A Gallery of Document Shells for Scientific WorkPlace® and Scientific Word®

Version 5

A Gallery of Document Shells for Scientific WorkPlace® and Scientific Word®

Version 5

Susan Bagby
George Pearson
MacKichan Software, Inc.

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Contents

What's New xix

About This Manual xix

Typesetting Basics xx

Producing Documents with Typesetting xx

Producing Documents without Typesetting xxi

Understanding the Differences in the Final Product xxi

Getting Help xxii

Online Help xxii

Supplemental Technical Documents xxiii

Obtaining Technical Support xxiii

Additional Information xxiv

1 Using Document Shells 1

Understanding Document Shells 1

LaTeX Document Classes 2

LaTeX Class Options 2

Other Document Classes 6

LaTeX Packages 7

Choosing a Document Shell 7

Part I Gallery of Shell Documents 9

2 Article Shells 11

A Simple MIT Press Article 12

AASTeX Journal 14

Academic Press Journals 16

Academic Press Journals - Modified 18

American Chemical Society 20

American Statistical Association Proceedings 22

AMS Journal Article 24

AMS Proceedings Article 26

An Astronomy-Astrophysics Journal 28

Annals of Statistics-Draft 30

ASAE Transactions 32

ASME Meeting 34

Astronomy & Astrophysics 36

Balkema 37

DECUS Proceedings 39

Elbert Walker's Article 41

Elsevier CRC One-column 43

Elsevier CRC Two-column 45

Elsevier IFAC Proceedings 47

Elsevier Preprint 49

Geophysics Journal 51

Harold O. Fried's Article 53

IEEE Transactions for Conferences 55

IEEE Transactions for Journals 56

IEICE Transactions 57

International Journal of Forecasting - Draft 58

Japanese Journal of Applied Physics 60

JEEP - A General Purpose Vehicle 62

JEEP - Double-spaced Except for Quotes 64

Journal of International Economics North-Holland 66

Journal of Low Temperature Physics 68

Journal of Progress in Surface Science 70

Kluwer Journal 72

Linear Algebra and its Applications 74

Mathematical Reviews Template 76

Mathematics Magazine Article 78

Modified Article for Short Texts 80

Monthly Notices of the Royal Astronomical Society 82

REVTeX 4 84

Science Magazine 86

SIAM Journal 88

SIAM Proceedings in Applied Mathematics 90

SIAM-ACM Preprint 92

Similar to AIP 94

Similar to AIP - Modified 96

Similar to Bulletin of the American Mathematical Society 98

Similar to MAA Monthly before 1992 100

Similar to North-Holland Journals 102

Similar to Sequential Analysis Journal 104

Society for Computer Simulation 106

SPIE Proceedings 108

SPIE Proceedings - Modified 110

SPIE Proceedings (new) 112

Springer-Verlag Heidelberg Journal 114

Squeezed States and Uncertainty Relations 116

Standard LaTeX Article (Chicago) 118

Standard LaTeX Article (Harvard) 120

Standard LaTeX Article (hyperref) 122

Statistics and Decisions 123

TU Wien 125

TU Wien Article (new) 127

World Scientific Proceedings 9.00x6.00 129

World Scientific Proceedings 9.75x6.50 (updated) 131

World Scientific Proceedings 10.00x7.00 133

World Scientific Proceedings 11.00x8.50 135

3 Author Packages for AMS Shells 137

Contemporary Mathematics (Proceedings) 138

Generic Journal 140

Mathematics of Computation 142

4 Book Shells 145

AMS Book or Monograph 146

ETP (Electronic Technical Publishing) 150

Linda Gilbert Book 154

Springer-Verlag Conference 158

Springer-Verlag Heidelberg LLNCS 162

Springer-Verlag Heidelberg Physics Monograph 166

Springer-Verlag Multi-authored 170

Springer-Verlag Single-authored 174

World Scientific Book 9.00x6.00 178

World Scientific Book 9.75x6.50 182

5 Exam and Syllabus Shells 187

Assignment 188

Bolton Institute 189

Class Announcement 190

Class Handout 191

SW Exam #1 - 8.5 x 11 Page 192

SW Exam #1 - 8.5 x 14 Page 193

SW Exam #2 194

SW Exam #3 195

Syllabus 196

6 Other Document Shells 197

Assorted - Basic Assignment 198

Assorted - Math Scratchpad 199

Book - SW Book #1 200

Book - SW Book #2 204

Book - SW Book #3 208

Book - SW Book #4 212

Book - SW Book #5 216

Book - SW Book #6 220

Fax - SW Fax #1 224

Fax - SW Fax #2 225

Fax - SW Fax #3 226

Letter - Informal 227

Letter - Similar to TeXbook Example 228

Letter - SW Letter #1 229

Letter - SW Letter #2 230

Letter - SW Letter #3 231

Letter - SW Letter #4 232

Letter - SW Letter #5 233

Letter - SW Letter #6 234

Memo - SW Memo #1 235

Memo - SW Memo #2 236

Memo - SW Memo #3 237

Memo - SW Memo #4 238

Memo - SW Memo #5 239

Memo - SW Memo Special for Inventions 240

Press Release - SW Press Release #1 241

Press Release - SW Press Release #2 242

Report - JEEP Report 243

Report - SW Report #1 246

Report - SW Report #2 248

Report - SW Report #3 250

Report - SW Report #4 252

Report - SW Report #5 254

Report - TU Wien Report 256

Report - TU Wien Report (new) 259

Resume - SW Resume #1 262

Resume -SW Resume #2 263

Slides - SW Slides 264

7 Standard LaTeX Shells 267

Standard LaTeX Article and Blank Standard LaTeX Article Shells 268

Standard LaTeX Book 270

Standard LaTeX Conference Proceedings 274

Standard LaTeX Report 276

8 Style Editor Shells 279

Article 280

Article - LaTeX-like Article 282

Article - Sans serif 284

Book - CalcLabs Book 286

Book - Fred Szabo's Book 288

Book - Jonathan Lewin's Book 292

Book - LaTeX-like Book 294

Book - Stewart Calculus 298

Book - User's Guide 300

Book #1 302

Exam #1 306

Exam Builder Shell 307

Exam Builder with Title Page 308

Fax #1 310

General - Scientific Word Readme 311

General - Simple WYSIWYG 313

Letter #1 315

Letter #2 316

Letter #3 317

Letter #4 318

Memo #1 319

Play 320

Press Release 322

QCA Workbook 323

Report #1 325

Resume #1 328

Slides - Jim's Landscape 329

Slides A 330

Slides B 332

Slides C 334

Slides D 336

Slides QCA 338

Thesis - Harvard Thesis 340

Thesis - Harvard Thesis Modified by Philippe Laval 344

Thesis - LSU Thesis 348

Thesis #1 352

9 Thesis Shells 355

Air Force Institute of Technology 356

Georgia Institute of Technology 360

Massachusetts Institute of Technology 364

Northwestern University 366

Similar to New Mexico State University 370

Similar to North Dakota State University 374

Similar to University of Miami 378

Similar to University of Utah 382

University of Arizona 386

University of California 390

University of Georgia 394

University of New Mexico 398

University of New South Wales 402

University of Pittsburgh 406

University of Washington 409

Part II Gallery of BibTeX Bibliography Styles 413

10 Using BibTeX with SWP or SW 415

Understanding BibTeX Databases 415

Understanding BibTeX Bibliography Styles 416

Selecting a BibTeX Bibliography Style 417

11 BibTeX Bibliography Styles 419

aaai-named.bst 420

aabbrv.bst 422

aalpha.bst 423

abbrv.bst 424

achemso.bst 425

achemsol.bst 426

acm.bst 427

address.bst 428

address-html.bst 431

adfathesis.bst 433

agsm.bst 434

alpha.bst 435

alphahtml.bst 436

alphahtmldate.bst 438

alphahtmldater.bst 439

amsalpha.bst 440

amsplain.bst 441

annotate.bst 442

annotation.bst 443

anotit.bst 444

apa.bst 445

apacite.bst 446

apalike.bst 447

apalike2.bst 448

aplain.bst 449

apsr.bst 450

asaetr.bst 451

astron.bst 452

aunsnot.bst 453

aunsrt.bst 454

authordate1.bst 455

authordate2.bst 456

authordate3.bst 457

authordate4.bst 458

bbs.bst 459

bibtoref.bst 460

birthday.bst 461

cbe.bst 463

cea.bst 464

cell.bst 466

chicago.bst 468

dtk.bst 469

econometrica.bst 470

email.bst 471

email-html.bst 473

finplain.bst 475

gerabbrv.bst 476

geralpha.bst 477

gerapali.bst 478

gerplain.bst 479

gerunsrt.bst 480

humanbio.bst 481

humannat.bst 482

ieee.bst 483

ieeepes.bst 484

ieeetr.bst 485

imac.bst 486

inlinebib.bst 487

is-abbrv.bst 489

is-alpha.bst 490

is-plain.bst 491

is-unsrt.bst 492

jas99.bst 493

jbact.bst 494

jcc.bst 495

jkthesis.bst 496

jmb.bst 497

jmr.bst 499

jpc.bst 500

jphysicsB.bst 501

jtb.bst 502

jthcarsu.bst 503

jurabib.bst 504

jureco.bst 505

kluwer.bst 506

letter.bst 507

mbplain.bst 509

mslapa.bst 510

named.bst 511

nar.bst 512

nature.bst 513

nederlands.bst 514

newapa.bst 515

oxford-en.bst 516

oxford-in.bst 518

oxford-se.bst 520

pccp.bst 522

phaip.bst 523

phapalik.bst 524

phcpc.bst 525

phiaea.bst 526

phjcp.bst 527

phnf.bst 528

phnflet.bst 529

phone.bst 530

phpf.bst 532

phppcf.bst 533

phreport.bst 534

phrmp.bst 535

plabbrv.bst 536

plain.bst 537

plainhtml.bst 538

plainhtmldate.bst 540

plainhtmldater.bst 541

plalpha.bst 542

plplain.bst 543

plunsrt.bst 544

revcompchem.bst 545

siam.bst 546

siamproc.bst 547

smfalpha.bst 548

smfplain.bst 549

sweabbrv.bst 550

swealpha.bst 551

sweplain.bst 552

thesnumb.bst 553

unsrt.bst 554

Index 555

What's New

A Gallery of Document Shells adds to the suite of manuals for MacKichan Software products. Along with *Typesetting Documents in Scientific WorkPlace and Scientific Word,* this online manual is a response to the many users who have requested more information about LaTeX typesetting in *Scientific WorkPlace (SWP)* and *Scientific Word (SW).*

About This Manual

The primary goal of this manual is to help you choose document shells that are appropriate for your typesetting purposes. The manual explains the key characteristics of the shells provided with the program. It contains brief discussions and illustrations of typeset documents created with each shell, except those created with *Scientific Notebook (SNB),* which are intended for direct printing instead of typesetting. A secondary goal is to help you choose appropriate styles for automatically created BibTeX bibliographies and citations. The manual explains and illustrates the characteristics of each available BibTeX bibliography style.

This manual doesn't apply to *SNB* or to the *Scientific Viewer,* which don't support typesetting. The manual excludes any discussion of shells not intended to produce a typeset document.

We assume that you have successfully installed *SWP* or *SW* and that you have a working knowledge of the program. You can find additional information about the program in these accompanying manuals:

- *Getting Started with Scientific WorkPlace, Scientific Word, and Scientific Notebook.*
- *Creating Documents with Scientific WorkPlace and Scientific Word.*
- *Doing Mathematics with Scientific WorkPlace and Scientific Notebook*

We also assume you are familiar with basic TeX, the extraordinary mathematics typesetting program and language designed by Donald Knuth. Also useful is knowledge of LaTeX, a set of macros designed by Leslie Lamport to enhance TeX with document-structuring features such as tables of contents, chapters and sections, lists, and bibliographies. An understanding of BibTeX, the public domain program created by Oren Patashnik to create and format bibliographies and the citations that refer to them. is helpful as well. The Windows implementation of TeX and LaTeX that is supplied with the program is TrueTeX, a product of TrueTeX Software. The version of TrueTeX shipped with *SWP* and *SW* includes PDFTeX support.

The manual includes information about TEX and LATEX, document classes, LATEX packages, typesetting options, BibTEX bibliography styles, and document shells. While a good understanding of TEX, LATEX , and BibTEX will help you better understand how these often complex elements interact, a thorough discussion of those programs is beyond our scope here. If you need additional information, we suggest you refer to these excellent sources: *The TEXbook* by Donald E. Knuth; *LATEX, A Document Preparation System* by Leslie Lamport; *The LATEX Companion* by Michel Goossens, Frank Mittelbach, and Alexander Samarin; and *A Guide to* LATEX: *Document Preparation for Beginners and Advanced Users* by Helmut Kopka and Patrick W. Daly.

Typesetting Basics

Even if you have a basic understanding of the program, it's important to review how typesetting works and why the appearance of your printed document is so noticeably different when you typeset and when you don't. You can find basic information in more detail in the online Help and in *Creating Documents with Scientific WorkPlace and Scientific Word.* Version 5 adds the capability to produce typeset PDF files.

Producing Documents with Typesetting

Throughout our documentation, we refer to the processes that involve LATEX typesetting as *typeset compile, typeset preview,* and *typeset print,* and to those that involve PDFTEX typesetting as *typeset compile PDF, typeset preview PDF,* and *typeset print PDF.* (The processes are similar; general statements about *typesetting* refer to both sets of processes.) These processes are available as commands on the Typeset menu and as buttons on the Typeset toolbar.

When you typeset your document with LATEX (using the Preview or Print commands on the Typeset menu), the compilation yields a *device independent,* or *DVI,* file, which is a finely typeset version of your document. The DVI file may contain automatically generated document elements such as cross-references, tables of contents, and numbers for equations. The compilation may also result in other generated files, such as table of contents files or bibliography files, that are required by the DVI file. The program then sends the DVI file to the typeset previewer or to the printer. Consequently, the document you see on the typeset preview screen or in print may have a noticeably different appearance from the document you see as you work in the document window.

When you typeset your document with PDFLATEX (using the Preview PDFor Print PDF commands on the Typeset menu), the compilation yields a PDF file that contains your typeset document embedded with all necessary fonts and graphics. As with the DVI file, the PDF file may contain automatically generated document elements such as tables of contents and numbers for equations. If your document includes the *hyperref* package, any cross-references in the document are changed to hyperlinks. The program sends the PDF file to the PDF reader installed on your system or the printer. The PDF file has an almost identical appearance to the DVI file but may have a noticeably different appearance from what you see as you work in the document window.

The typeset appearance of your document depends on typesetting specifications from several different sources, all set initially by the shell you use to create your document:

- The *typesetting specifications*, a collection of TEX and LATEX instructions related to typesetting document elements, including those represented by the tags on the Tag toolbar in the program window.
- Any LATEX *packages* or *options* specified for the document or the shell.
- Any additional TEX or LATEX *commands* that appear in the document preamble or body.
- The BibTEX style chosen for the document, if any.

These specifications don't affect the appearance of your document if you don't typeset it.

The chapters that follow explain how to modify some of these specifications from within the program. However, we advise against attempts at extensive modification of the specifications if you aren't extremely familiar with TEX and LATEX. See *Typesetting Documents in Scientific WorkPlace and Scientific Word* for more information.

Producing Documents without Typesetting

With Version 3 and higher of *SWP* and *SW,* you can produce your documents either with or without typesetting. In our documentation, we refer to the processes that don't involve typesetting as *preview* and *print.* These commands are available on the File menu and the Standard toolbar.

When you produce your document without typesetting it, the program sends the document directly to a non-LATEX previewer or to the printer using many of the same routines with which it displays the document in the document window. Consequently, what you see in the preview window or in print is similar to what you see as you work on your document in the document window. (The program doesn't reflect the page setup specifications or the print options in the document window.)

The non-typeset appearance of your document depends on three sets of specifications, again all set initially by the document shell:

- The *style,* a collection of the specifications for the appearance of each tag in the document window and in print
- The *page setup specifications*
- The *print options*

The online Help and *Creating Documents with Scientific WorkPlace and Scientific Word* provide information about modifying these specifications from within the program. These three sets of specifications don't affect the typeset appearance of your document, although the style determines how the document appears on the screen when you're working on it.

Understanding the Differences in the Final Product

Each time you produce your document in *SWP* or *SW*, you can choose whether or not to typeset it. The results differ noticeably.

If you typeset, the program uses LaTeX or pdfLaTeX to compile the document and generate any specified automatic elements such as front matter items (tables of contents or lists of figures and tables), cross-references, footnotes and margin notes, automatically numbered equations, indexes, and bibliographies. LaTeX and pdfLaTeX also provide hyphenation, kerning, ligatures, sophisticated paragraph and line breaking, and other automatic formatting features.

If you don't typeset, the program produces the document using many of the same routines it uses to display the document in the document window. No document elements are automatically generated, and the printed results are similar to what you see as you work on the document.

Getting Help

In addition to the information available in the manuals supplied with your software, you can get information about the program from the online Help system, the library of reference materials about mathematics and science, and, if you have an Internet connection, the MacKichan Software website. If these resources don't contain the information you need, technical support is available. We also regularly make additional information available on our unmoderated discussion forum and email list. You can find an errata sheet for this book, as well as all other manuals published by MacKichan Software, Inc., at this URL:

http://www.mackichan.com/techtalk/errata.html

Online Help

Without leaving the program, you can search the online Help system to find basic and advanced information about all available commands and operations, including those related to numeric, symbolic, and graphic computations. In particular, you can find additional material regarding TeX, LaTeX, LaTeX packages, and other related topics. If you save copies of the Help documents in *SWP,* you can interact with the mathematics they contain, experimenting with or reworking the included examples. In addition, two programs—the Style Editor and the Document Manager—have their own online Help systems.

► **To get help from the** Help **menu**

Choose	To
Contents	See a list of online information
Search...	Find a Help topic
Index	Access the online index to General Information, Computing Techniques, or the Reference Library
MacKichan Software Website	Open the link to the MacKichan Software website
Register...	Register your software and obtain a license
System Features...	See a list of available features; change the serial number for your installation
License Information	Obtain information about registering your system
About...	Obtain information about your installation

► **To go directly to the Help Contents, press** F1.

Supplemental Technical Documents

We urge you to explore the supplemental technical documents supplied with the program. You can use the program to open, view, and print the documents. In particular, we urge you to read the following documents:

- In the `Help\general` directory, the document `50techref.tex`, which contains technical information on the features in Version 5.
- In the `Play` directory, the sample documents, which demonstrate the use of computation in *SWP*.
- In the `SWSamples` directory,
  - The sample documents, which illustrate the use of LaTeX packages in *SWP* and *SW*.
  - The file `OptionsPackagesLaTeX.tex`, which describes and contains links to information about the options, packages, and other TeX-related items provided with the program.
  - The file `BibTeXBibliographyStyles.tex`, which lists and describes the BibTeX style (`.bst`) files installed with the program.

Obtaining Technical Support

If you can't find the answer to your questions in the manuals or the online Help, you can obtain technical support from our website at

http://www.mackichan.com/techtalk/knowledgebase.html

or at our Web-based Technical Support forum at

http://www.mackichan.com/techtalk/UserForums.htm

You can also contact our Technical Support staff by email, telephone, or fax. We urge you to submit questions by email whenever possible in case our technical staff needs to obtain your file to diagnose and solve the problem.

When you contact us by email or fax, please provide complete information about the problem you're trying to solve. We must be able to reproduce the problem exactly from your instructions. When you contact us by telephone, you should be sitting at your computer with the program running. Please provide the following information any time you contact Technical Support:

- The MacKichan Software product you have installed.
- The version and build numbers of your installation (see Help / About).
- The serial number of your installation (see Help / System Features).
- The version of the Windows system you're using.
- The type of hardware you're using, including network hardware.
- What happened and what you were doing when the problem occurred.
- The exact wording of any messages that appeared on your computer screen.

► **To contact technical support**

- Contact Technical Support by email, fax, or telephone between 8 A.M. and 5 P.M. Pacific Time:

Internet email address: support@mackichan.com
Fax: 360-394-6039
Telephone: 360-394-6033
Toll-free telephone: 877-SCI-WORD (877-724-9673)

Additional Information

You can learn more on our website, which we update regularly to provide the latest technical information about the program. The site also houses links to other TEX and LATEX resources. We maintain an unmoderated discussion forum and an unmoderated email list so our users can share information, discuss common problems, and contribute technical tips and solutions. You can link to these valuable resources from our home page at **http://www.mackichan.com**.

1 Using Document Shells

Every *SWP* and *SW* document is created from a template called a *document shell.* Each shell carries several sets of specifications that determine its fundamental structure and appearance. Those specifications, and the structure and appearance they define, extend to each new document you create with a given shell.

The program includes over 150 document shells that you can use to create books, exams, articles, reports, letters, theses, faxes, and other documents. The shells have the extension `.shl` and are in the `Shells` directory of your program installation.

Although many are similar, no two shells are exactly alike. Each is designed with a structure and components common to a certain kind of document, such as a book, report, article, or thesis. From shell to shell, the structure and components differ, depending on the purpose and anticipated content of the document and, in many cases, the typesetting requirements of the publisher. Choosing a shell carefully is an important step in developing your documents.

For much more information about working with document shells, refer to *Typesetting Documents in Scientific WorkPlace and Scientific Word* and *Creating Documents with Scientific WorkPlace and Scientific Word.*

Understanding Document Shells

Each shell is associated with several sets of specifications. One set consists of page setup specifications, print options, and a style file with a `.cst` extension. These specification determine the appearance of your document when you preview or print it without typesetting or when you display it in the document window. However, *these specifications have no effect on the typeset appearance of your document.*

The other set—the typesetting specifications—determine the document class and fundamental structure of the shell and may also specify one or more LaTeX packages that provide a particular typesetting capability. The typesetting specifications govern all aspects of the typeset appearance of the shell and of any documents created with the shell. Typesetting specifications govern type face; type size; margins; page size; line spacing; location and appearance of headers and footers; paragraph layout and indention; appearance and placement of section headings; page breaks; automatic generation of cross-references, table of contents, and other document elements; and other typographic details too numerous to mention. Most of the specifications are contained in LaTeX formatting files with extensions of `.cls`, `.clo`, and `.sty`, although others may be contained in your document. LaTeX and PDFLaTeX typeset your document based on this large collection of specifications.

Note Before Version 3.5, we held to convention, using the word *style* to refer to the typesetting specifications. However, convention has changed. In newer versions of LaTeX, the *document style* has been renamed the *document class*. We now use the word *style* to refer to the `.cst` file and not to the typesetting specifications.

When you open a new document, you select a document shell. The program opens a new document and copies the shell into it, along with the shell's typesetting specifications, style, page setup, and print options. Until you change it in some way, the new document is identical to the shell. It has the same class and structure, uses the same LaTeX packages, and produces the same appearance, with and without typesetting.

LaTeX Document Classes

The document class named in the typesetting specifications determines the basic structure of the shell and of any documents you create with it. The class specifies the kind of document to be produced and defines its general structure as a book, report, article, or other kind of document. The class also determines the elements, environments, and constructs allowed in the document. Document class files have an extension of `.cls`.

About half of the shells provided with *SWP* and *SW* have standard LaTeX base classes; they are created with `book.cls`, `report.cls`, or `article.cls`. Although many of the other shells produce similar kinds of documents, they have different, more specialized base classes, as with the shells that produce articles formatted for a specific journal or theses formatted to meet the requirements of a particular university. The rest of the shells have the base class `sebase`; they were developed with the Style Editor. The program doesn't include a shell document for the standard LaTeX letter class.

LaTeX Class Options

Although the document class defines a shell document in broad typesetting terms, LaTeX and PDFLaTeX need additional typesetting instructions to format a document completely. Some of these instructions come from document class options, a collection of formatting instructions that define typesetting in more detail. The options can control body text font size, page orientation, number of text columns, print quality, page size, and many other aspects of document design and typesetting.

The tables below show the default settings for `article.cls`, `book.cls`, and `report.cls`, the three base document classes used for most document shells in *SWP* and *SW*. The shell descriptions in this manual note any option settings that differ from the defaults. Accompanying the shell descriptions are page layout diagrams, which reflect the class option default settings. The notes keyed to the diagrams provide information about the size of the margins, headers, footers, text area, and margin notes, if any. Most measurements are given in points; a point is $\frac{1}{72}$ inch.

If your document uses different settings, these page layouts may not apply. For example, if a document specifies a4 paper instead of 8.5x11 or two columns instead of one, the margins will differ from those shown in the layout diagrams. You may want to add the *layout* package to your document to generate a new layout diagram. For more information, refer to *Typesetting Documents in Scientific WorkPlace and Scientific Word*.

These class option defaults are in effect for document shells created with `article.cls`, `book.cls`, and `report.cls`, unless otherwise noted in the shell:

Class Option Defaults for Shells Created with Article.cls

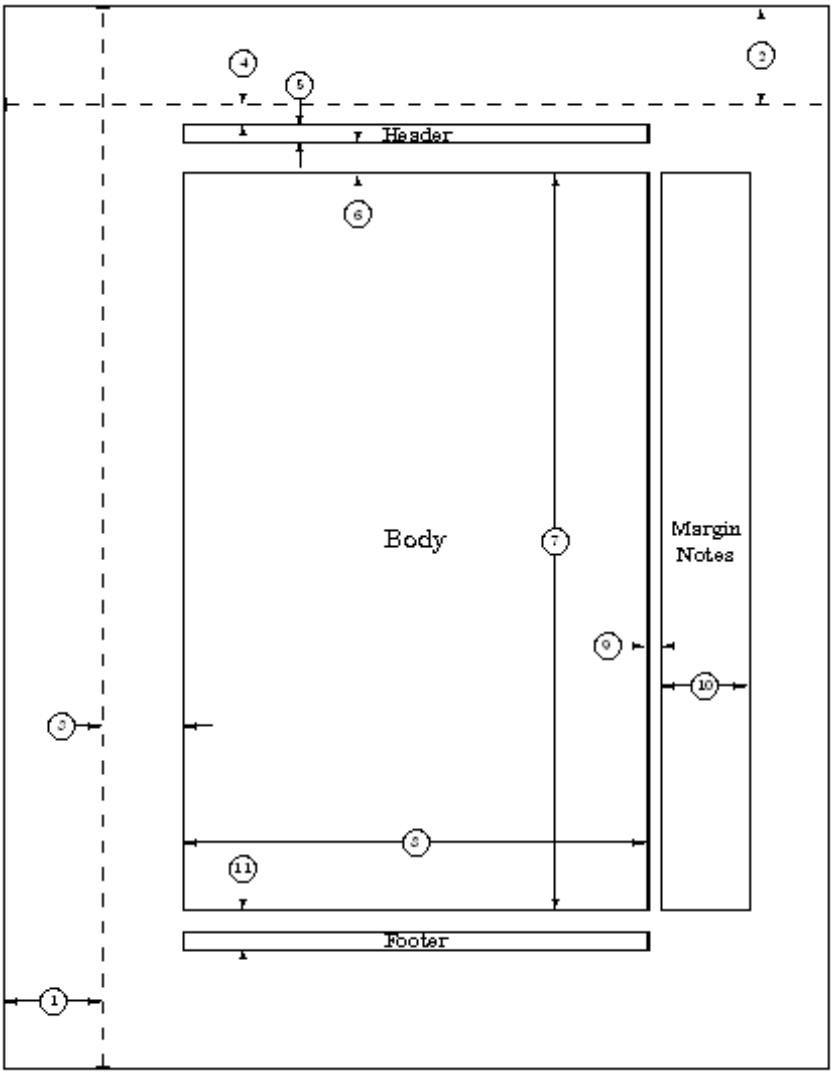
Category	Default	Options
Body text point size	10 pt	11 pt, 12 pt
Paper size	8.5x11	a4, a5, b5, Legal size, Executive size
Orientation	Portrait	Landscape
Print side	One side	Both sides
Quality	Final	Draft
Title page	Title area on page 1	Title page
Columns	One	Two
Equation numbering	On right	On left
Displayed equations	Centered	Flush left
Bibliography style	Closed	Open
Babel language	English U.S.	See package documentation.

Class Option Defaults for Shells Created with Book.cls

Category	Default	Options
Body text point size	10 pt	11 pt, 12 pt
Paper size	8.5x11	a4, a5, b5, Legal size, Executive size
Orientation	Portrait	Landscape
Print side	Both sides	One side
Quality	Final	Draft
Title page	Title page	No title page
Columns	One	Two
Start chapter on left	No	Yes
Equation numbering	On right	On left
Displayed equations	Centered	Flush left
Open bibliography style	Closed	Open
Babel language	English U.S.	See package documentation.

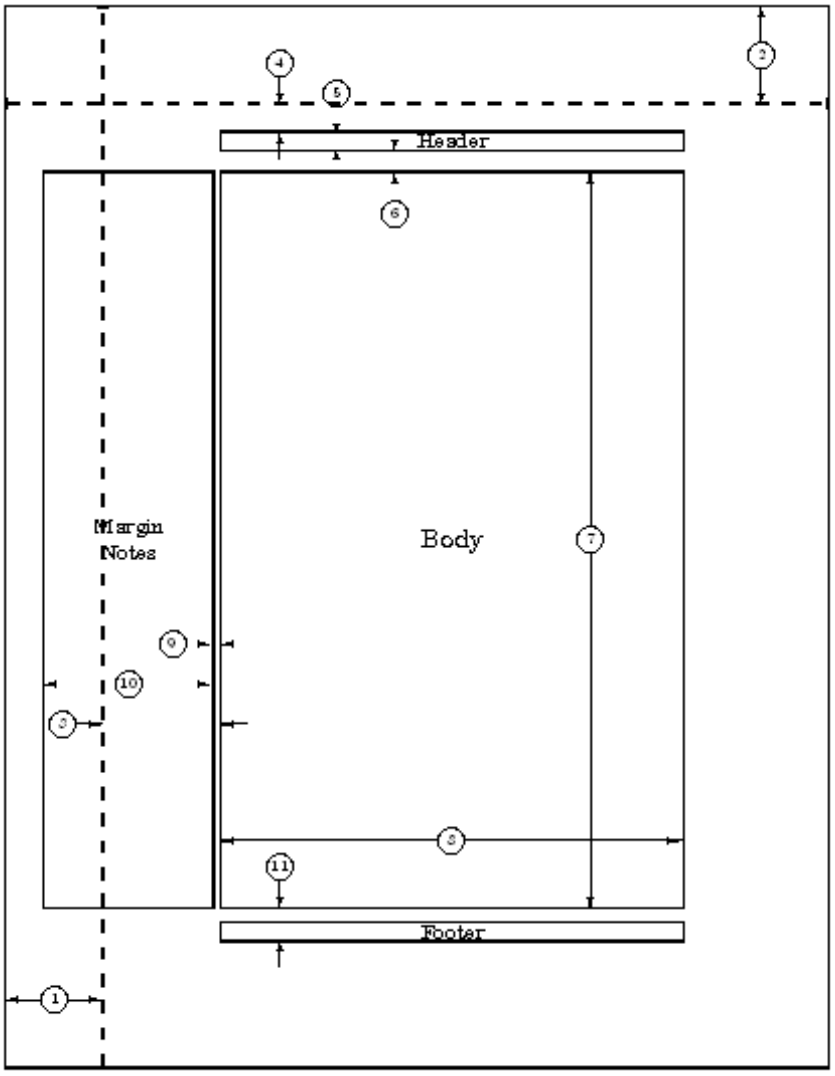
Class Option Defaults for Shells Created with Report.cls

Category	Default	Options
Body text point size	10 pt	11 pt, 12 pt
Paper size	8.5x11	a4, a5, b5, Legal size, Executive size
Orientation	Portrait	Landscape
Print side	One side	Both sides
Quality	Final	Draft
Title page	Title page	No title page
Columns	One	Two
Start chapter on left	No	Yes
Equation numbering	On right	On left
Displayed equations	Centered	Flush left
Open bibliography style	Closed	Open
Babel language	English U.S.	See package documentation.



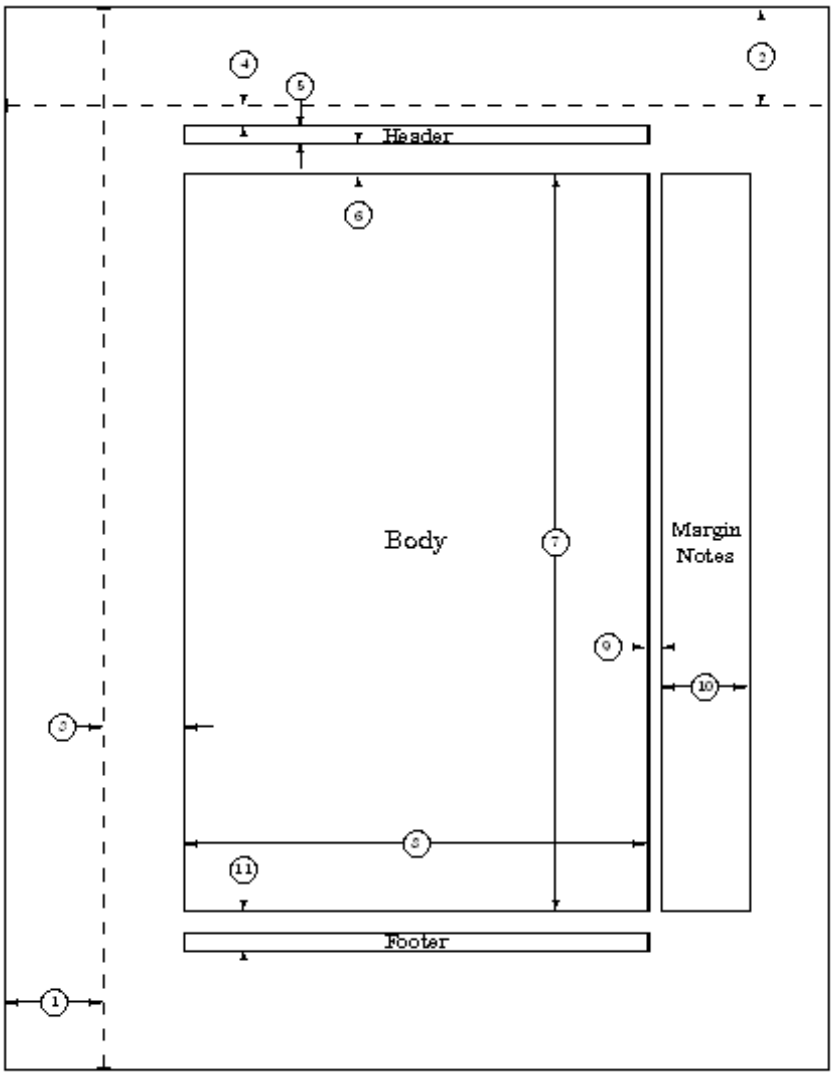
1 one inch + \hoffset
2 one inch + \voffset
3 \oddsidemargin = 62pt
4 \topmargin = 16pt
5 \headheight = 12pt
6 \headsep = 25pt
7 \textheight = 550pt
8 \textwidth = 345pt
9 \marginparsep = 11pt
10 \marginparwidth = 65pt
11 \footskip = 30pt
\marginparpush = 5pt (not shown)
\hoffset = 0pt
\voffset = 0pt
\paperwidth = 614pt
\paperheight = 794pt

Default page layout for article.cls



1	one inch + \hoffset	2	one inch + \voffset
3	\evensidemargin = 89pt	4	\topmargin = 22pt
5	\headheight = 12pt	6	\headsep = 18pt
7	\textheight = 550pt	8	\textwidth = 345pt
9	\marginparsep = 7pt	10	\marginparwidth = 125pt
11	\footskip = 25pt		\marginparpush = 5pt (not shown)
	\hoffset = 0pt		\voffset = 0pt
	\paperwidth = 614pt		\paperheight = 794pt

Default page layout for book.cls



1	one inch + \hoffset	2	one inch + \voffset
3	\oddsidemargin = 62pt	4	\topmargin = 16pt
5	\headheight = 12pt	6	\headsep = 25pt
7	\textheight = 550pt	8	\textwidth = 345pt
9	\marginparsep = 11pt	10	\marginparwidth = 65pt
11	\footskip = 30pt		\marginparpush = 5pt (not shown)
	\hoffset = 0pt		\voffset = 0pt
	\paperwidth = 614pt		\paperheight = 794pt

Default page layout for report.cls

Other Document Classes

If you're using a shell based on a customized document class, the default categories and the corresponding options may differ. You can learn which document class options are in effect for a particular shell from the Options and Packages command on the Typeset menu, and you can view the page layout for the shell with the *layout* package.

LaTeX Packages

The document class options establish a basic set of LaTeX typesetting instructions. LaTeX *packages*—sets of additional typesetting instructions—extend typesetting instructions by enabling some specific LaTeX behavior or customizing some aspect of the document appearance or production, such as the creation of an index, the special formatting of footnotes, the content and design of headers and footers, the style of numbered lists, or the generation of a list of symbols. Just as document classes have options, many packages have options with which you can customize document behavior still further. The options differ from package to package.

When you install the program, you automatically install those LaTeX packages that are included with the standard LaTeX distribution. The packages are installed in the `base`, `required`, and `AMS` subdirectories of the `TCITeX\TeX\LaTeX` directory. Also, the `TCITeX\TeX\LaTeX\contrib` directory of your installation includes a collection of packages that are particularly useful with *SWP* and *SW*. Most packages have an `.sty` file extension. *Typesetting Documents in Scientific WorkPlace and Scientific Word* describes the packages available with the program, and you can find links to additional and often extensive information about the packages in the online Help system.

You can add packages to your document in addition to those packages that have been specified for the shell. Documents created with most document shells—that is, documents in most document classes—can accept additional packages. The order in which the packages are specified can, on occasion, affect LaTeX behavior. The documentation notes when package order is significant.

Choosing a Document Shell

Every *SWP* and *SW* document begins with a document shell. Choosing a shell carefully can save you time and frustration, especially if you expect to create a complex document. Keep your typesetting needs in mind as you look for an appropriate shell.

The program includes a large collection of shells for creating new documents in several categories. The categories are reflected in the shell directories:

- **Articles**—short documents intended for publication in scholarly journals or conference proceedings.
- **Author Packages for AMS**—articles intended for publication in journals or conference proceedings published by the American Mathematical Society (AMS).
- **Books**—large documents intended for publication as a separate volume.
- **Exams and Syllabi**—short documents intended for use in the classroom.
- **Other Documents**—miscellaneous document types including faxes, letters, memos, overhead transparencies, slides, and some books and reports, usually developed for earlier releases of the program.
- **Scientific Notebook**—documents created with *SNB*. Documents created with these shells are intended for printing without benefit of typesetting. These shells don't appear in this manual.
- **Standard LaTeX**—documents created with the LaTeX base document classes without the addition of any packages.
- **Style Editor**—documents created with shells developed using the Style Editor.
- **Theses**—documents that fulfill thesis formatting requirements at several universities.

Make sure the shell you choose produces the type of document you want to create. Don't attempt to write a book using a letter shell or an article using a report shell. Make sure that the shell contains the tags appropriate for your work. If you need theorem environments, for example, choose a shell that has theorem and theorem-like item tags. If you are unsure of your typesetting requirements, we urge you to choose the standard LaTeX shell for the type of document you need. Standard LaTeX shells provide the greatest flexibility and portability. You can achieve almost any typesetting effect by beginning with a standard shell and adding LaTeX packages as necessary.

Important We strongly recommend that you begin all new documents using one of the standard LaTeX shells, unless you have a compelling reason (such as publisher's instructions) to do otherwise.

In the following chapters, we provide information about the shells included with the program. For each shell, we note the document class and any packages used by the shell. We indicate whether the class and packages use option defaults or other settings. We also note when no class or package options are available from within the program. We include special information and brief instructions necessary for working with the shell, as well as cautions where necessary. You may find additional information in the document shell itself. Finally, we include pictures of representative pages from a typeset document created with the shell. (Note that a given sample document may not be the same as the document you see when you open the shell.)

We have excluded one category of documents from the manual—those created with *SNB* shells. Because the *SNB* shells are designed for printing without typesetting, we don't describe them here, nor do we provide illustrations of typeset sample documents for those shells. Documents created with *SNB* shells are similar in the document window and in print. Typesetting *SNB* documents may produce unexpected results because LaTeX or pdfLaTeX may number sections and equations automatically, insert front matter, change the spacing, and otherwise attempt to change the formatting of the document. If you want to take advantage of typesetting for your *SWP* or *SW* document, choose a shell designed for typesetting instead of an *SNB* shell.

We encourage you to examine the shell samples in this manual carefully and take note of the features they illustrate. Notice details such as the absence or presence of headers and footers, the placement of page numbers and footnotes, the size of the margins, the appearance and placement of the headings, the extent of the front matter, the use of single or double columns, and the use of single or double spacing.

When you find a shell that looks appropriate, open and print a new document with the shell to see if it meets your requirements. The closer the shell fits your requirements, the easier your typesetting tasks will be.

► To open a new document with a document shell

1. On the Standard toolbar, click the New button or, from the File menu, choose New to open the New dialog box.

2. From the Shell Directories list in the New dialog box, choose the kind of document you want.

3. From the Shell Files list, select the shell you want and choose OK.

Part I

Gallery of Shell Documents

2 Article Shells

Most article shells are based on the typesetting specifications set in the base document class `article.cls`, although some customized article shells use other `.cls` files. Generally, most article shells have front matter consisting of title and author information, a date, and an abstract. Some include tables of contents. Most shells include tags for up to five heading levels in the body of the article. Chapter headings are reserved for book and report shells. Some but not all articles contain tags for theorem environments. The back matter for most article shells includes appendices and bibliographies. Indices are reserved for books and reports.

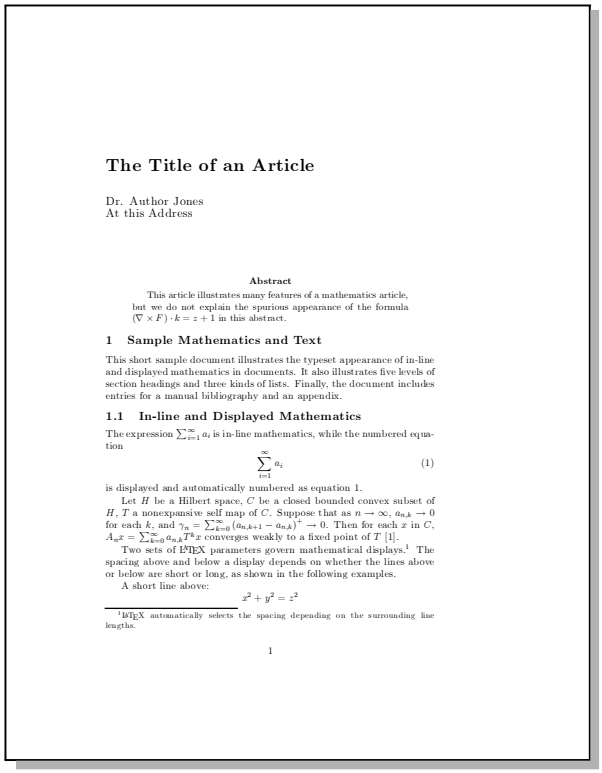
See page 2 for information about base document class defaults and page 4 for page layout diagrams for the base document classes.

A Simple MIT Press Article

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
mitpress	None

The shell produces documents similar to those created with the standard LaTeX article shell (see page 268) but differs in the design of the front matter. The shell prints the title in bold type, left justifies the title and author information, and omits the date.



The Title of an Article

Dr. Author Jones
At this Address

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

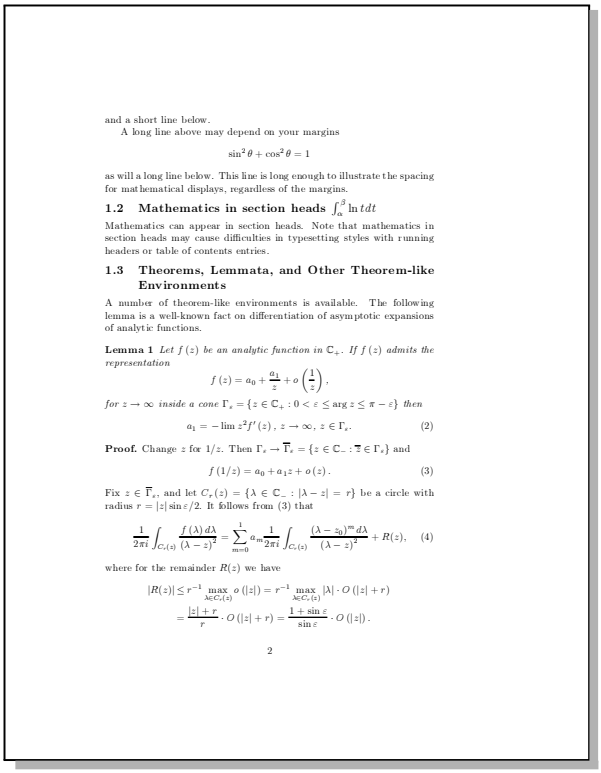
Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$
$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\pi/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, z \in \overline{\Gamma}_{\pi/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

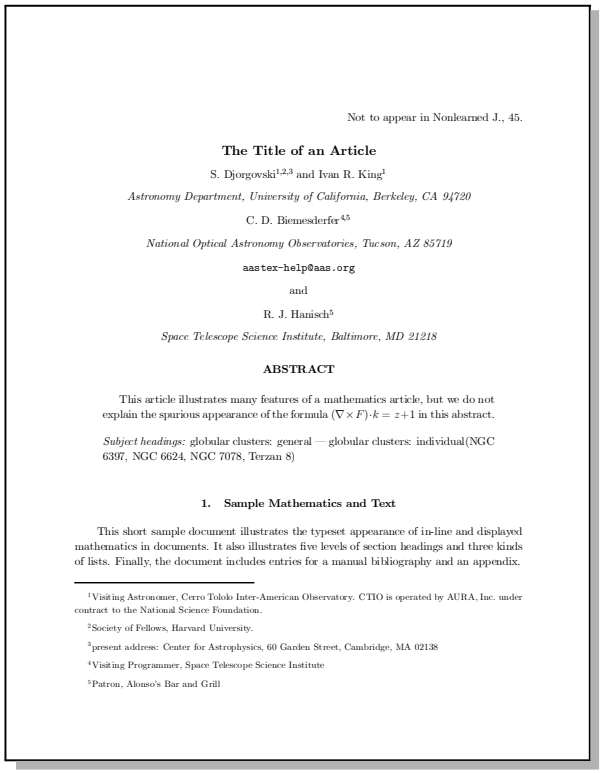
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

AASTeX Journal

Document class base file: aastex.cls

Options and Packages	Defaults
Document class options	Body text 12 pt, preprint
Packages:	
amsfonts	None

The shell produces documents that use the AASTeX typesetting specification, used for manuscript preparation for the *Astrophysical Journal; Astrophysical Journal, Letters; Astrophysical Journal, Supplement;* and *Astronomical Journal.*



Not to appear in Nonlearned J., 45.

The Title of an Article

S. Djorgovski[1,2,3] and Ivan R. King[1]

Astronomy Department, University of California, Berkeley, CA 94720

C. D. Biemesderfer[4,5]

National Optical Astronomy Observatories, Tucson, AZ 85719

aastex-help@aas.org

and

R. J. Hanisch[5]

Space Telescope Science Institute, Baltimore, MD 21218

ABSTRACT

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z+1$ in this abstract.

Subject headings: globular clusters: general — globular clusters: individual(NGC 6397, NGC 6624, NGC 7078, Terzan 8)

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

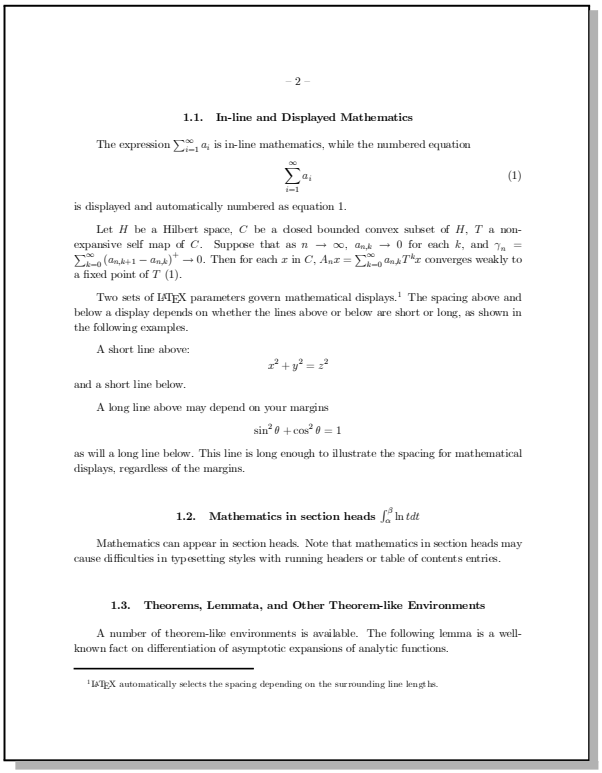
[1]Visiting Astronomer, Cerro Tololo Inter-American Observatory. CTIO is operated by AURA, Inc. under contract to the National Science Foundation.

[2]Society of Fellows, Harvard University.

[3]present address: Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138

[4]Visiting Programmer, Space Telescope Science Institute

[5]Patron, Alonso's Bar and Grill



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$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T (1).

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \ z \to \infty, \ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, \ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

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Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

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2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance.
   The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as (4), (5) and (6). You can also have multiple citations appear together. Here is an example: (2; 3; 4).

REFERENCES

N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A1}$$

The quadratic equation shown as equation A1 is used to demonstrate how equations are numbered in the appendix.

This preprint was prepared with the AAS LaTeX macros v5.2.

Academic Press Journals

Document class base file: apjrnl.cls

Options and Packages	Defaults
Document class options	None
Packages:	
amsfonts	None

The shell provides typesetting specifications for articles intended for 37 scholarly journals published by Academic Press. The journals are listed in the shell and the applicable journal is selected as a document class option. Selecting the journal *Metabolic Engineering* creates two-column text, not shown in the example that follows.

Front matter fields include title, author, address, date, and abstract. The shell uses fields in the body of the document for keywords and subject classification, if required by the selected journal. See the shell for additional information.

The Title of an Article

Dr. Author Jones[1]
At this Address
E-mail: author1@university1.edu

and

Dr. Author Second and Dr. Author Third[2]
At this Address
author2@university2.edu

Version: Today's date

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \bullet k = z + 1$ in this abstract.

Key Words: keywords: text should be lower case except as necessary for meaning.
Insert header for classifications: Use only if your journal has a subject classification requirement

1. SAMPLE MATHEMATICS AND TEXT

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[1] First author thanks.
[2] Example of two authors at the same location.
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LEMMA 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$
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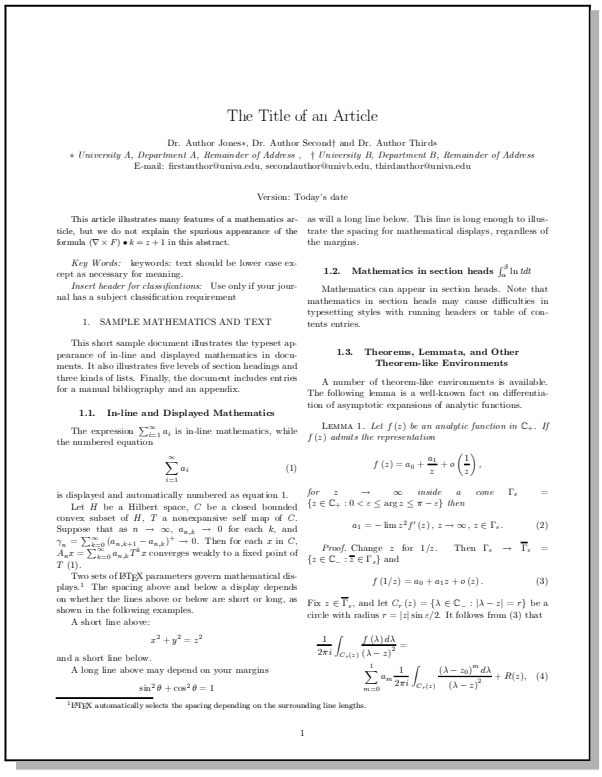
Academic Press Journals - Modified

Document class base file: apjrnl.cls

Options and Packages	Defaults
Document class options	*Digital Signal Processing*
Packages:	
amsfonts	None

The shell provides typesetting specifications for articles intended for six scholarly journals published by Academic Press. The journals are listed in the shell and the applicable journal is selected as a document class option. Four of the journals produce double-column output. The format for one of the double-column journals, *Journal of Colloid and Interface Science,* is shown in the sample pages shown below. The journal *Digital Signal Processing,* has been selected as the default and is shown in the sample pages shown on the next page.

Front matter fields include title, author, address, date, and abstract. All author names appear in a single field. The shell uses an unusual method of entering author addresses. Fields in the body of the document hold keywords and subject classification, if required by the selected journal. See the shell for additional information.



The Title of an Article

Dr. Author Jones*, Dr. Author Second† and Dr. Author Third*

* *University A, Department A, Remainder of Address* , † *University B, Department B, Remainder of Address*
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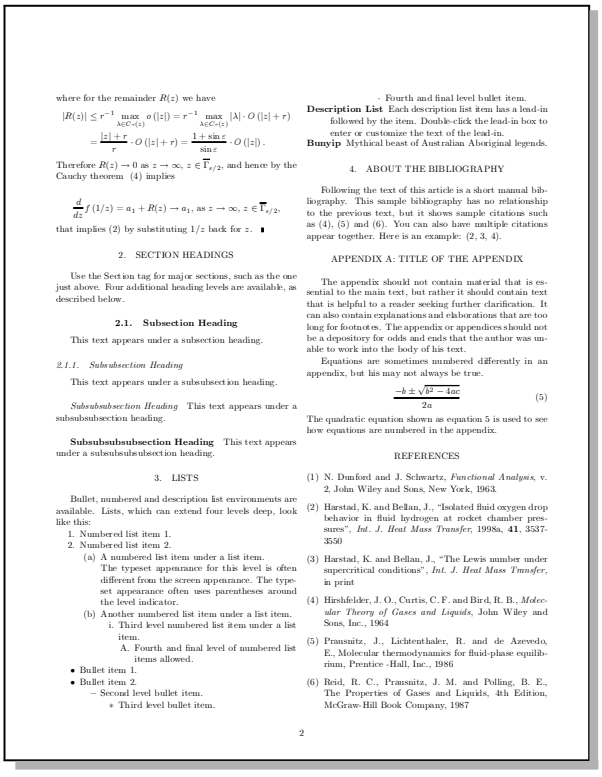

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The Title of an Article

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American Chemical Society

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
achemso	Standard

This shell uses the achemso package to provide a BibTEX style appropriate for the journals of The American Chemical Society. The package is not an official package of the Society.

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At this Address

July 20, 2004

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$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

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References

1. N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

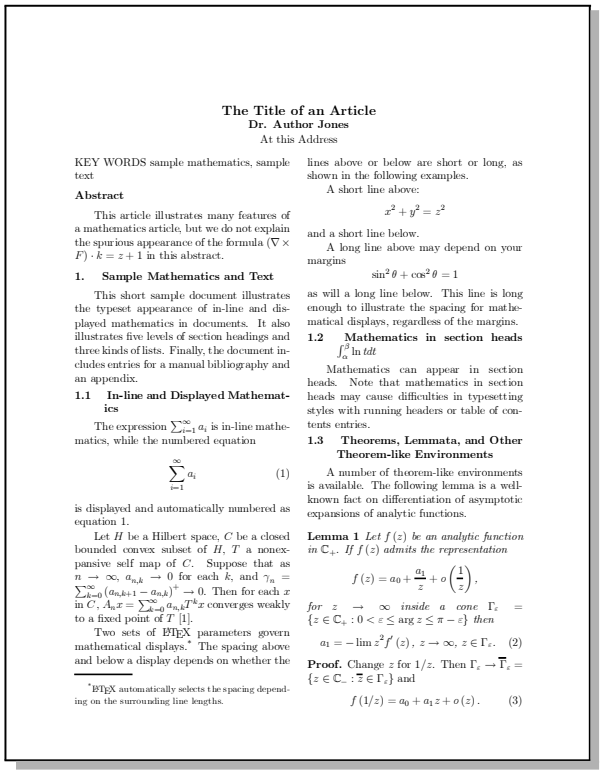
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

American Statistical Association Proceedings

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20asap	None

The front matter includes a field for key words.



The Title of an Article

Dr. Author Jones
At this Address

KEY WORDS sample mathematics, sample text

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

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1.2 Mathematics in section heads

$\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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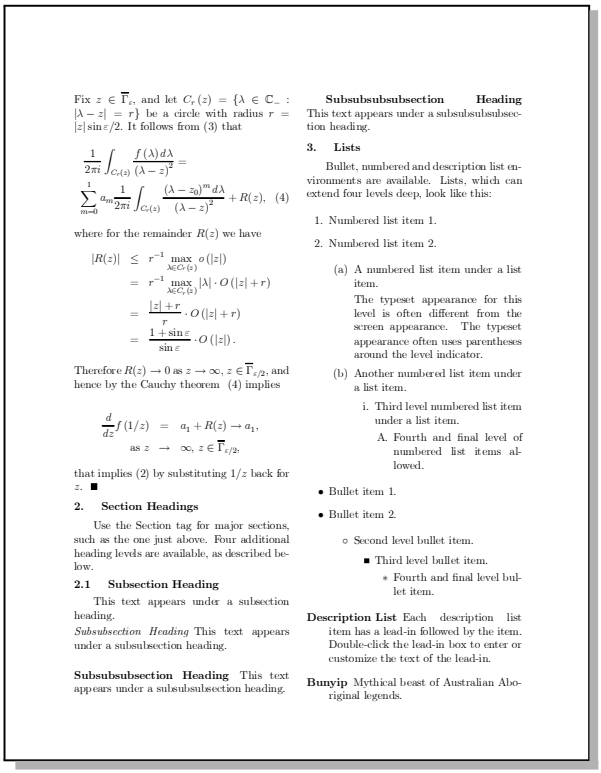
for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

*LaTeX automatically selects the spacing depending on the surrounding line lengths.



Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

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AMS Journal Article

Document class base file: amsart.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The shell is an $\mathcal{AMS}$-LaTeX typesetting specification intended for the preparation of articles to appear in AMS journals. The extensive front matter includes fields for full and short title, address, email address, URL address, thanks, dedication, and key words.

THE TITLE OF AN ARTICLE

DR. AUTHOR JONES

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1991 *Mathematics Subject Classification.* Primary 05C38, 15A15; Secondary 05A15, 15A18.
Key words and phrases. Keyword one, keyword two, keyword three.
Thanks to Mother.
This paper is in final form and no version of it will be submitted for publication anywhere.
[1]LaTeX automatically selects the spacing depending on the surrounding line lengths.

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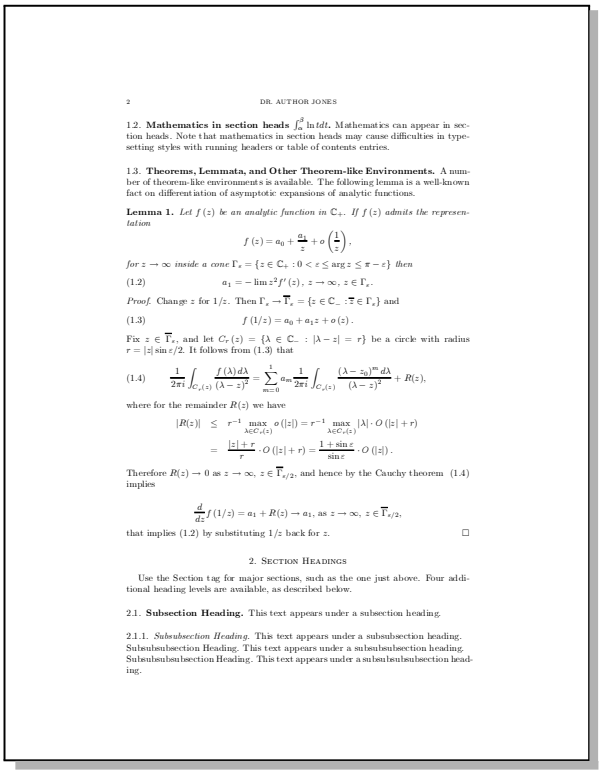

2 DR. AUTHOR JONES

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Bunyip: Mythical beast of Australian Aboriginal legends.

4. Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

The Long Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

> Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'
>
> So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.
>
> There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.
>
> In another moment down went Alice after it, never once considering how in the world she was to get out again.

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At this Address
E-mail address: ajones@oneuniv.edu
URL: http://www.authorone.oneuniv.edu

AMS Proceedings Article

Document class base file: amsproc.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The shell is an $\mathcal{AMS}$-LaTeX typesetting specification intended for the preparation of articles to appear in AMS proceedings. The extensive front matter includes fields for full and short title, address, email address, URL address, thanks, dedication, and key words.

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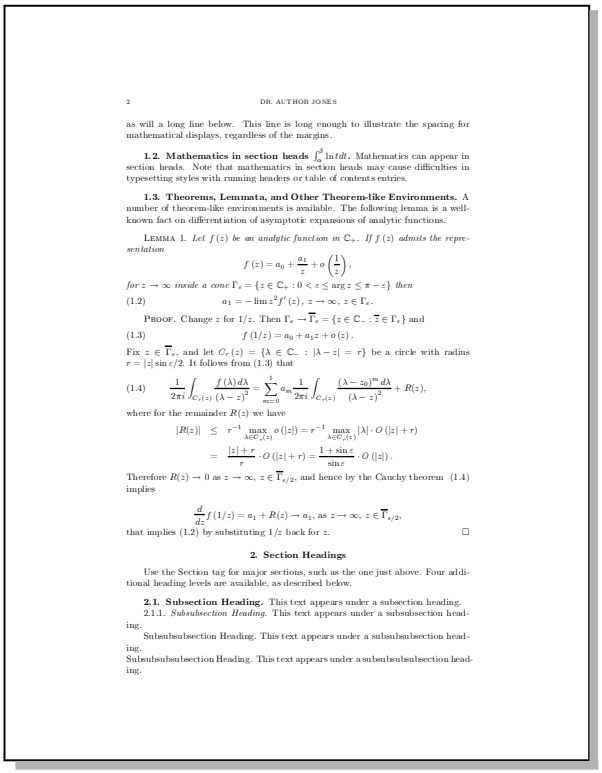

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Bunyip: Mythical beast of Australian Aboriginal legends.

4. Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, *scriptsize*, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

The Long Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

> Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'
>
> So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.
>
> There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.
>
> In another moment down went Alice after it, never once considering how in the world she was to get out again.

5. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [**4**], [5] and [**6**]. You can also have multiple citations appear together. Here is an example: [**2, 3, 4**].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550
[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print
[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964
[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Appendix A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

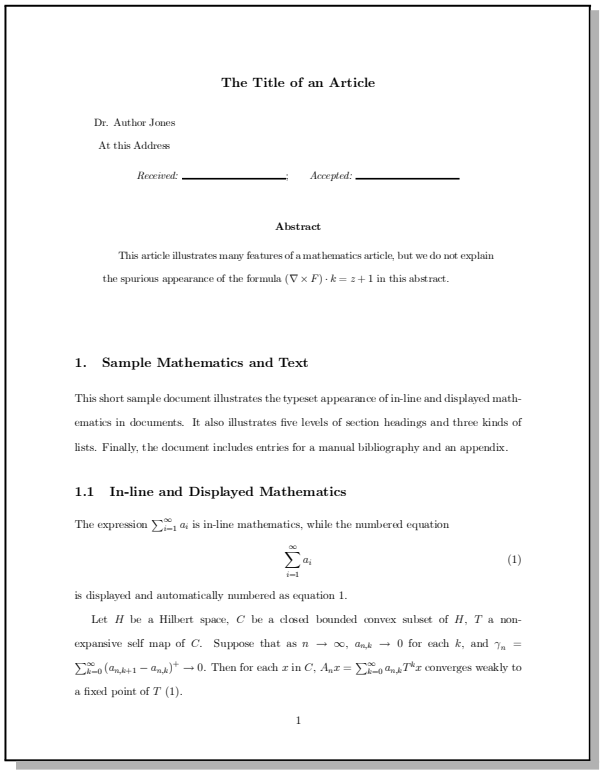
At this Address
E-mail address: ajones@nowhere.edu
URL: `http://www.nowhere.edu`

An Astronomy-Astrophysics Journal

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20asas	None

The shell produces documents whose characteristics are similar to those found in astronomy and astrophysics journals.



The Title of an Article

Dr. Author Jones
At this Address

Received: _____; *Accepted:* _____

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

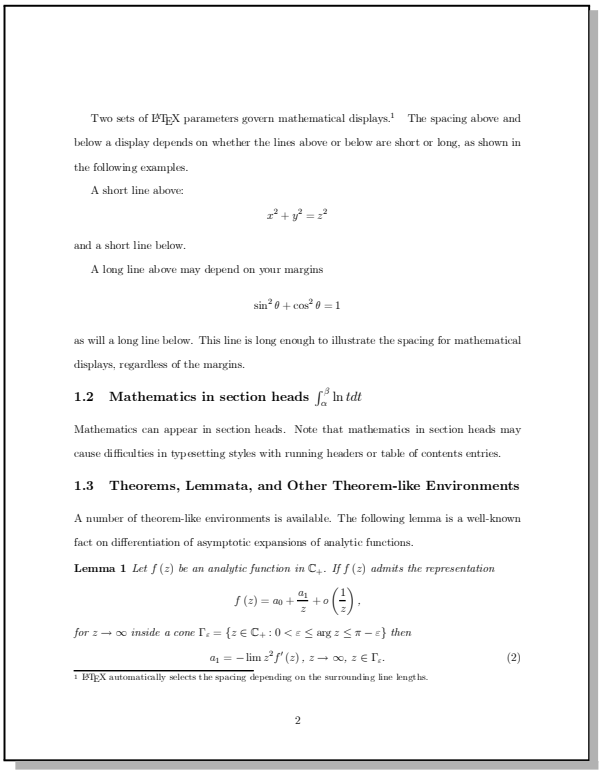
The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T (1).

1



Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

2

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as (4), (5) and (6). You can also have multiple citations appear together. Here is an example: (2, 3, 4).

REFERENCES

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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

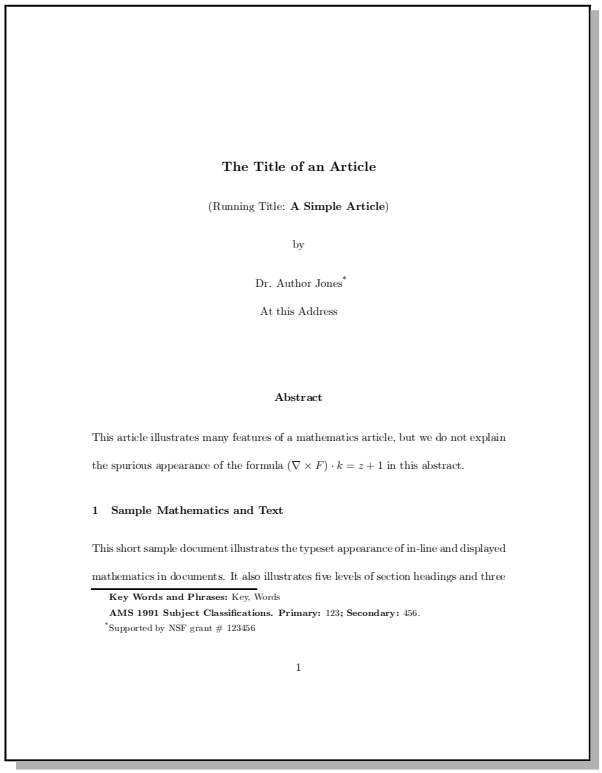
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Annals of Statistics-Draft

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20dft1	None

The shell is intended for preparing drafts of papers to be submitted to the *Annals of Statistics*. The shell produces documents with wide margins and double spacing so that referees and editors have room to write comments; it doesn't produce camera-ready documents. The front matter includes fields for a running title, primary and secondary classes, and key words.



The Title of an Article

(Running Title: **A Simple Article**)

by

Dr. Author Jones*

At this Address

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

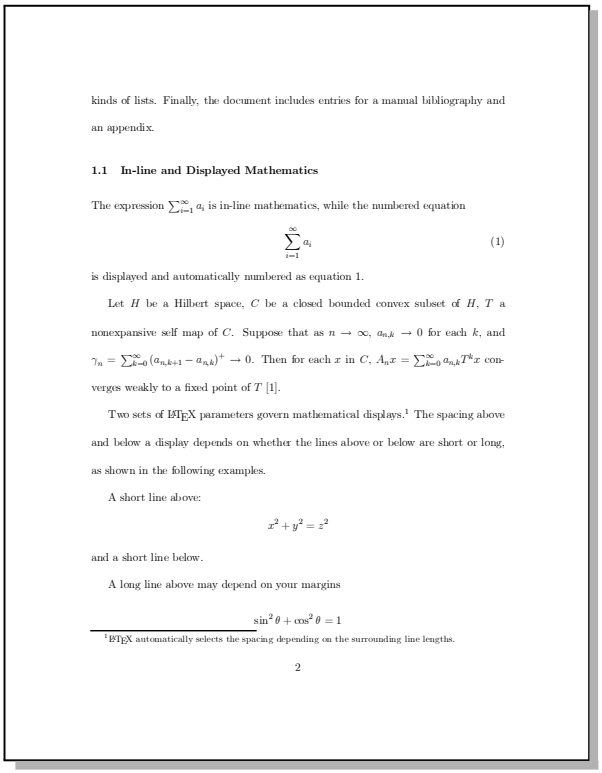
This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three

Key Words and Phrases: Key, Words

AMS 1991 Subject Classifications. Primary: 123; **Secondary:** 456.

*Supported by NSF grant # 123456

1



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2

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

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that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

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This text appears under a subsection heading.

You can apply the special, mathematics only, tags `BLACKBOARD BOLD`, `CALLIGRAPHIC`, and `fraktur`. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> I am not a crook. *Richard Nixon*
>
> They misunderestimated me. George W. Bush

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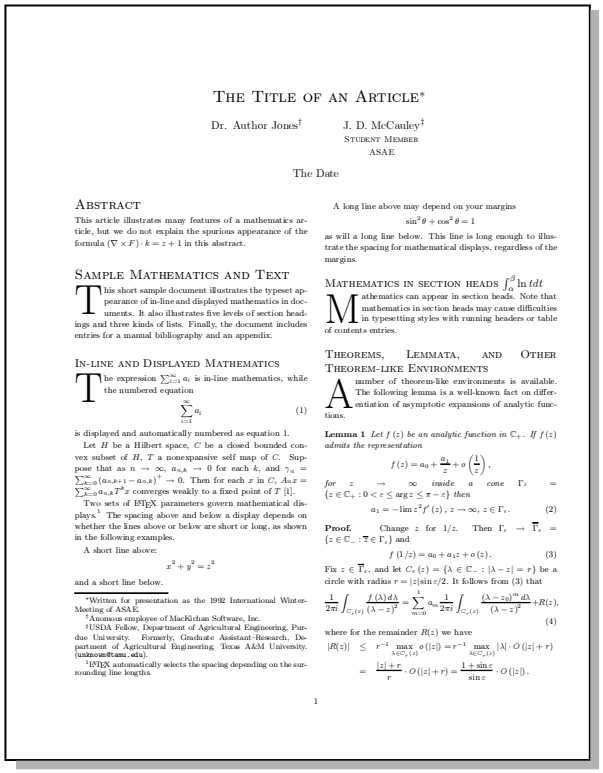
ASAE Transactions

Document class base file: asaetr.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

This shell produces documents appropriate for submission to the *ASAE Transactions*. A special macro (`drop`) defined for the shell typesets a large character at the beginning of a paragraph, with subsequent text wrapped around the character. The macro is best used in *SWP* and *SW* as an encapsulated TeX field so the drop letter can be viewed. See the shell for detailed information. Note that more material fits on double-column pages than on single-column pages.



THE TITLE OF AN ARTICLE*

Dr. Author Jones† J. D. McCauley‡
STUDENT MEMBER
ASAE

The Date

ABSTRACT
This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

SAMPLE MATHEMATICS AND TEXT

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A short line above:

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A long line above may depend on your margins

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MATHEMATICS IN SECTION HEADS $\int_0^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

THEOREMS, LEMMATA, AND OTHER THEOREM-LIKE ENVIRONMENTS

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\epsilon = \{z \in \mathbb{C}_+ : 0 < \epsilon \le \arg z \le \pi - \epsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\epsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\epsilon \to \overline{\Gamma}_\epsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\epsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

Fix $z \in \overline{\Gamma}_\epsilon$, and let $C_\epsilon(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \epsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_\epsilon(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_\epsilon(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

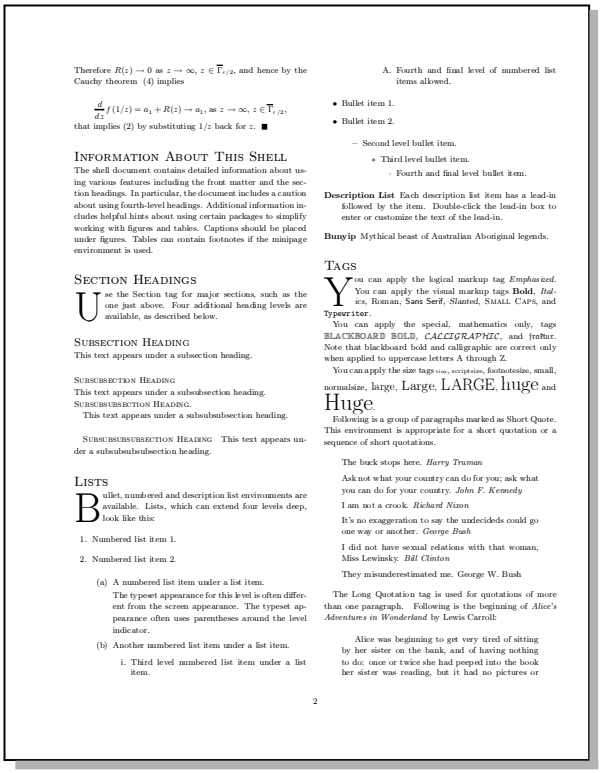
$$|R(z)| \le r^{-1} \max_{\lambda \in C_\epsilon(z)} o(|z|) = r^{-1} \max_{\lambda \in C_\epsilon(z)} |\lambda| \cdot O(|z| + r)$$
$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\epsilon}{\sin\epsilon} \cdot O(|z|)\,.$$

*Written for presentation as the 1992 International Winter Meeting of ASAE.

†Anomous employee of MacKichan Software, Inc.

‡USDA Fellow, Department of Agricultural Engineering, Purdue University. Formerly, Graduate Assistant–Research, Department of Agricultural Engineering, Texas A&M University. (unknown@team.edu).

[1]LaTeX automatically selects the spacing depending on the surrounding line lengths.



Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\epsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\epsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

INFORMATION ABOUT THIS SHELL

The shell document contains detailed information about using various features including the front matter and the section headings. In particular, the document includes a caution about using fourth-level headings. Additional information includes helpful hints about using certain packages to simplify working with figures and tables. Captions should be placed under figures. Tables can contain footnotes if the minipage environment is used.

SECTION HEADINGS

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

SUBSECTION HEADING

This text appears under a subsection heading.

SUBSUBSECTION HEADING

This text appears under a subsubsection heading.

SUBSUBSUBSECTION HEADING.

This text appears under a subsubsubsection heading.

SUBSUBSUBSUBSECTION HEADING This text appears under a subsubsubsubsection heading.

LISTS

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
       The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
       i. Third level numbered list item under a list item.
       A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

TAGS

You can apply the logical markup tag *Emphasized*. You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*
>
> I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*
>
> They misunderestimated me. George W. Bush

The Long Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

> Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or

conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

In another moment down went Alice after it, never once considering how in the world she was to get out again.

About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [6] and [7]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

BibTeX automatically generates the "References" section of your paper from an external database. Style files govern to appearance of your "References" section. In principle, you could change a paper, which met the requirements of one professional society, to that of another by simply changing the style file that you use. The style file asaetr.bst (for ASAE) is currently being developed. Other style files exist for IEEE, ACM, APA, etc.

To use BibTeX, you normally process your file with LaTeX, then with BibTeX, then twice more with LaTeX. The BibTeX style file, which is unfinished, comes close to the citation style used by ASAE. You may have to edit some entries by hand. To do this, edit the *.bbl file after you have processed the file with BibTeX. See Appendix B in [5] (Lamport, 1986) for more information about BibTeX.

References

N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

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Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

Lamport, L.,LaTeX: A Document Preparation System, Addison–Wesley Pub. Co., 1986

Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

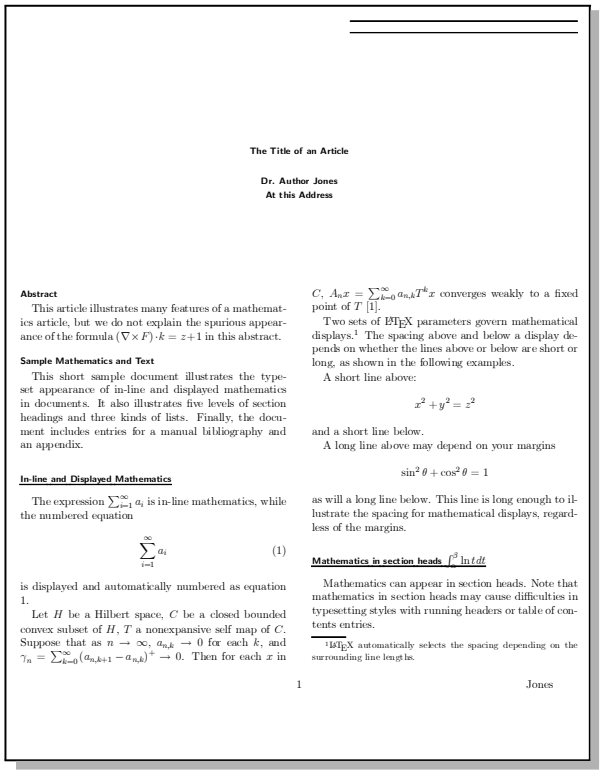
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

ASME Meeting

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20asme	None

The shell produces documents similar to those in ASME Meeting publications. Documents have narrow margins to accommodate two wide columns. The front matter includes a field for a short form of the author's name.



The Title of an Article

Dr. Author Jones
At this Address

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z+1$ in this abstract.

Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

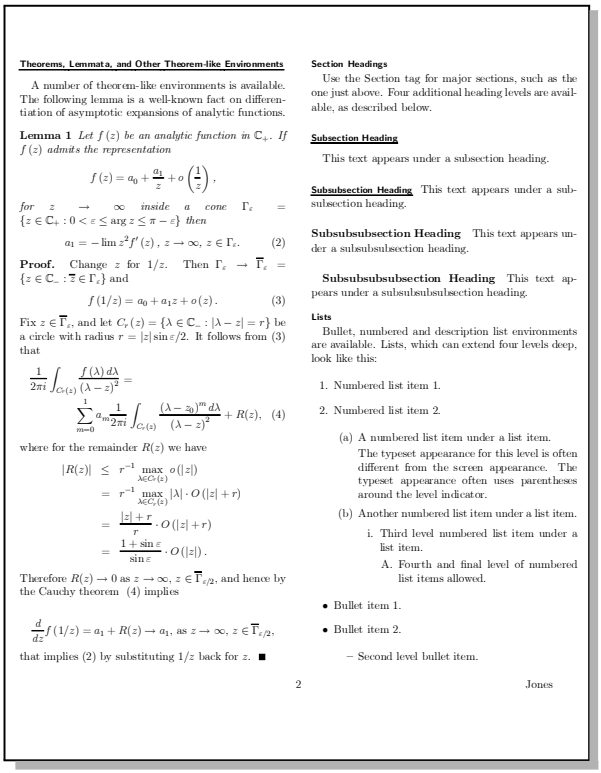
$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in section heads $\int_a^3 \ln t\,dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item. The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.

- Third level bullet item.
  - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

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An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

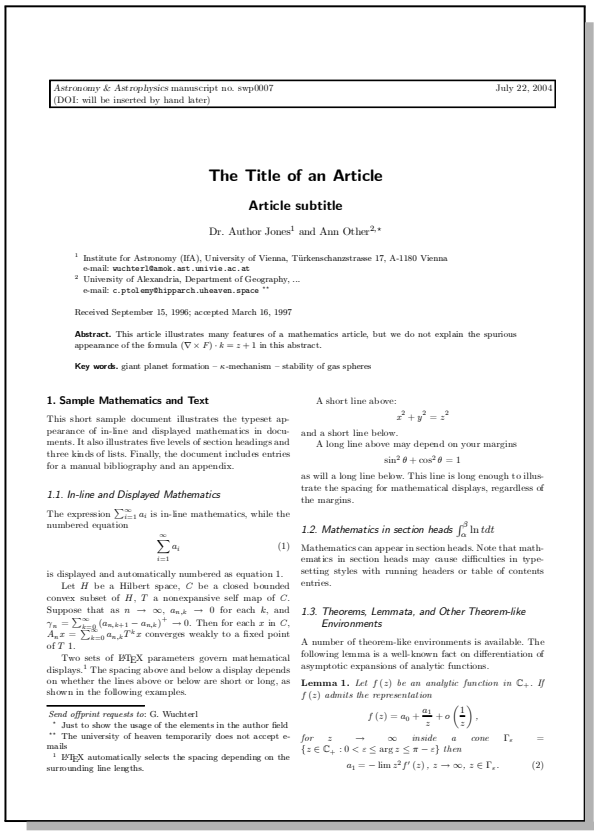
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Astronomy & Astrophysics

Document class base file: aa.cls

Options and Packages	Defaults
Document class options	None
Packages:	
None	

This shell produces documents using the typesetting specifications created for the journal *Astronomy & Astrophysics*. Text appears in two columns.



Astronomy & Astrophysics manuscript no. swp0007 July 22, 2004
(DOI: will be inserted by hand later)

The Title of an Article

Article subtitle

Dr. Author Jones[1] and Ann Other[2,⋆]

[1] Institute for Astronomy (IfA), University of Vienna, Türkenschanzstrasse 17, A-1180 Vienna
e-mail: wuchterl@amok.mt.univie.ac.at
[2] University of Alexandria, Department of Geography, ...
e-mail: c.ptolemy@hipparch.uheaven.space ⋆⋆

Received September 15, 1996; accepted March 16, 1997

Abstract. This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Key words. giant planet formation – κ-mechanism – stability of gas spheres

1. Sample Mathematics and Text

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1.1. In-line and Displayed Mathematics

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1.2. Mathematics in section heads $\int_0^\beta \ln t dt$

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1.3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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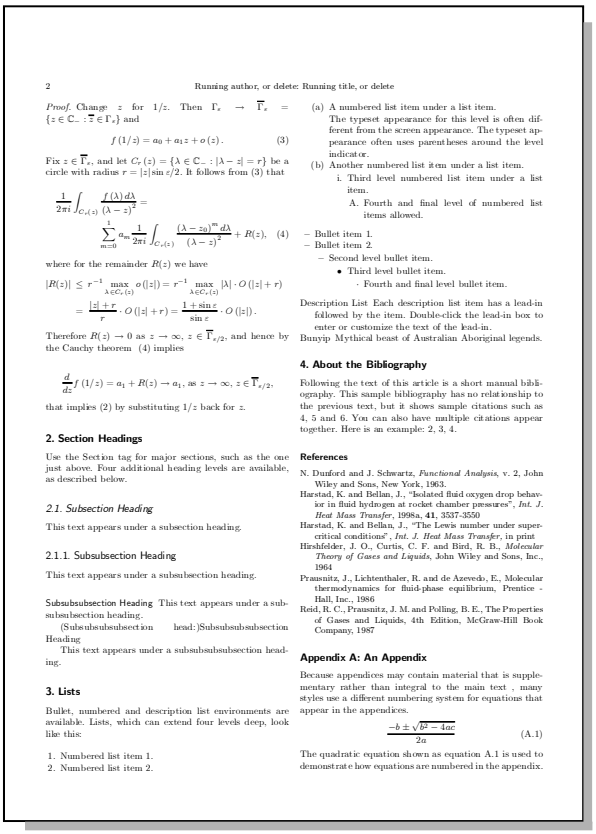
$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Send offprint requests to: G. Wuchterl
⋆ Just to show the usage of the elements in the author field
⋆⋆ The university of heaven temporarily does not accept e-mails

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

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This text appears under a subsection heading.

2.1.1. Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

(Subsubsubsubsection head:)Subsubsubsubsection Heading

This text appears under a subsubsubsubsection heading.

3. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
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Bunyip Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

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References

N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
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Appendix A: An Appendix

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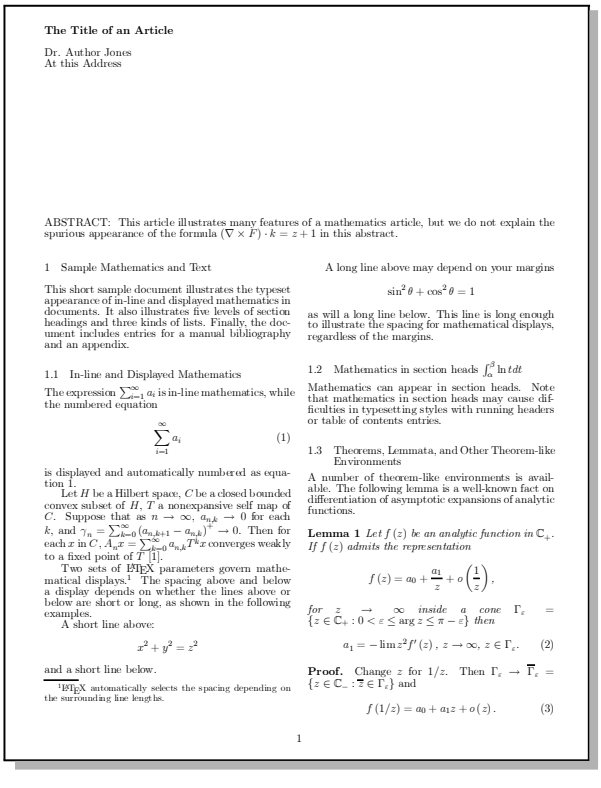
Balkema

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20balk	None

The shell produces documents that are similar to those used by Balkema.



The Title of an Article

Dr. Author Jones
At this Address

ABSTRACT: This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

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1.3 Theorems, Lemmata, and Other Theorem-like Environments

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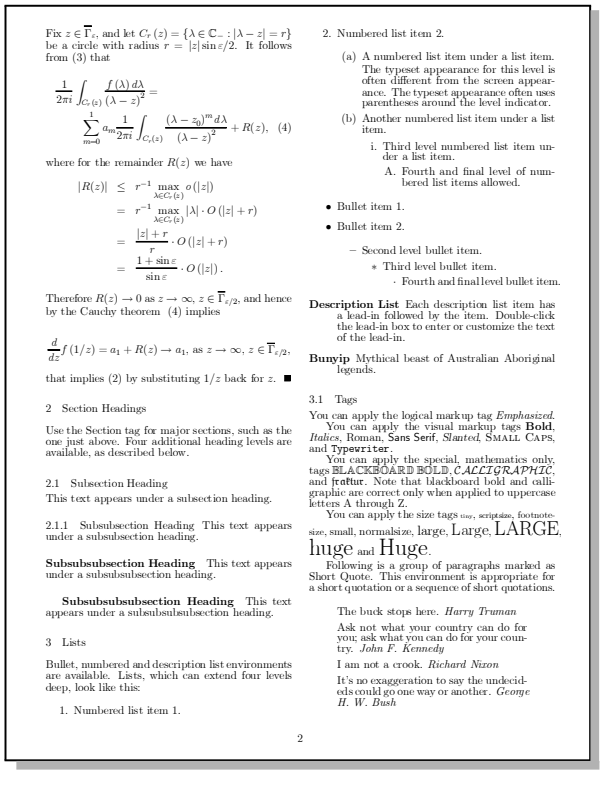
Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$



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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item. The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
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      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

3.1 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George H. W. Bush*

I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*

They misunderestimated me. George W. Bush

The Long Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

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> So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.
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> There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.
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REFERENCES

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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

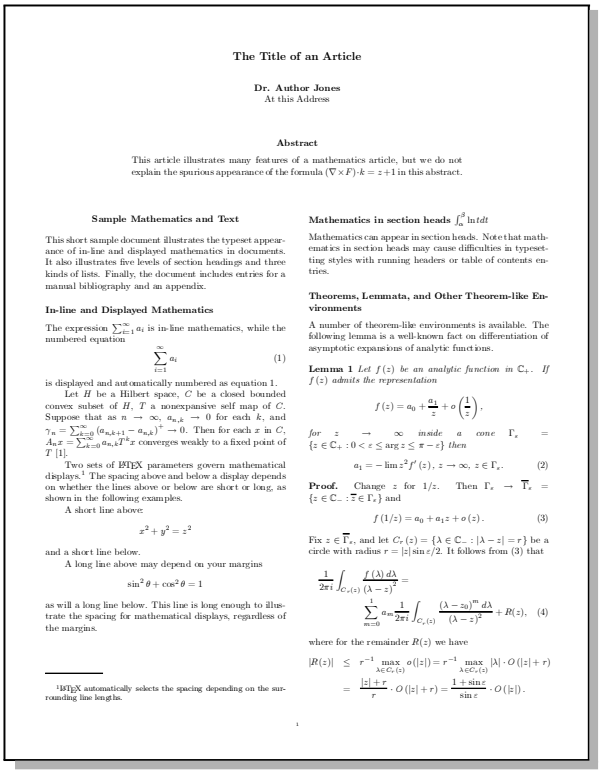
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

DECUS Proceedings

Document class base file: deproc.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
deproc	

The shell uses the LaTeX implementation of a special formatting package to produce documents that meet the requirements for conference papers appearing in the *DECUS Proceedings*. A knowledge of TeX and LaTeX may be helpful in using this shell.



The Title of an Article

Dr. Author Jones
At this Address

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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Mathematics in section heads $\int_a^b \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

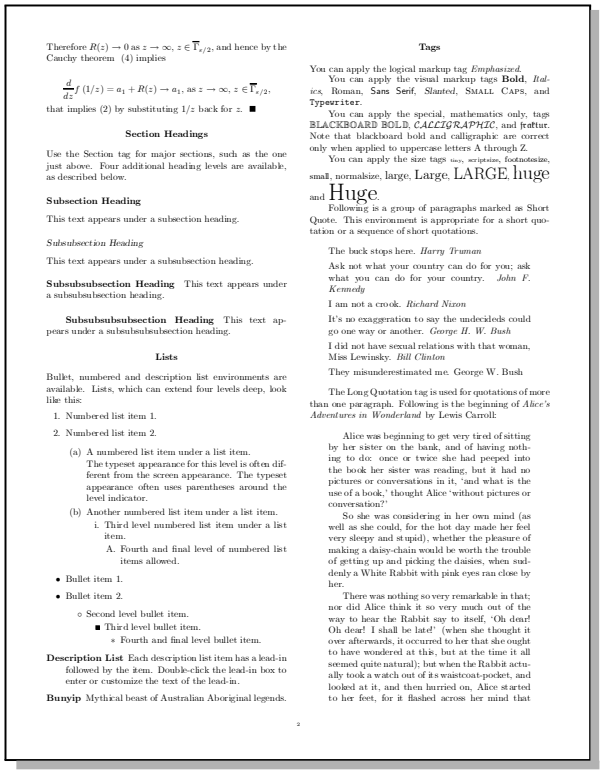
$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) = \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$



Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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Bunyip Mythical beast of Australian Aboriginal legends.

Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, *CALLIGRAPHIC*, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

The buck stops here. *Harry Truman*

Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*

I am not a crook. *Richard Nixon*

It's no exaggeration to say the undecideds could go one way or another. *George H. W. Bush*

I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*

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Excerpt From Original DECUS Documentation

The *DECUS Proceedings*, like the conference proceedings of many other organizations, is rushed to publication as quickly as possible so that the material will reach the conference participants and other interested readers before its value is diminished by time. Reproducing author-prepared copy eliminates the considerable bother and expense of typesetting, proofreading and corrections. The published document should be compact, uniform in appearance, and readable, regardless of the kind or quality of printing device available to the author. For these reasons, instructions to authors have heretofore assumed that nothing more elaborate is available than an ordinary typewriter or dot matrix printer.

To enforce uniformity, the author is provided with "model paper", on which are printed (in non-reproducing ink) column and page borders, alignment marks, and instructions for placement of title, author, and the other parts of a proceedings article. The dimensions of the model paper are almost always larger than those of the published Proceedings — this permits more text to be packed onto each page, and also improves its appearance or "quality" when photographically reduced, smoothing out the rough edges of letters and symbols generated by a typewriter, dot-matrix printer or other "low-resolution" device.

Within the past few years, advances in laser-printer technology have made good-quality output accessible to a growing number of users, through a widening selection of low-cost output systems based on print engines with 300 dot-per-inch resolution and (relatively) easy-to-use interfaces. Such devices have been attached to most kinds of DEC computers, and drivers now exist to print the output from such programs as Scribe, TEX and Troff. Most low-end laser printers cannot use paper wider than $8\frac{1}{2}$", however, so even if both a good composition program and output printer had been available, until now an author would have been discouraged from using them for mechanical reasons.

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An Appendix

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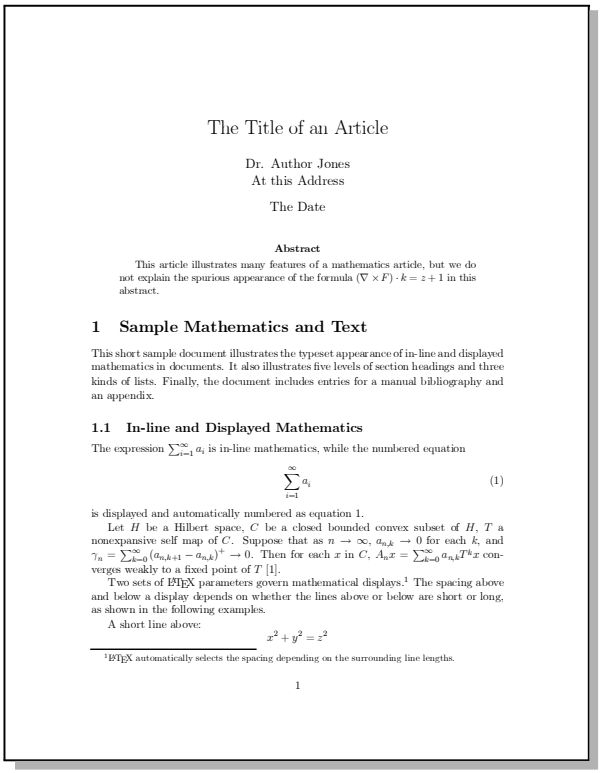
Elbert Walker's Article

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20elba	None

This shell produces documents using the typesetting specifications created for Elbert Walker.



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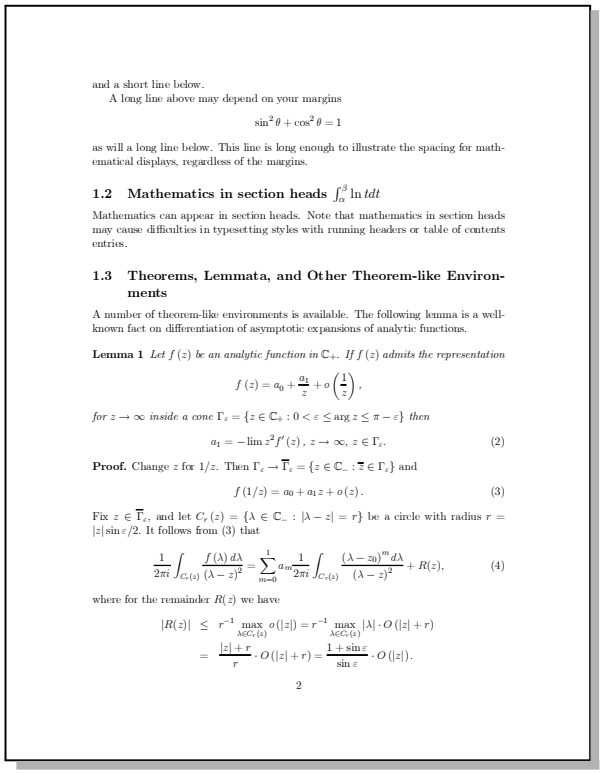

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\iota/2}$, and hence by the Cauchy theorem (4) implies

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>
> I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*
>
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```
#include <iostream>        // < > is used for standard libraries.
void main(void)            // "main" method always called first.
{
  cout << "Hello World.";  // Send to output stream.
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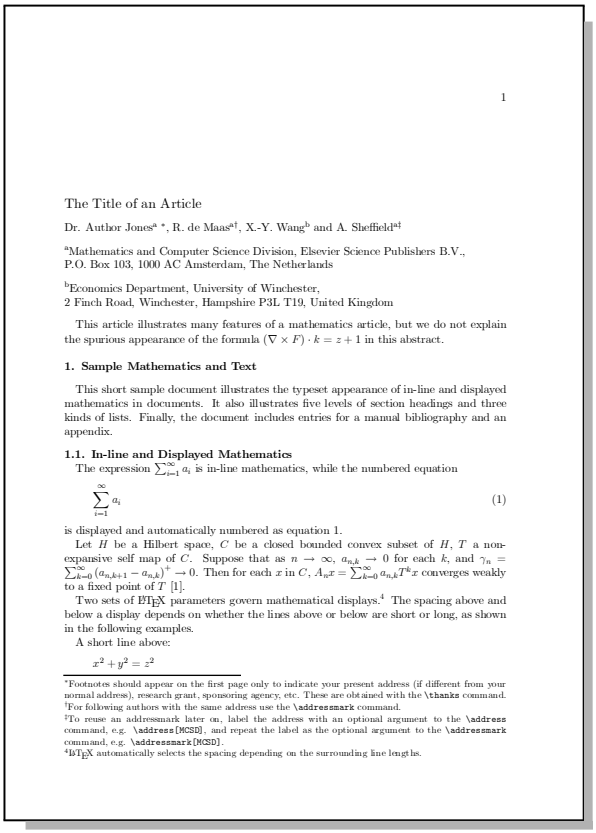
Elsevier CRC One-column

Document class base file: article.cls

Options and Packages	Defaults
Document class options	12 pt, displayed equations flush left, two-sided output
Packages:	
espcrc1	

This shell produces documents using typesetting specifications created for Elsevier Science. The specifications produce one-column, camera-ready copy with wide outside margins.



1

The Title of an Article

Dr. Author Jones[a] *, R. de Maas[a†], X.-Y. Wang[b] and A. Sheffield[a‡]

[a]Mathematics and Computer Science Division, Elsevier Science Publishers B.V.,
P.O. Box 103, 1000 AC Amsterdam, The Netherlands

[b]Economics Department, University of Winchester,
2 Finch Road, Winchester, Hampshire P3L T19, United Kingdom

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*Footnotes should appear on the first page only to indicate your present address (if different from your normal address), research grant, sponsoring agency, etc. These are obtained with the `\thanks` command.
†For following authors with the same address use the `\addressmark` command.
‡To reuse an addressmark later on, label the address with an optional argument to the `\address` command, e.g. `\address[MCSD]`, and repeat the label as the optional argument to the `\addressmark` command, e.g. `\addressmark[MCSD]`.
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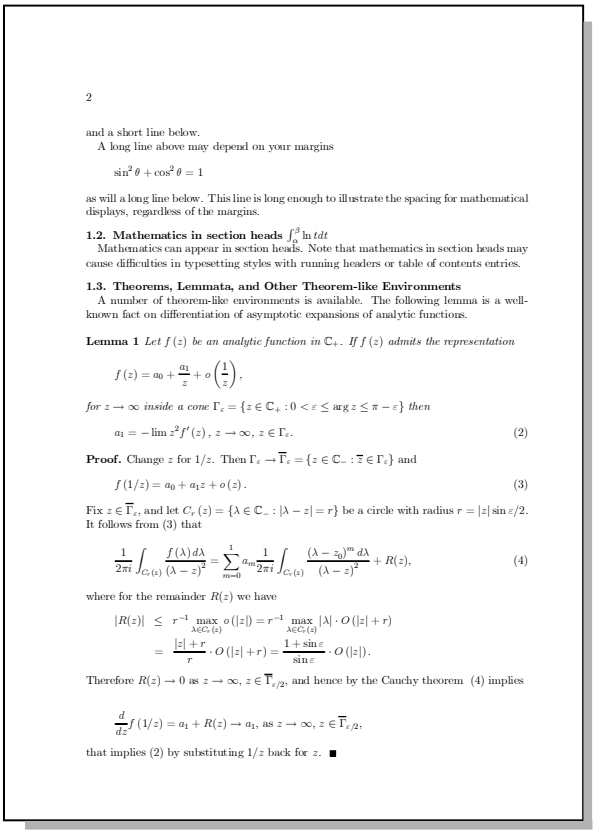

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1.3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1,\ \text{as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1. Subsection Heading
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Subsubsubsubsection Heading

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

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Bunyip Mythical beast of Australian Aboriginal legends.

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A. An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

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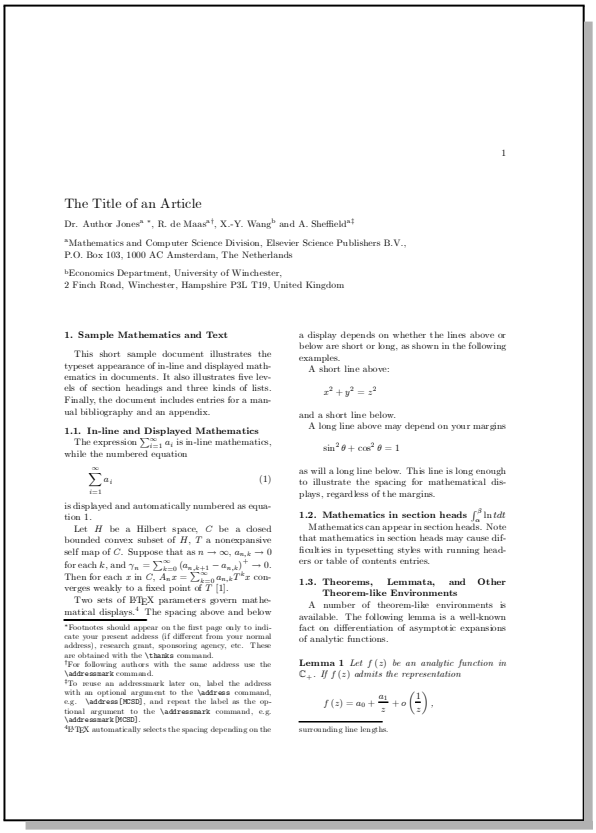
Elsevier CRC Two-column

Document class base file: article.cls

Options and Packages	Defaults
Document class options	displayed equations flush left, two-sided output
Packages:	
espcrc2	

This shell produces documents using typesetting specifications created for Elsevier Science. The specifications produce two-column, camera-ready copy with wide outside margins.



1

The Title of an Article

Dr. Author Jones[a *], R. de Maas[a †], X.-Y. Wang[b] and A. Sheffield[a ‡]

[a]Mathematics and Computer Science Division, Elsevier Science Publishers B.V.,
P.O. Box 103, 1000 AC Amsterdam, The Netherlands

[b]Economics Department, University of Winchester,
2 Finch Road, Winchester, Hampshire P3L T19, United Kingdom

1. Sample Mathematics and Text

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$$\sin^2\theta + \cos^2\theta = 1$$

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Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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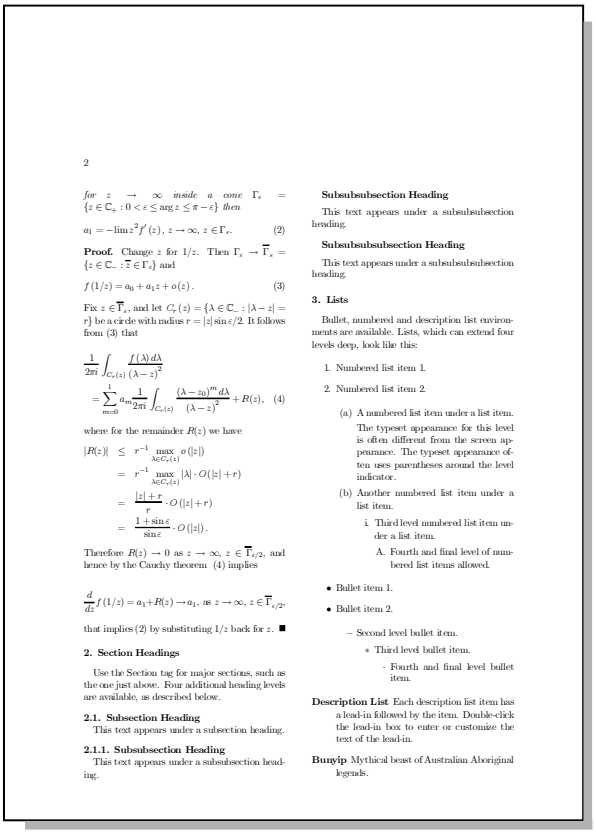
surrounding line lengths.

*Footnotes should appear on the first page only to indicate your present address (if different from your normal address), research grant, sponsoring agency, etc. These are obtained with the \thanks command.

†For following authors with the same address use the \addressmark command.

‡To reuse an addressmark later on, label the address with an optional argument to the \address command, e.g. \address[MCSD], and repeat the label as the optional argument to the \addressmark command, e.g. \addressmark[MCSD].

[4]LaTeX automatically selects the spacing depending on the



2

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

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Elsevier IFAC Proceedings

Document class base file: ifacmtg.cls

Options and Packages	Defaults
Document class options	A4 paper
Packages:	
None	

This shell produces documents using the typesetting specifications created for the conference proceedings of the International Federation of Automatic Control.

THE TITLE OF AN ARTICLE

Dr. Author Jones

Dr. Author Second and Dr. Author Third

At this Address
author2@university2.edu

Abstract: This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \bullet k = z + 1$ in this abstract.

Keywords: Elsevier LaTeX sample document

1. SAMPLE MATHEMATICS AND TEXT

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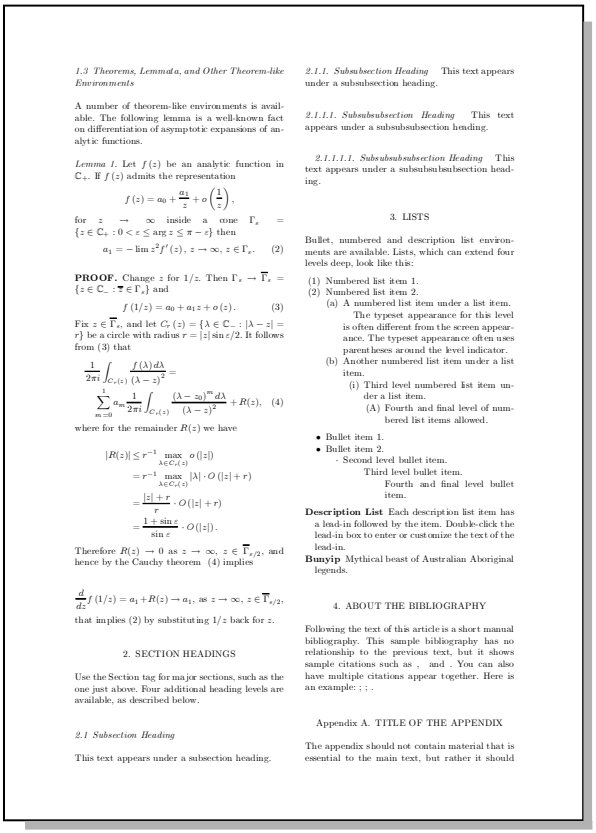

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where for the remainder $R(z)$ we have

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Appendix A. TITLE OF THE APPENDIX

The appendix should not contain material that is essential to the main text, but rather it should

contain text that is helpful to a reader seeking further clarification. It can also contain explanations and elaborations that are too long for footnotes. The appendix or appendices should not be a depository for odds and ends that the author was unable to work into the body of his text.

Equations are sometimes numbered differently in an appendix, but his may not always be true.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

The quadratic equation shown as equation A.1 is used to see how equations are numbered in the appendix.

(Chapter head:)*

Bibliography

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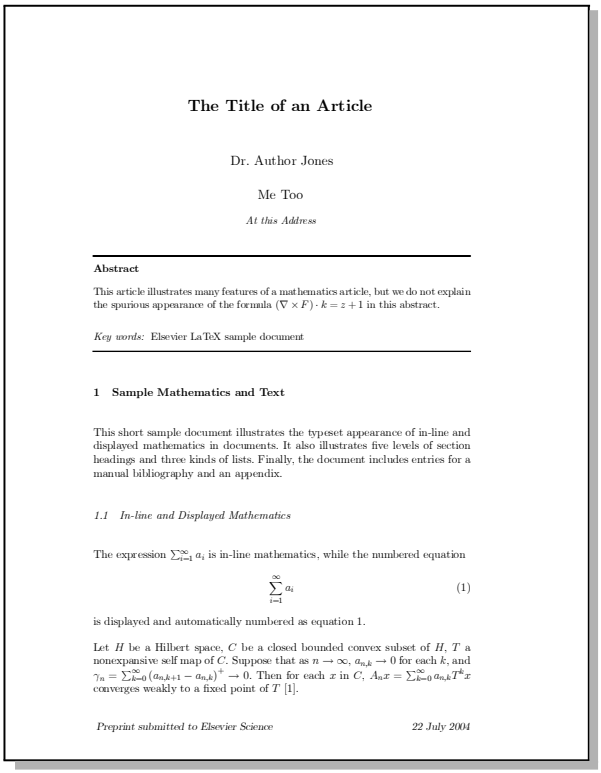
Elsevier Preprint

Document class base file: elsart.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell produces documents with a layout that meets the preprint typesetting specifications for articles published in Elsevier Science's journals. Instead of using *SWP* or *SW* front matter, the shell uses a frontmatter environment in a TEX field at the beginning of the document. The theorem environments are non-standard and defined by the typesetting specification files instead of in the document preamble. Note that using copy and paste techniques to move theorem-like environments between this shell and others requires re-tagging the environments.



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Me Too

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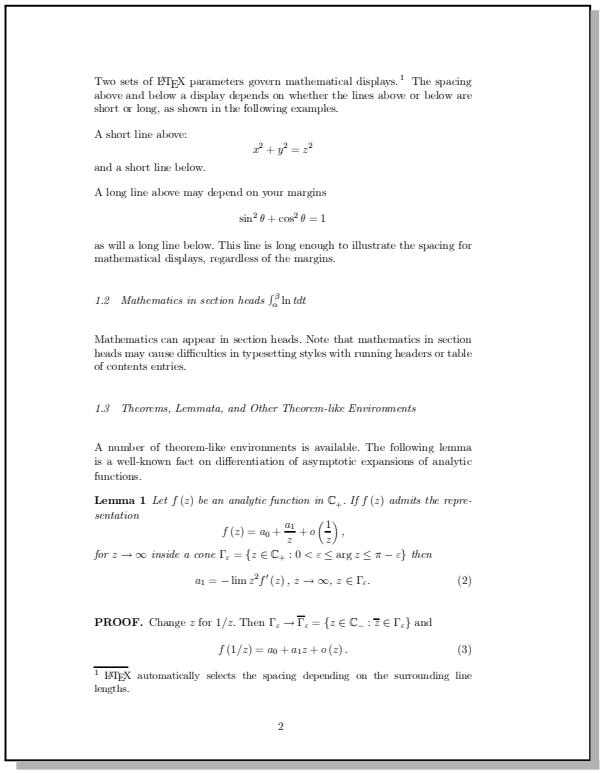

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(Subsubsubsubsection head:)Subsubsubsubsection Heading

This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

(1) Numbered list item 1.
(2) Numbered list item 2.
  (a) A numbered list item under a list item.
    The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
  (b) Another numbered list item under a list item.
    (i) Third level numbered list item under a list item.
      (A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    Third level bullet item.
      Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.
Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2–4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \qquad (A.1)$$

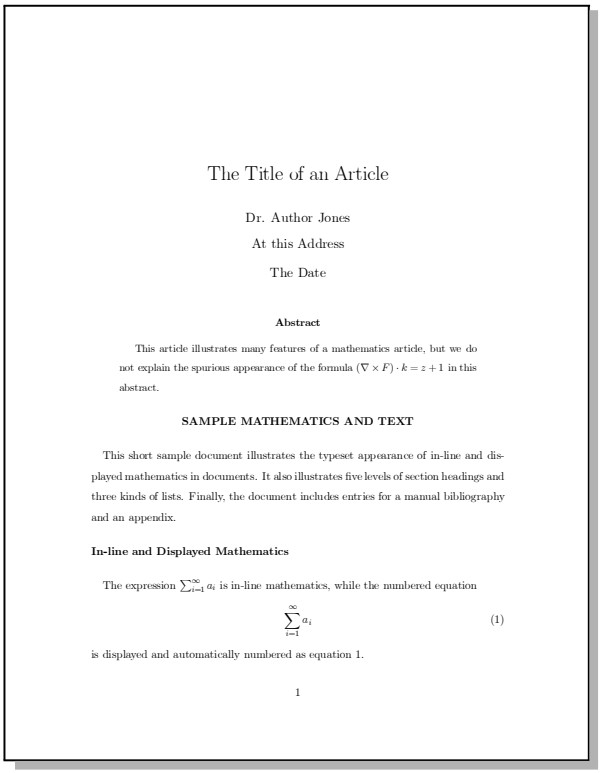
The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

Geophysics Journal

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
geophysics	None

This shell produces documents that meet the *Geophysics Journal* typesetting specifications. The shell uses the default class options, except that 12 pt has been selected for the body text font size. Some headings are centered.



The Title of an Article

Dr. Author Jones

At this Address

The Date

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

SAMPLE MATHEMATICS AND TEXT

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

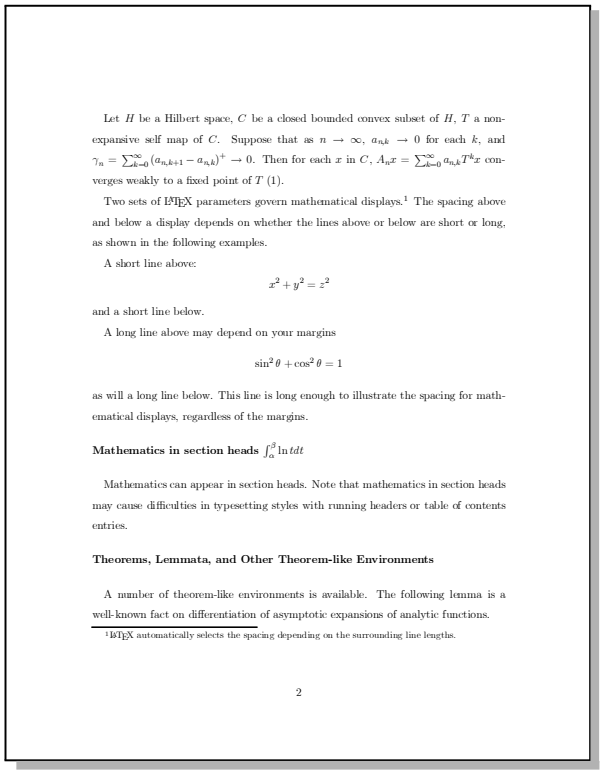
In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

1



Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T (1).

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

2

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

SECTION HEADINGS

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading.—

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

LISTS

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.

   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.

   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.

- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

ABOUT THE BIBLIOGRAPHY

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as (4), (5) and (6). You can also have multiple citations appear together. Here is an example: (2; 3; 4).

REFERENCES

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

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AN APPENDIX

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

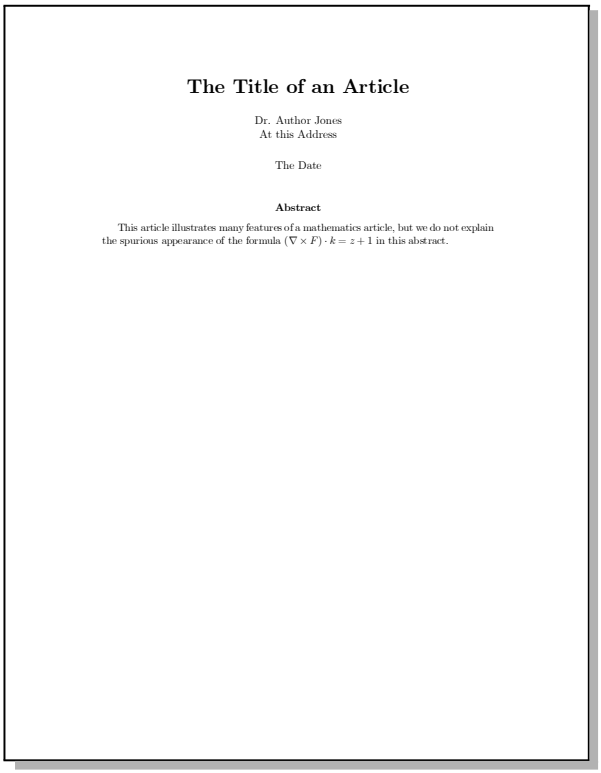
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Harold O. Fried's Article

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20fra	None

This shell produces documents using typesetting specification created for Harold O. Fried and Betty Daniel. The title page containing the abstract is single-spaced; the body of the article is double-spaced.



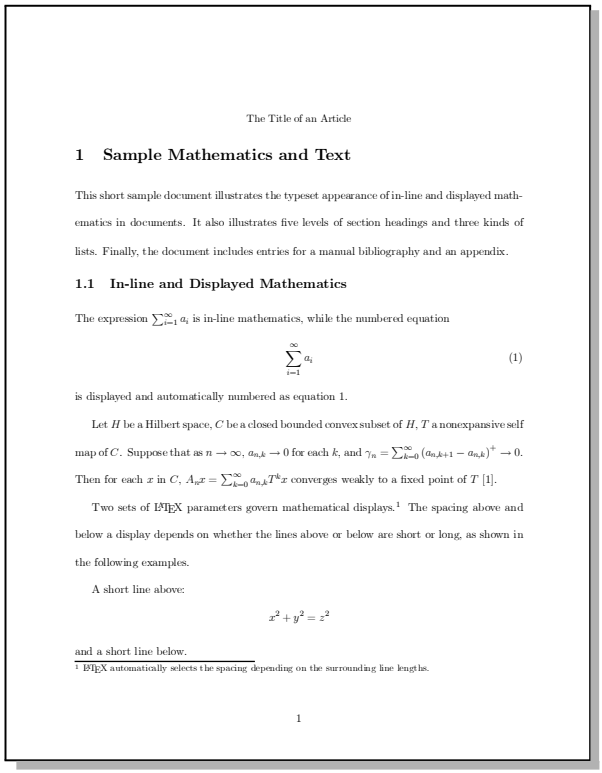
The Title of an Article

Dr. Author Jones
At this Address

The Date

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.



1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda\in C_r(z)} o(|z|) = r^{-1} \max_{\lambda\in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

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Appendix A

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1}$$

The quadratic equation shown as equation 1 is used to demonstrate how equations are numbered in the appendix.

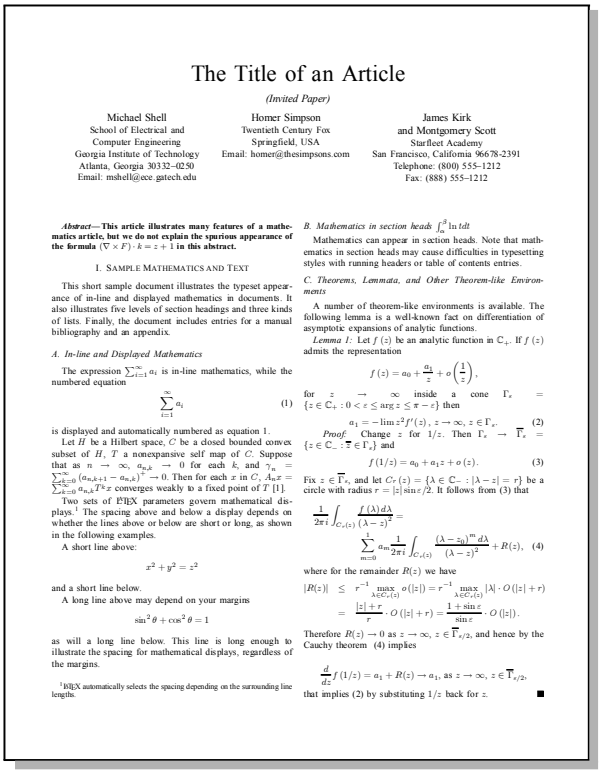
IEEE Transactions for Conferences

Document class base file: IEEEtran.cls

Options and Packages	Defaults
Document class options	Two-column output
Packages:	
None	

This shell produces documents appropriate for submission to conference proceedings published by the Institute of Electrical and Electronics Engineers, Inc.

The shell uses front matter elements and author information from a TeX field at the beginning of the document. The `maketitle` command and the abstract are also moved to TeX fields at the beginning of the document. The shell contains more detailed information.



The Title of an Article

(Invited Paper)

Michael Shell
School of Electrical and Computer Engineering
Georgia Institute of Technology
Atlanta, Georgia 30332–0250
Email: mshell@ece.gatech.edu

Homer Simpson
Twentieth Century Fox
Springfield, USA
Email: homer@thesimpsons.com

James Kirk and Montgomery Scott
Starfleet Academy
San Francisco, California 96678-2391
Telephone: (800) 555–1212
Fax: (888) 555–1212

***Abstract*— This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.**

I. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

A. In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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A short line above:

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[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

B. Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

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Lemma 1: Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

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$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

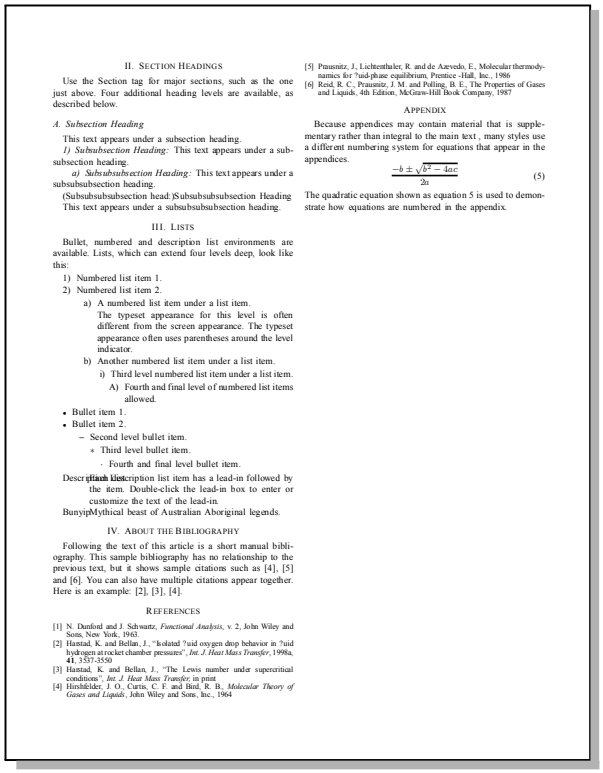
where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) = \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■



II. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

A. Subsection Heading

This text appears under a subsection heading.

1) Subsubsection Heading: This text appears under a subsubsection heading.

a) Subsubsubsection Heading: This text appears under a subsubsubsection heading.

(Subsubsubsubsection head)Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

III. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1) Numbered list item 1.
2) Numbered list item 2.
   a) A numbered list item under a list item.
      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   b) Another numbered list item under a list item.
      i) Third level numbered list item under a list item.
         A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description list Each item in a description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

IV. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2], [3], [4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
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Appendix

Because appendices may contain material that is supplementary rather than integral to the main text, many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

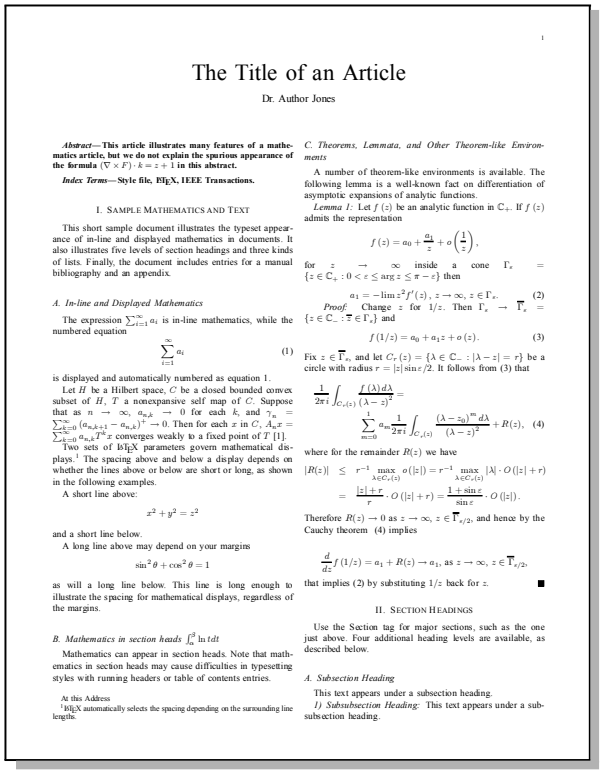
IEEE Transactions for Journals

Document class base file: IEEEtran.cls

Options and Packages	Defaults
Document class options	Two-column output
Packages:	
None	

This shell produces documents appropriate for submission to many journals published by the Institute of Electrical and Electronics Engineers, Inc. The shell creates key words with a special macro that appears at the beginning of the body of your documents; replace the text in the key words environment with your key words.

The shell also uses two special commands (`markboth` and `setcounter`), which are placed in TEX fields. The commands set the text for the page header and the beginning page number. Revise or omit the contents of these fields as necessary. The shell contains more detailed information.



1

The Title of an Article

Dr. Author Jones

***Abstract*— This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.**

***Index Terms*— Style file, LaTeX, IEEE Transactions.**

I. Sample Mathematics and Text

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$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

B. Mathematics in section heads $\int_0^3 \ln t\,dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

At this Address

[1]LaTeX automatically selects the spacing depending on the surrounding line lengths.

C. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1: Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$ and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) = \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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that implies (2) by substituting $1/z$ back for z. ∎

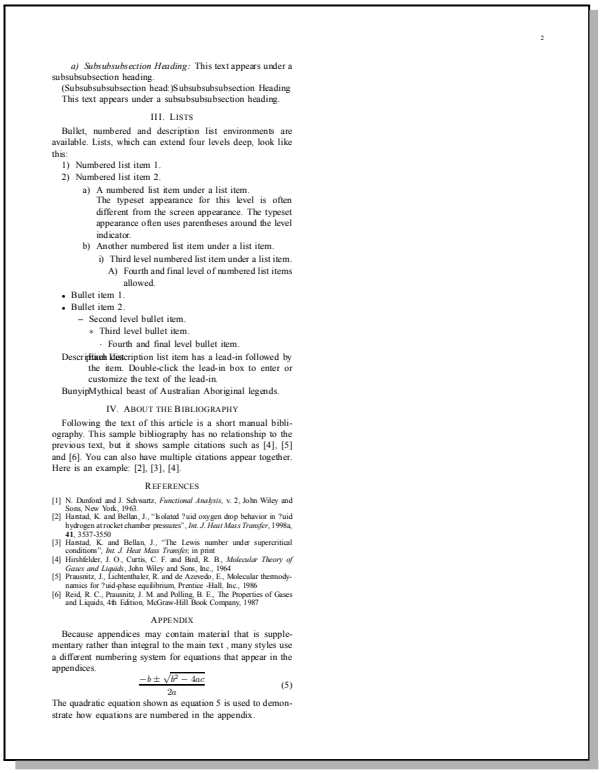
II. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

A. Subsection Heading

This text appears under a subsection heading.

1) Subsubsection Heading: This text appears under a subsubsection heading.



2

a) Subsubsubsection Heading: This text appears under a subsubsubsection heading.

(Subsubsubsubsection head:)Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

III. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1) Numbered list item 1.
2) Numbered list item 2.
   a) A numbered list item under a list item.
      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   b) Another numbered list item under a list item.
      i) Third level numbered list item under a list item.
         A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description list: Description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

IV. About the Bibliography

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Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

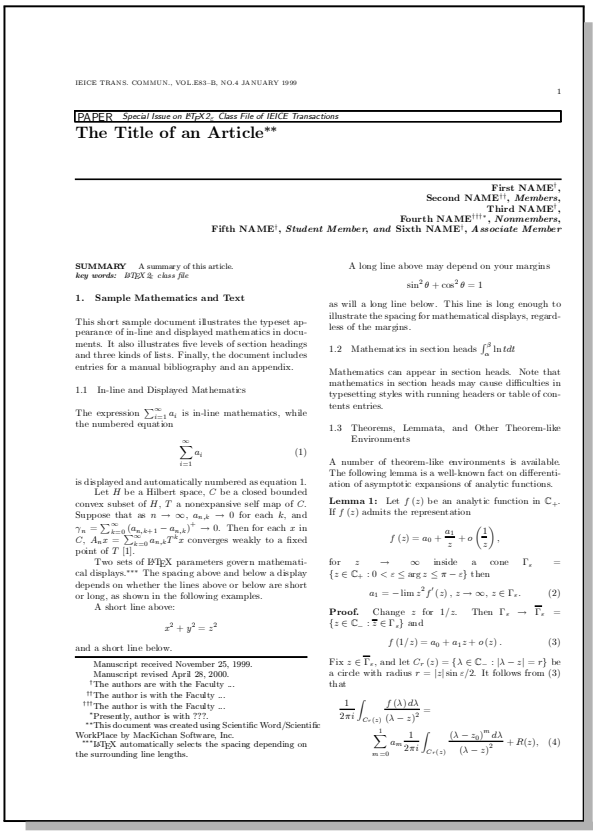
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

IEICE Transactions

Document class base file: ieice.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

This shell document produces double-column documents appropriate for English-language articles in the *IEICE Transactions,* a publication of The Institute of Electronics, Information and Communication Engineers. The front matter contains many special items used by the typesetting specifications, including notes on the title, a designation of where to break the line of authors' names, authors' affiliations, engineering field, volume and number of the journal, and designation of a special issue of the journal. Summary and key words fields appear at the beginning of the body of the document. See the shell for more information.



PAPER *Special Issue on LaTeX2ε Class File of IEICE Transactions*

The Title of an Article**

First NAME†, Second NAME††, *Members*, Third NAME†, Fourth NAME†††*, *Nonmembers*, Fifth NAME†, *Student Member*, and Sixth NAME†, *Associate Member*

SUMMARY A summary of this article.
key words: *LaTeX 2ε, class file*

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

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$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1: Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

(1) Subsubsubsection Heading

This text appears under a subsubsubsection heading.

((1).1) Subsubsubsubsection Heading

This text appears under a subsubsubsubsection heading.

3. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   a. A numbered list item under a list item. The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   b. Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2]–[4].

References

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[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550
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Appendix A: An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A·1}$$

The quadratic equation shown as equation A·1 is used to demonstrate how equations are numbered in the appendix.

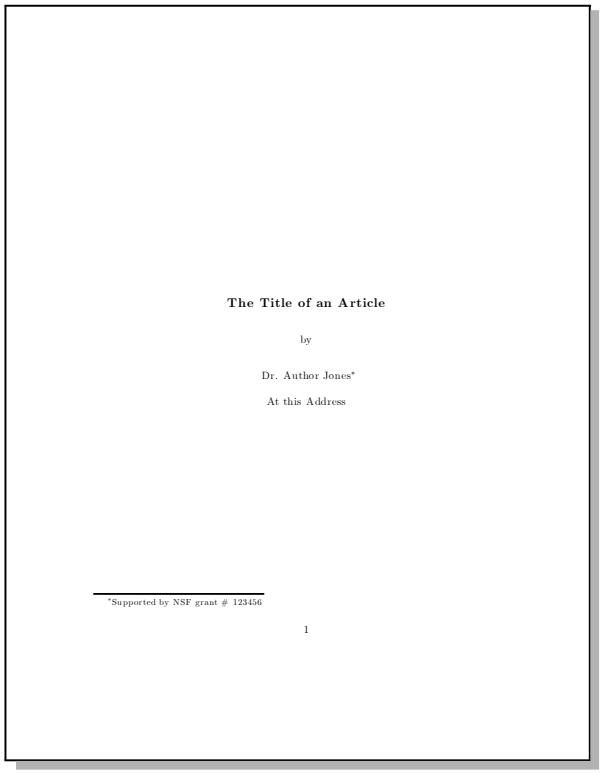
Manuscript received November 25, 1999.
Manuscript revised April 28, 2000.
†The authors are with the Faculty ...
††The author is with the Faculty ...
†††The author is with the Faculty ...
*Presently, author is with ???.
**This document was created using Scientific Word/Scientific WorkPlace by MacKichan Software, Inc.
***LaTeX automatically selects the spacing depending on the surrounding line lengths.

International Journal of Forecasting - Draft

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20dft2	None

This shell produces draft documents suitable for submitting to the *International Journal of Forecasting*. It has large margins and double spacing throughout so that referees and editors have room to write comments. The front matter includes specification of a running title, AMS classification (both primary and secondary), and key words. Documents produced with this shell are not camera-ready.



The Title of an Article

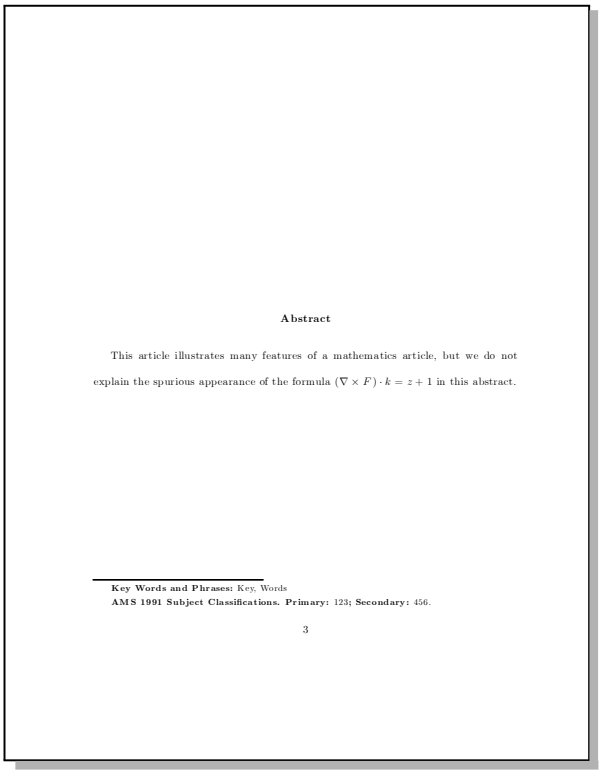
by

Dr. Author Jones*

At this Address

*Supported by NSF grant # 123456

1



Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Key Words and Phrases: Key, Words
AMS 1991 Subject Classifications. Primary: 123; **Secondary:** 456.

3

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

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is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[3] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

[3] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Proof. Change z for $1/z$. Then $\Gamma_s \to \overline{\Gamma}_s = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_s\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

(b) Another numbered list item under a list item.

i. Third level numbered list item under a list item.

A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
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Description List Each description list item has a lead-in followed by the item.

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Bunyip Mythical beast of Australian Aboriginal legends.

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A An Appendix

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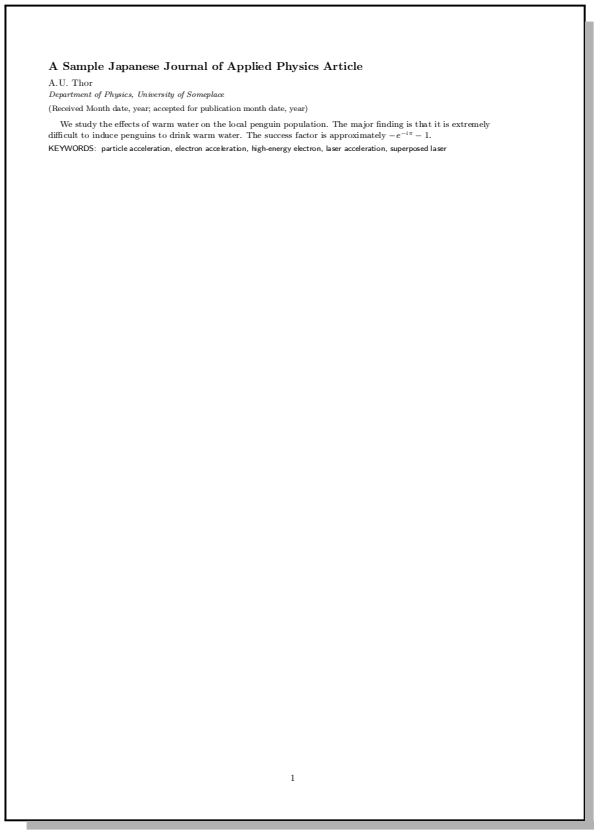
Japanese Journal of Applied Physics

Document class base file: jjap.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
graphicx	Standard

The shell uses special front matter fields to designate the institute of the author and the key words for the document. Also, it uses a special macro for the appendix—`\appendix{Section name}`—instead of the usual `\appendix` macro. The section name uses the normal section tag.



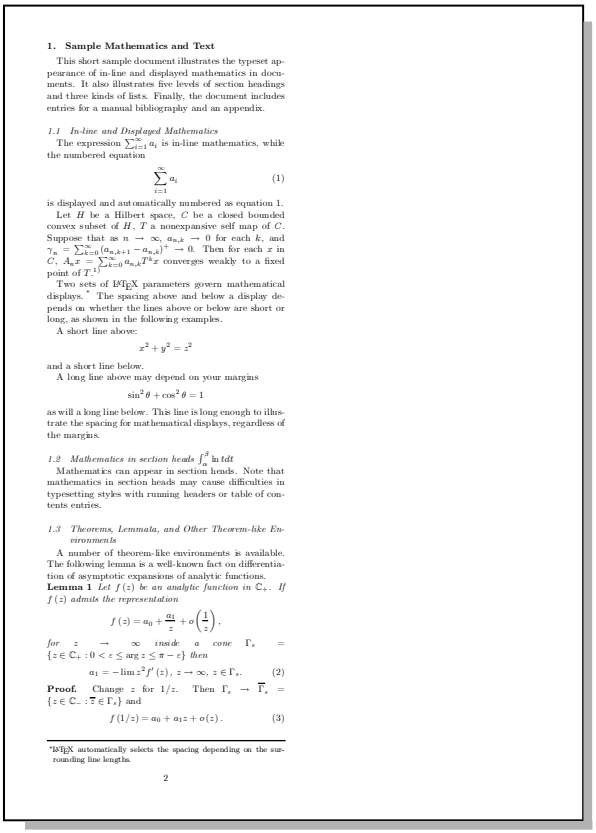
A Sample Japanese Journal of Applied Physics Article

A.U. Thor
Department of Physics, University of Someplace

(Received Month date, year; accepted for publication month date, year)

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$.

KEYWORDS: particle acceleration, electron acceleration, high-energy electron, laser acceleration, superposed laser



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$$\sin^2\theta + \cos^2\theta = 1$$

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A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

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where for the remainder $R(z)$ we have

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$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,.$$

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Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

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      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

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Appendix: Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (A\text{-}1)$$

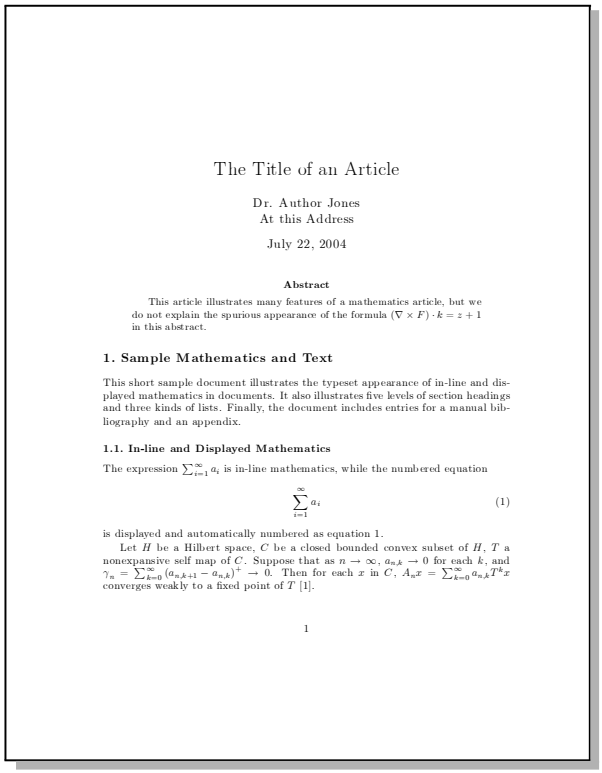
The quadratic equation shown as equation A-1 is used to demonstrate how equations are numbered in the appendix.

JEEP - A General Purpose Vehicle

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
amsmath	Standard
jeep	None

The shell produces general-purpose documents, as the name implies, using a 12-pt font. Headings appear at the left side of the page.



The Title of an Article

Dr. Author Jones
At this Address

July 22, 2004

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1. In-line and Displayed Mathematics

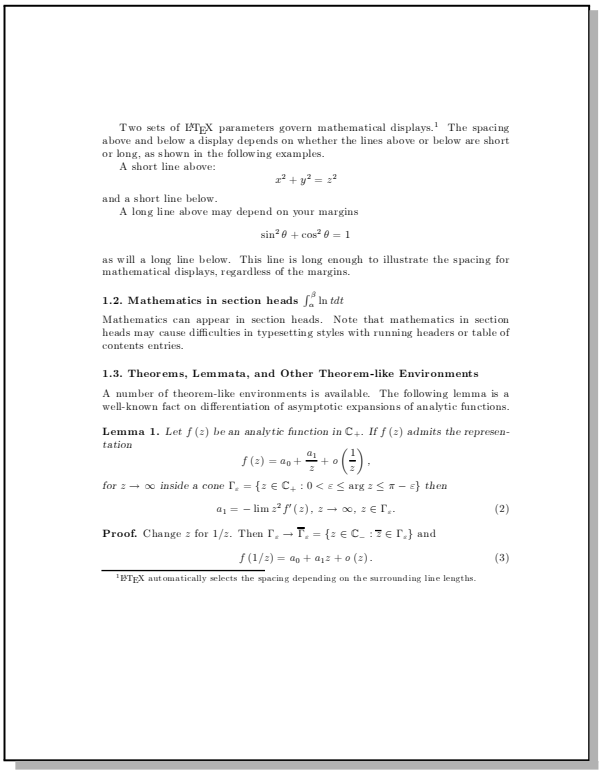
The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

1



Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

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A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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1.2. Mathematics in section heads $\int_a^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

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Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1. Subsection Heading

This text appears under a subsection heading.

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Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
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    1. A numbered list item under a list item.
       The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

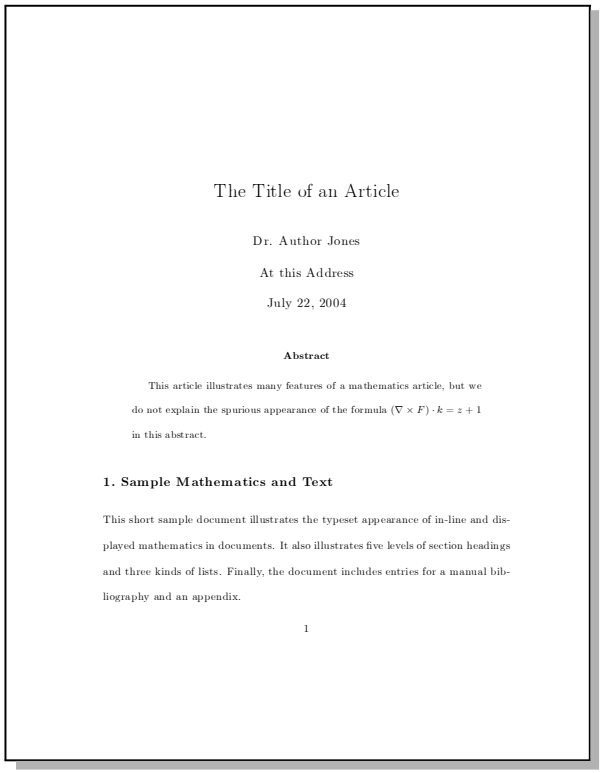
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

JEEP - Double-spaced Except for Quotes

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
amsmath	Standard
jeep	None
sw20jar2	None

The information in documents produced with this shell is double-spaced, except for quotes. The shell uses a 12-pt font. Headings appear at the left side of the page.



The Title of an Article

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At this Address

July 22, 2004

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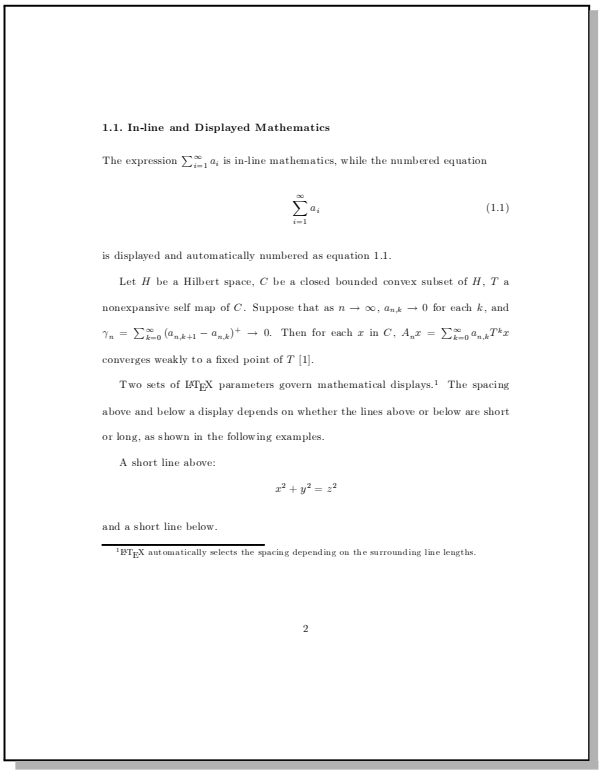
1



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2

A long line above may depend on your margins

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Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

The Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

> There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

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A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

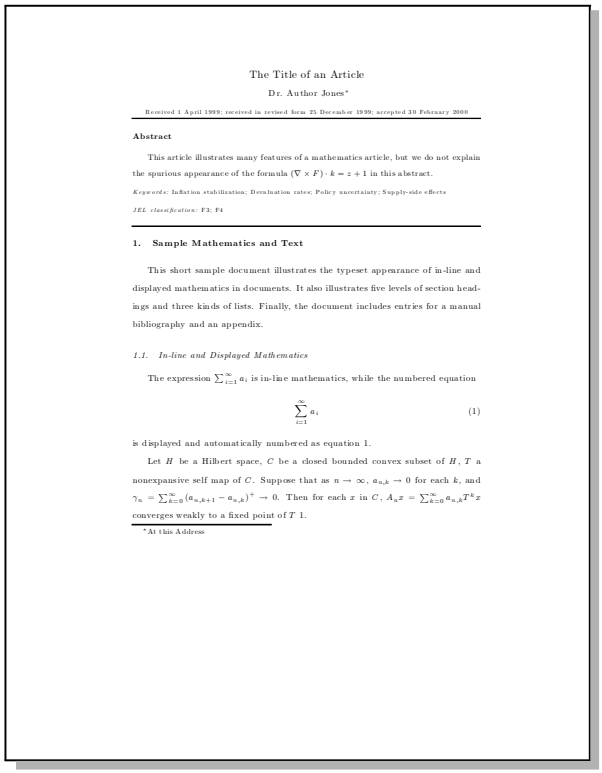
$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

Journal of International Economics North-Holland

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Draft
Packages:	
sw20nhej	None
endnotes	None

The shell includes front matter fields for key words and for a classification as determined by the *Journal of Economic Literature.*



The Title of an Article

Dr. Author Jones*

Received 1 April 1999; received in revised form 25 December 1999; accepted 20 February 2000

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Keywords: Inflation stabilization; Devaluation rates; Policy uncertainty; Supply-side effects

JEL classification: F3; F4

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*At this Address

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

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This text appears under a subsection heading.

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

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   (a) A numbered list item under a list item.

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A An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

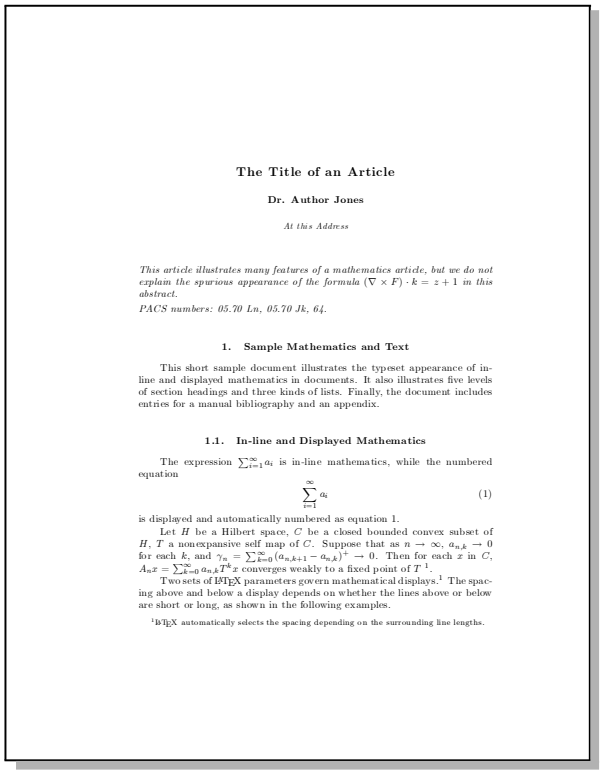
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Journal of Low Temperature Physics

Document class base file: jltp.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell places all front matter in TEX fields at the beginning of the body of the document. The shell also includes a field for a running header.



The Title of an Article

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PACS numbers: 05.70 Ln, 05.70 Jk, 64.

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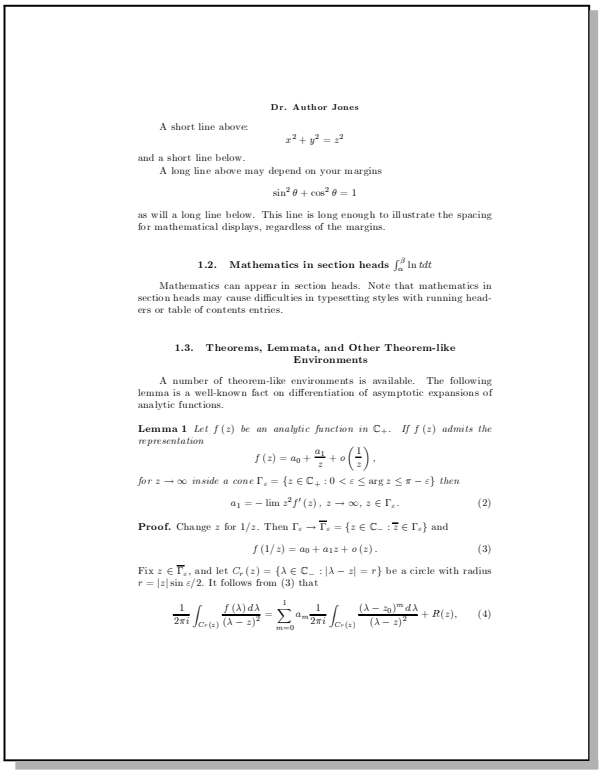

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for $z \to \infty$ *inside a cone* $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ *then*

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z|+r) \\ &= \frac{|z|+r}{r} \cdot O(|z|+r) = \frac{1+\sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

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that implies (2) by substituting $1/z$ back for z. ■

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Bunyip Mythical beast of Australian Aboriginal legends.

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Appendix A. An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

Journal of Progress in Surface Science

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

Rather than using additional packages, the shell includes extra instructions in the document preamble to control the formatting.

The Title of an Article

Dr. Author Jones
At this Address

The Date

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

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A short line above:

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A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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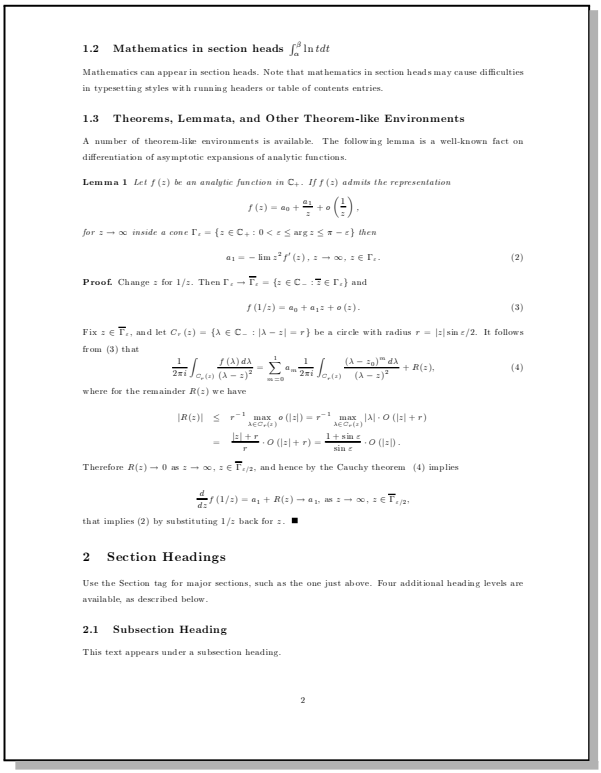

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

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2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Kluwer Journal

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Options and Packages	Defaults
Document class options	Standard
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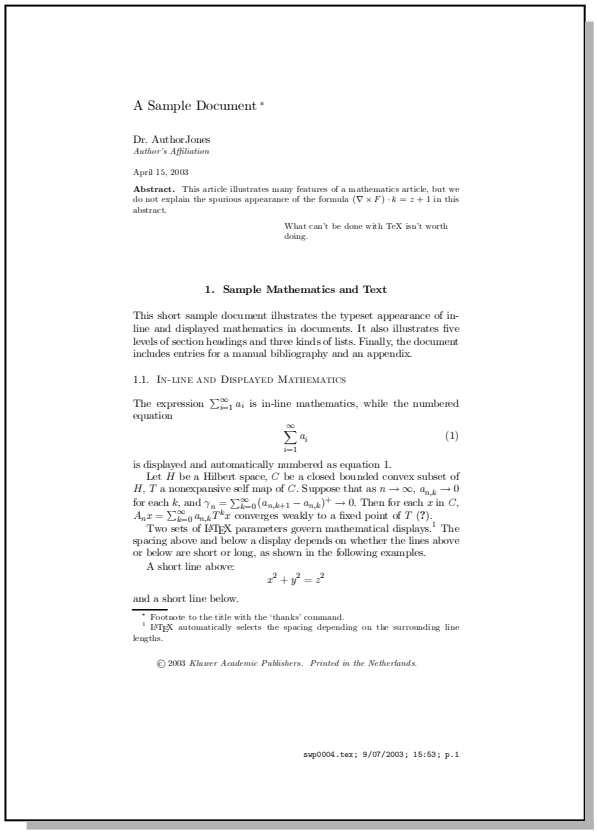

A Sample Document *

Dr. AuthorJones
Author's Affiliation

April 15, 2003

Abstract. This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

What can't be done with TeX isn't worth doing.

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* Footnote to the title with the 'thanks' command.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

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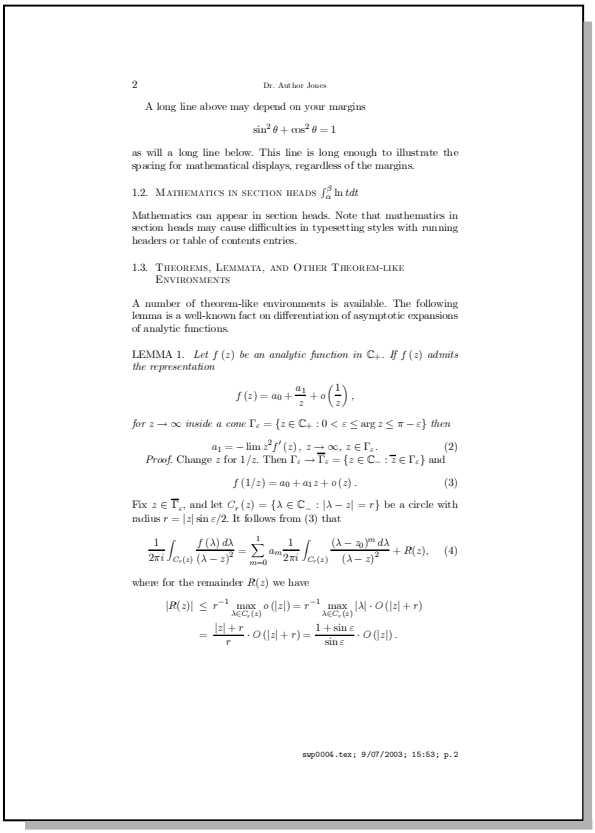

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Appendix

A. An Appendix

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The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Acknowledgements

And this is an acknowledgements section with a heading that was produced by the \acknowledgements command. Thank you all for helping me writing this LaTeX sample file.

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Linear Algebra and its Applications

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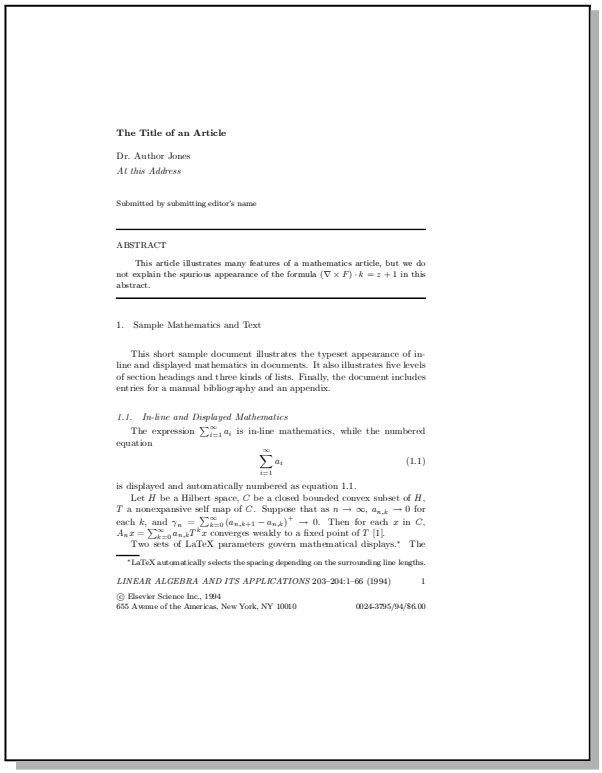

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Dr. Author Jones
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*LaTeX automatically selects the spacing depending on the surrounding line lengths.

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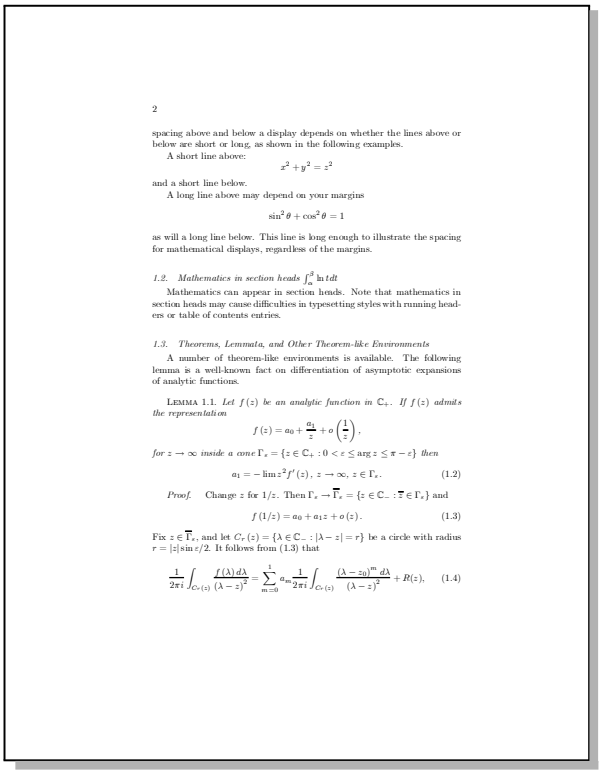

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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$$|R(z)| \leq r^{-1} \max_{\lambda \in C\prime(z)} o\left(|z|\right) = r^{-1} \max_{\lambda \in C\prime(z)} |\lambda| \cdot O\left(|z| + r\right)$$
$$= \frac{|z| + r}{r} \cdot O\left(|z| + r\right) = \frac{1 + \sin z}{\sin z} \cdot O\left(|z|\right).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{s/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f\left(1/z\right) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{s/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1. Subsection Heading

This text appears under a subsection heading.

2.1.1. Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading

This text appears under a subsubsubsubsection heading.

3. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.

   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

REFERENCES

1 N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
2 Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550
3 Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print
4 Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964
5 Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986
6 Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

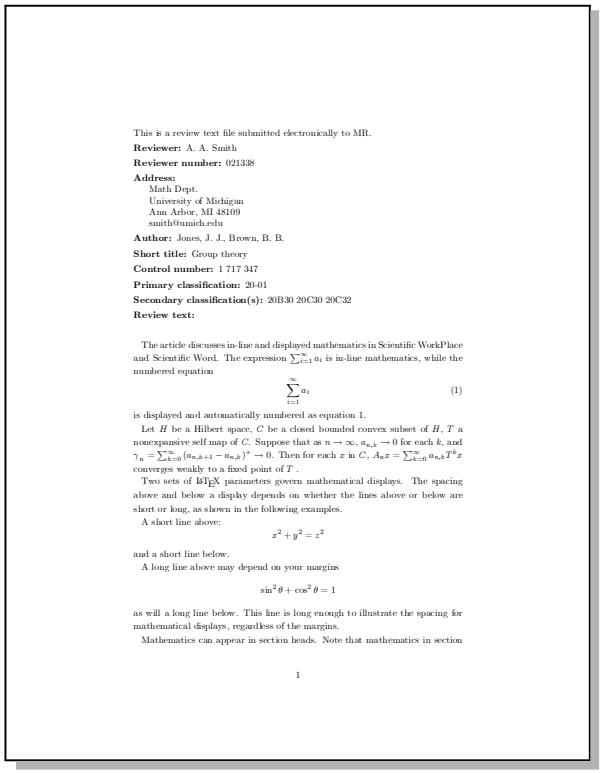
The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

Mathematical Reviews Template

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
review	None
amsmath	Standard
graphicx	Standard

The shell is intended for electronic submission of reviews to the *Mathematical Reviews.* The front matter is empty, replaced by fields in the template. The fields provide space to submit the reviewer's name and address, the author's name and a short title for the article, several numbers required by the *Mathematical Reviews,* the text of the review, and remarks.



This is a review text file submitted electronically to MR.

Reviewer: A. A. Smith

Reviewer number: 021338

Address:
Math Dept.
University of Michigan
Ann Arbor, MI 48109
smith@umich.edu

Author: Jones, J. J., Brown, B. B.

Short title: Group theory

Control number: 1 717 347

Primary classification: 20-01

Secondary classification(s): 20B30 20C30 20C32

Review text:

The article discusses in-line and displayed mathematics in Scientific WorkPlace and Scientific Word. The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T .

Two sets of LaTeX parameters govern mathematical displays. The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

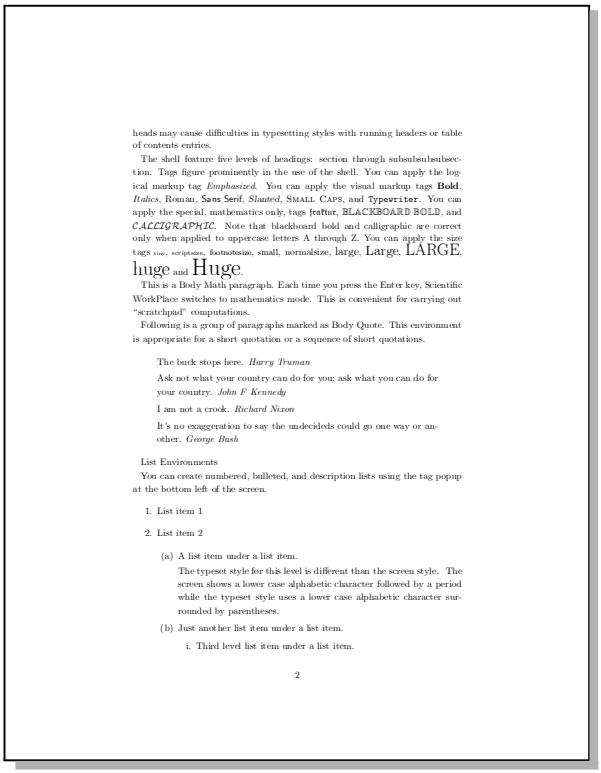
A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics can appear in section heads. Note that mathematics in section

1



heads may cause difficulties in typesetting styles with running headers or table of contents entries.

The shell feature five levels of headings: section through subsubsubsubsection. Tags figure prominently in the use of the shell. You can apply the logical markup tag *Emphasized*. You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`. You can apply the special, mathematics only, tags feature, BLACKBOARD BOLD, and *CALLIGRAPHIC*. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z. You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

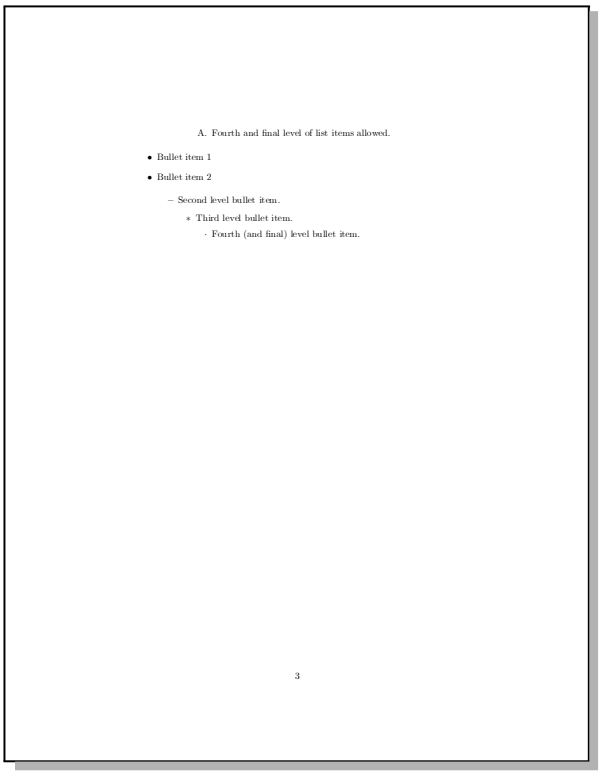
> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.
   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   (b) Just another list item under a list item.
      i. Third level list item under a list item.

2



A. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

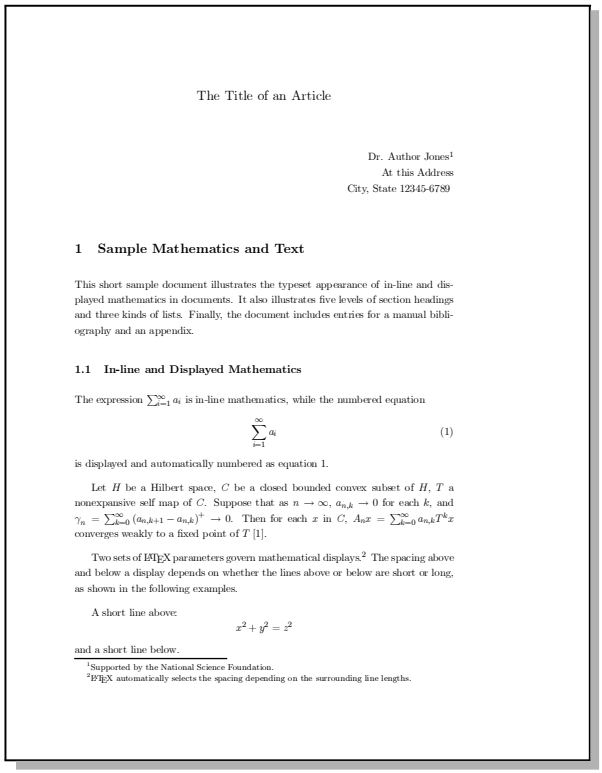
3

Mathematics Magazine Article

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 11 pt
Packages:	
amsmath	Standard

The front matter of the shell is empty. Instead of using fields in the front matter, the shell creates title information at the beginning of the body of the document. The information is right justified, with spacing provided by commands in TEX fields.



The Title of an Article

Dr. Author Jones[1]
At this Address
City, State 12345-6789

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

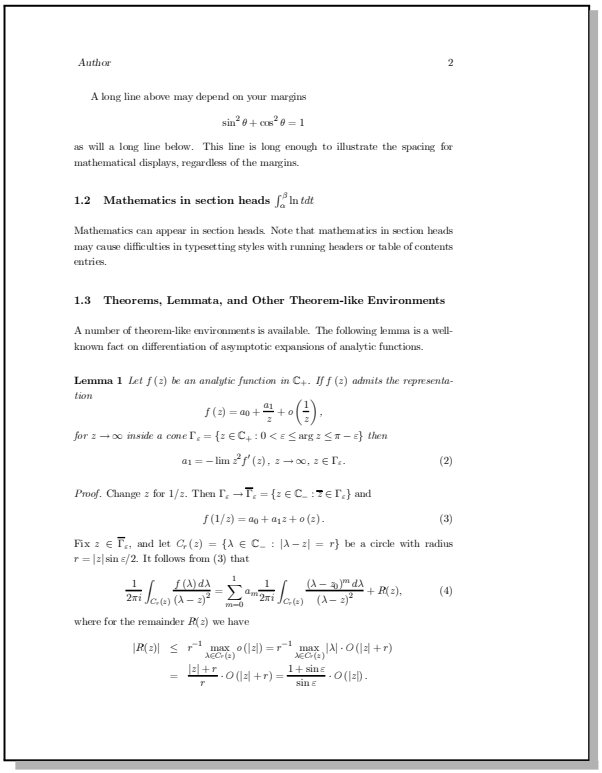
Two sets of LaTeX parameters govern mathematical displays.[2] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

[1]Supported by the National Science Foundation.
[2]LaTeX automatically selects the spacing depending on the surrounding line lengths.



A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_a^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z.

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.

(a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
(b) Another numbered list item under a list item.
   i. Third level numbered list item under a list item.
      A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

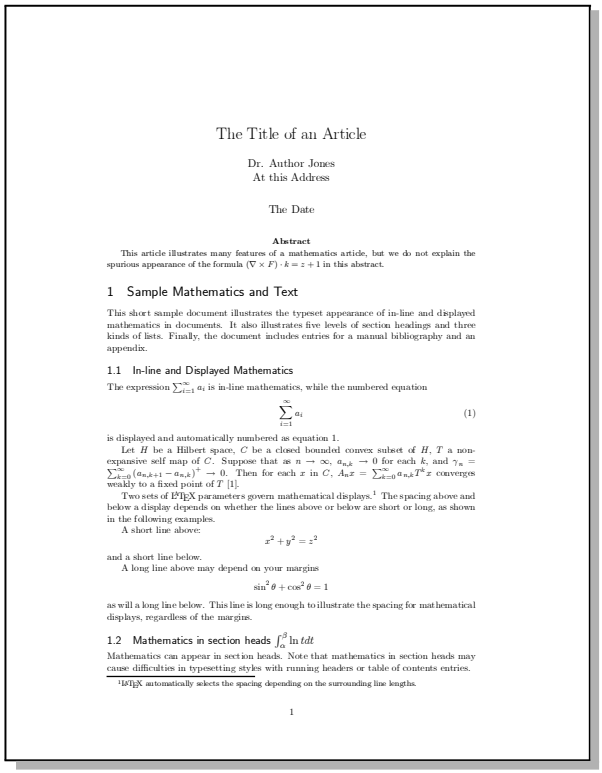
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Modified Article for Short Texts

Document class base file: csart.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
csart	None

The shell doesn't include a tag for an appendix.



The Title of an Article

Dr. Author Jones
At this Address

The Date

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

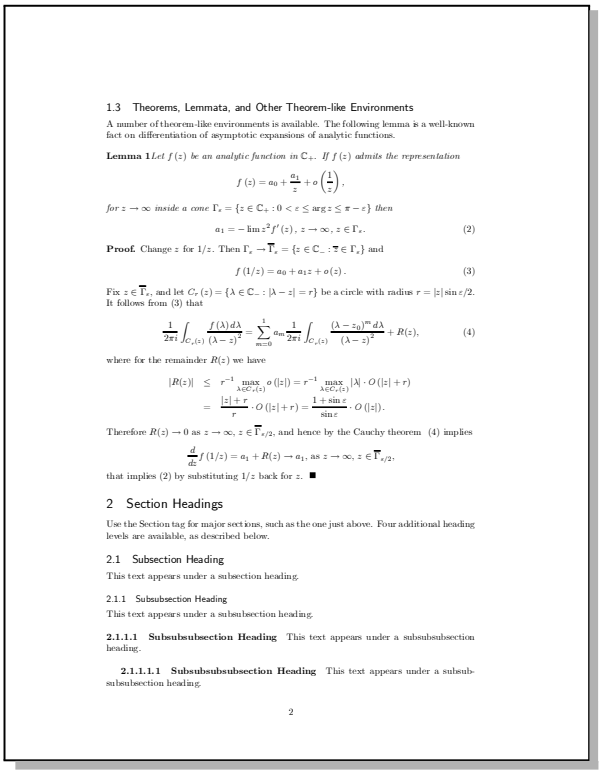
$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty, z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

2.1.1.1 Subsubsubsection Heading This text appears under a subsubsubsection heading.

2.1.1.1.1 Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
      A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
  * Third level bullet item.
    · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

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[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

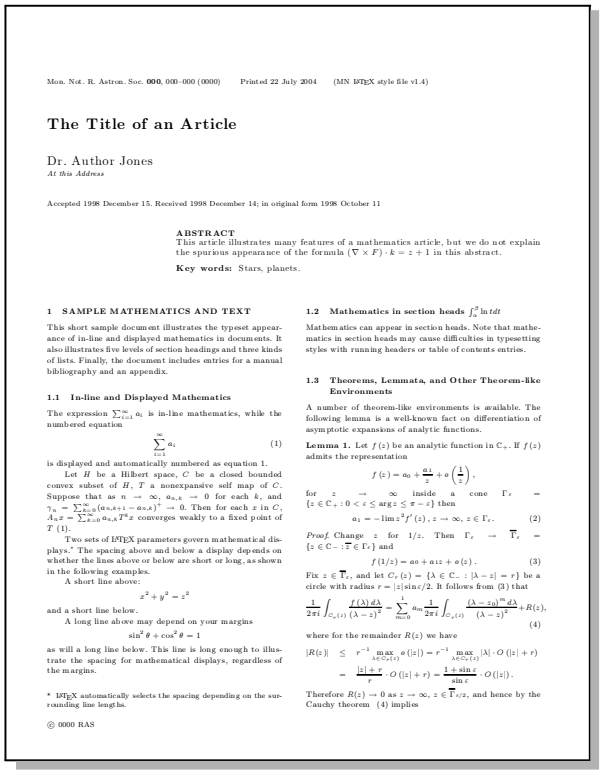
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Monthly Notices of the Royal Astronomical Society

Document class base file: mn.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
mn	None
sw20mnra	None

This shell produces double-column output by default. The front matter includes fields for key words and for a shortened form of the author's name, used in headers.



Mon. Not. R. Astron. Soc. **000**, 000–000 (0000) Printed 22 July 2004 (MN LATEX style file v1.4)

The Title of an Article

Dr. Author Jones
At this Address

Accepted 1998 December 15. Received 1998 December 14; in original form 1998 October 11

ABSTRACT
This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Key words: Stars, planets.

1 SAMPLE MATHEMATICS AND TEXT

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k\geq 0}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T (1).

Two sets of LATEX parameters govern mathematical displays.* The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

* LATEX automatically selects the spacing depending on the surrounding line lengths.

© 0000 RAS

1.2 Mathematics in section heads $\int_a^z \ln t\,dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \leq \arg z \leq \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,, z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

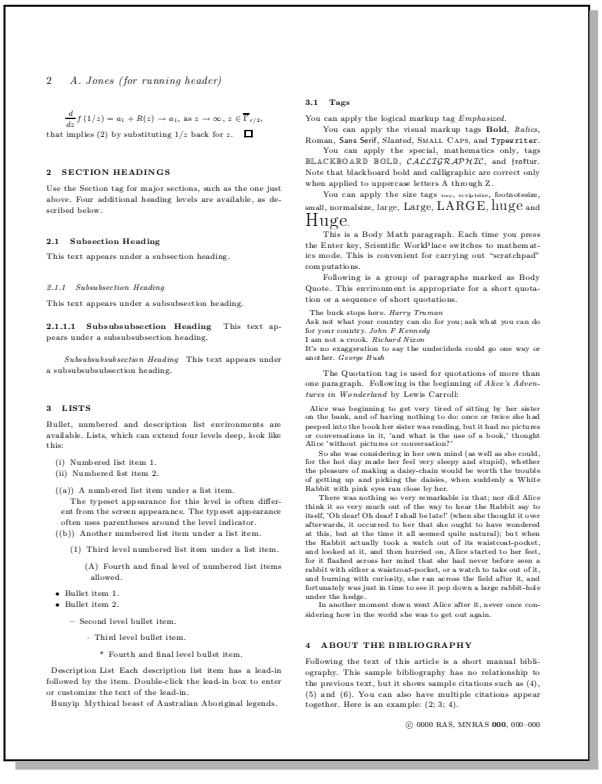
Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies



$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1$, as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, that implies (2) by substituting $1/z$ back for z. □

2 SECTION HEADINGS

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

2.1.1.1 Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 LISTS

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

(i) Numbered list item 1.
(ii) Numbered list item 2.

((a)) A numbered list item under a list item.
The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
((b)) Another numbered list item under a list item.

(1) Third level numbered list item under a list item.

(A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

3.1 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and Typewriter.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

The buck stops here. *Harry Truman*
Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
I am not a crook. *Richard Nixon*
It's no exaggeration to say the undecideds could go one way or another. *George Bush*

The Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

In another moment down went Alice after it, never once considering how in the world she was to get out again.

4 ABOUT THE BIBLIOGRAPHY

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as (4), (5) and (6). You can also have multiple citations appear together. Here is an example: (2; 3; 4).

© 0000 RAS, MNRAS **000**, 000–000

REFERENCES

N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

Reid, R. C., Prausnitz, J.M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

APPENDIX A: AN APPENDIX

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A1}$$

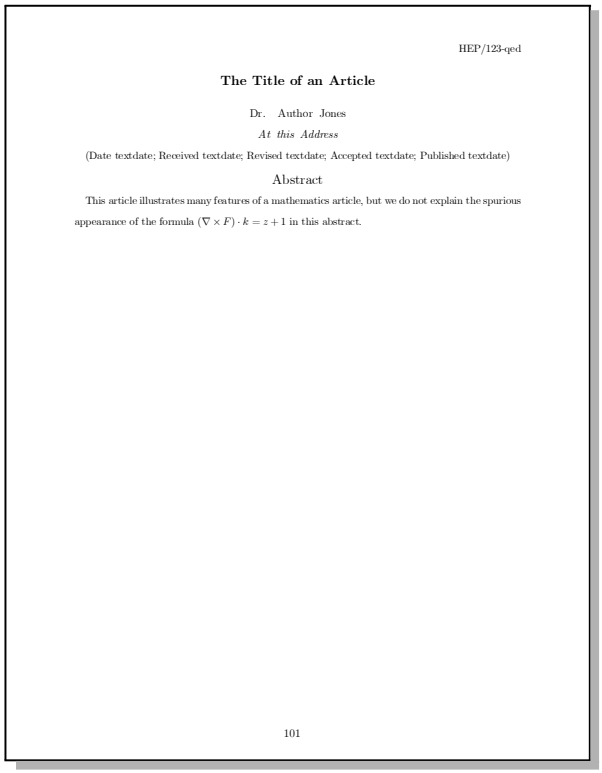
The quadratic equation shown as equation A1 is used to demonstrate how equations are numbered in the appendix.

REVTeX 4

Document class base file: revtex4.cls

Options and Packages	Defaults
Document class options	aps, preprint
Packages:	
REVTeX	None

The front matter includes fields for preprint information, a short title, key words, the PACS number, the volume and issue numbers, EID, received date, revised date, accepted date, published date, and starting and ending pages. The shell represents a beta version of REVTEX4. Note that this version contains errors that appear when the sample document is compiled.



HEP/123-qed

The Title of an Article

Dr. Author Jones

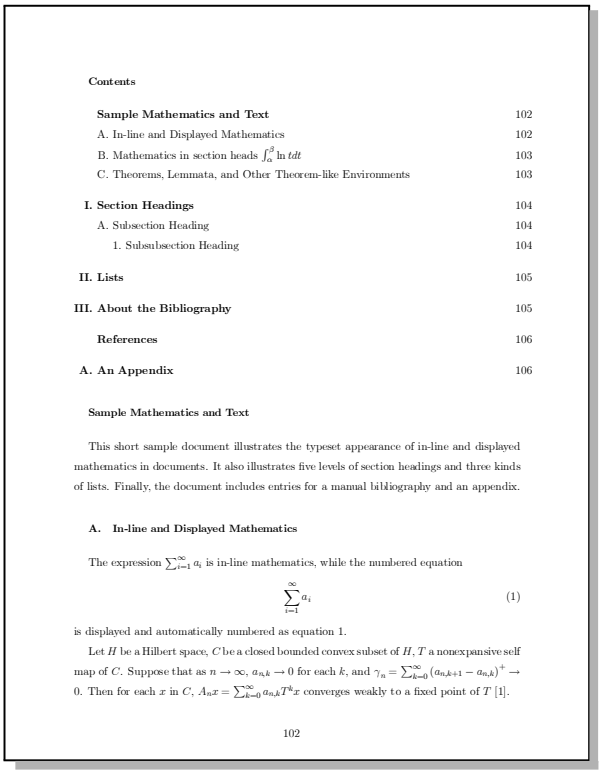
At this Address

(Date textdate; Received textdate; Revised textdate; Accepted textdate; Published textdate)

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

101



Contents

Sample Mathematics and Text 102
A. In-line and Displayed Mathematics 102
B. Mathematics in section heads $\int_\alpha^\beta \ln t dt$ 103
C. Theorems, Lemmata, and Other Theorem-like Environments 103

I. Section Headings 104
A. Subsection Heading 104
1. Subsubsection Heading 104

II. Lists 105

III. About the Bibliography 105

References 106

A. An Appendix 106

Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

A. In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

102

Two sets of LaTeX parameters govern mathematical displays.[7] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

B. Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

C. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

I. SECTION HEADINGS

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

A. Subsection Heading

This text appears under a subsection heading.

1. *Subsubsection Heading*

This text appears under a subsubsection heading.

a. Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

[6]. You can also have multiple citations appear together. Here is an example: [2–4].

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

[7] LaTeX automatically selects the spacing depending on the surrounding line lengths.

APPENDIX A: AN APPENDIX

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A1}$$

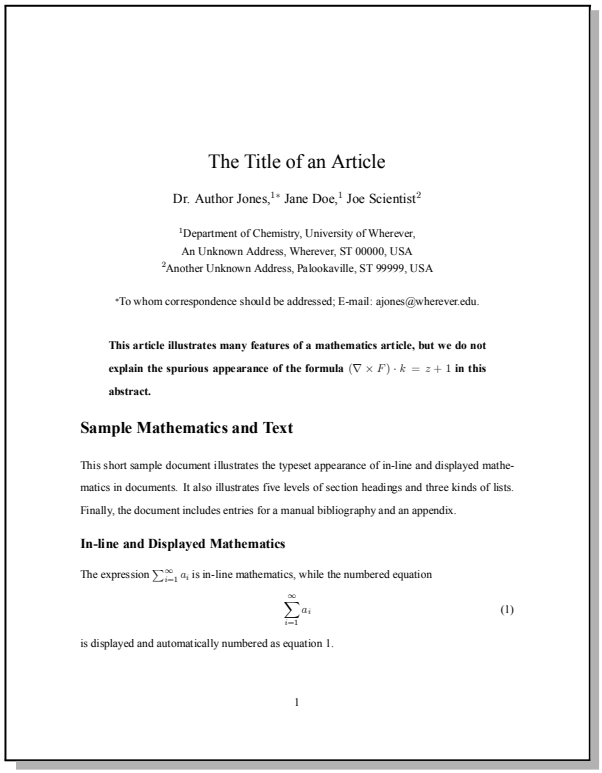
The quadratic equation shown as equation A1 is used to demonstrate how equations are numbered in the appendix.

Science Magazine

Document class base file: article.cls

Options and Packages	Defaults
Document class options	12 pt
Packages:	
scicite	None
times	None

This shell document provides a sample layout of a *Science Magazine* article.



The Title of an Article

Dr. Author Jones,[1*] Jane Doe,[1] Joe Scientist[2]

[1]Department of Chemistry, University of Wherever,
An Unknown Address, Wherever, ST 00000, USA
[2]Another Unknown Address, Palookaville, ST 99999, USA

*To whom correspondence should be addressed; E-mail: ajones@wherever.edu.

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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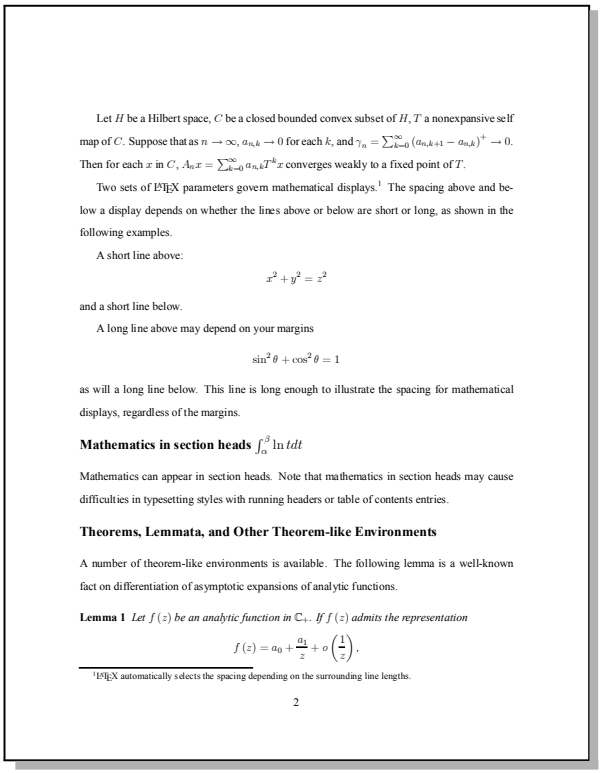
is displayed and automatically numbered as equation 1.



Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

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Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$

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Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

[1]LaTeX automatically selects the spacing depending on the surrounding line lengths.

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading

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Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.

    * Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

References and Notes

1. The package is TTH, available at http://hutchinson.belmont.ma.us/tth/ .
2. As the mark-up of the TEX source for this document makes clear, your ?le should be coded in LATEX2ε, not LATEX 2.09 or an earlier release. Also, please use the `article` document class.
3. Among whom are the author of this document. The "real" references and notes contained herein were compiled using BIBTEX from the sample .bib ?le `scibib.bib`, the style package `scicite.sty`, and the bibliography style ?le `Science.bst`.
4. One of the equation editors we use, Equation Magic (MicroPress Inc., Forest Hills, NY; http://www.micropress-inc.com/), interprets native TEX source code and generates an equation as an OLE picture object that can then be cut and pasted directly into Word. This editor, however, does not handle LATEX environments (such as {`array`} or {`eqnarray`}); it can interpret only TEX codes. Thus, when there's a choice, we ask that you avoid these LATEX calls in displayed math — for example, that you use the TEX `\matrix` command for ordinary matrices, rather than the LATEX {`array`} environment.

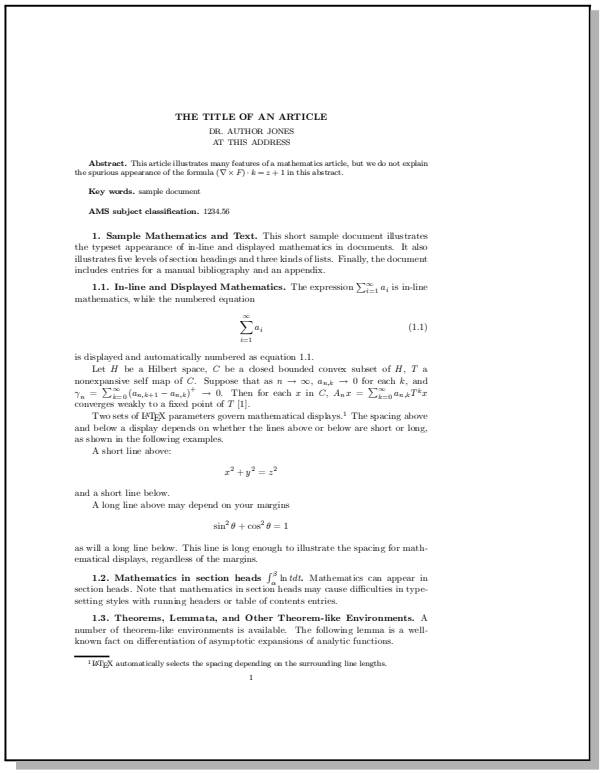
5. We've included in the template file `scifile.tex` a new environment, {`scilastnote`}, that generates a numbered final citation without a corresponding signal in the text. This environment can be used to generate a final numbered reference containing acknowledgments, sources of funding, and the like, per *Science* style. Along those lines, we'd like to thank readers of this document for their attention, and invite them to address any questions to Stewart Wills, at swills@aaas.org.

SIAM Journal

Document class base file: siamltex.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20siam	None

The front matter contains fields for key words and for the $\mathcal{AMS}$ subject class designation.



THE TITLE OF AN ARTICLE

DR. AUTHOR JONES
AT THIS ADDRESS

Abstract. This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Key words. sample document

AMS subject classification. 1234.56

1. Sample Mathematics and Text. This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1. In-line and Displayed Mathematics. The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

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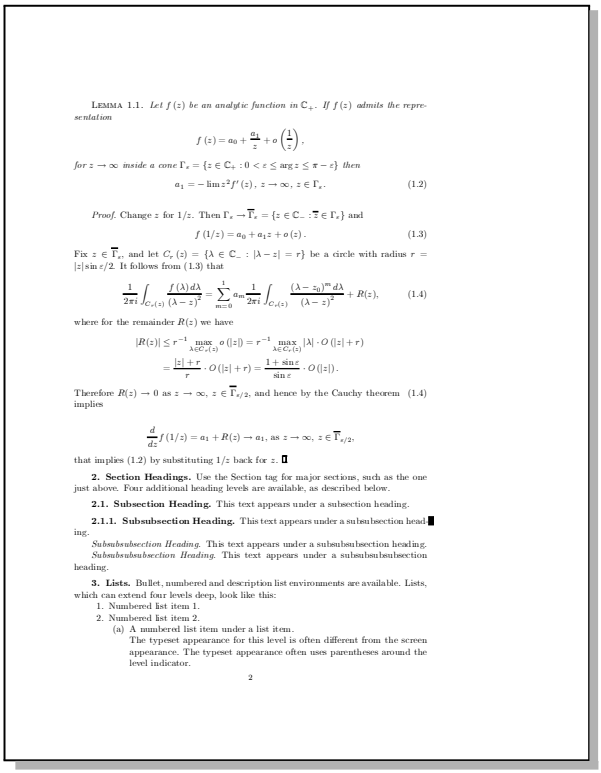
1.3. Theorems, Lemmata, and Other Theorem-like Environments. A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1



LEMMA 1.1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$

$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ∎

2. Section Headings. Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1. Subsection Heading. This text appears under a subsection heading.

2.1.1. Subsubsection Heading. This text appears under a subsubsection heading.

Subsubsubsection Heading. This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading. This text appears under a subsubsubsubsection heading.

3. Lists. Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
       The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.

2

(b) Another numbered list item under a list item.
   i. Third level numbered list item under a list item.
      A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

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REFERENCES

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Appendix A. An Appendix.

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

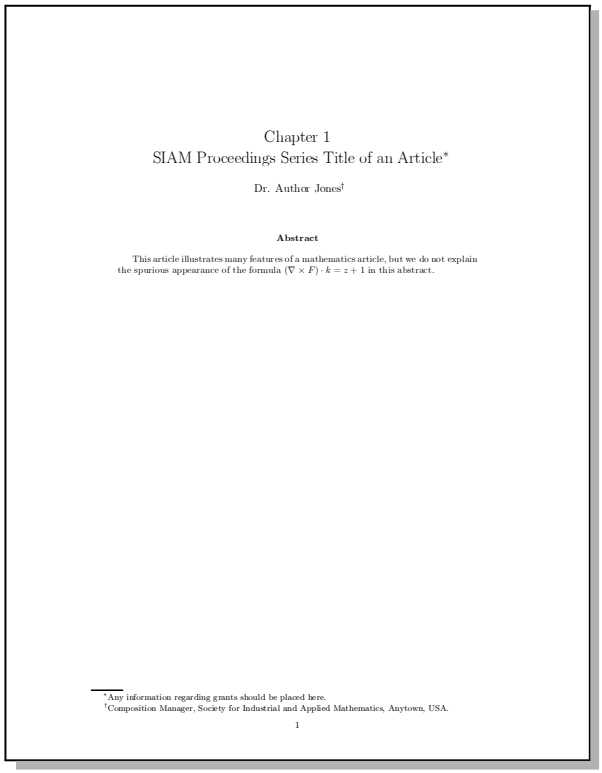
The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

SIAM Proceedings in Applied Mathematics

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 11 pt, Final copy, Equation numbers on left
Packages:	
proc2e	None

The shell doesn't use standard address fields in the front matter. Instead, the address, title, and affiliation appear in footnotes placed at the end of each Author field.



Chapter 1
SIAM Proceedings Series Title of an Article*

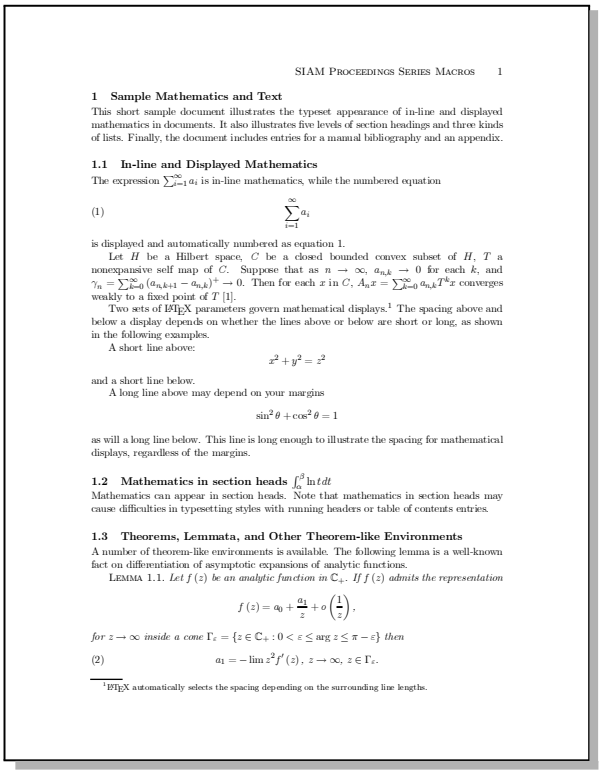
Dr. Author Jones†

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

*Any information regarding grants should be placed here.
†Composition Manager, Society for Industrial and Applied Mathematics, Anytown, USA.

1



1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+i} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_0^\beta \ln t\,dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

LEMMA 1.1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z.

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

SIAM-ACM Preprint

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Offset for two-sided printing, Two-column output, Equation numbers on left
Packages:	
ltexpprt	None

The front matter of the shell uses text tags to format the title (Large) and abstract (small). The authors' memberships appear in footnotes at the end of each Author field.

SIAM/ACM Preprint Series Macros, The Title of an Article*

Dr. Author Jones†

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

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*Supported by GSF grants ABC123, DEF456, and GHI789.

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$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{\pi} \in \Gamma_\varepsilon\}$ and

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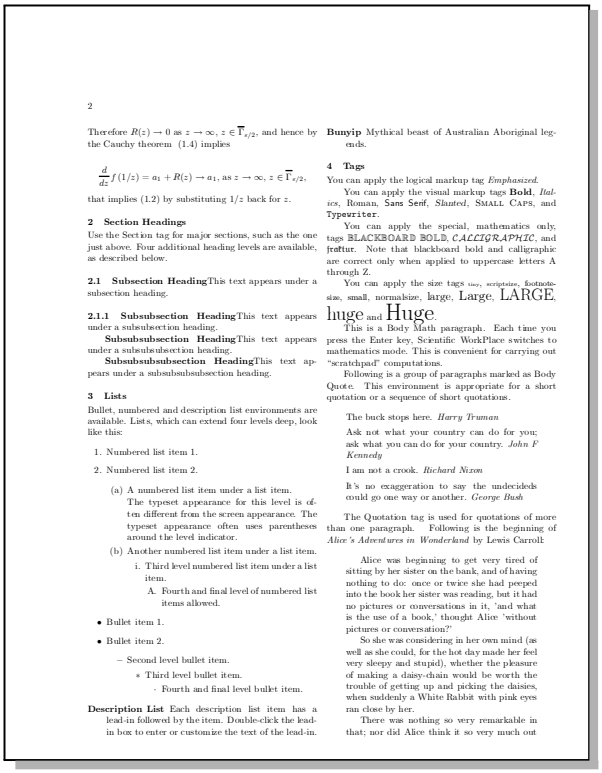
where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$



Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z.

2 Section Headings

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Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags 𝔹𝕃𝔸ℂ𝕂𝔹𝕆𝔸ℝ𝔻 𝔹𝕆𝕃𝔻, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{Fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\text{tiny}}$, $_{\text{scriptsize}}$, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

The buck stops here. *Harry Truman*

Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*

I am not a crook. *Richard Nixon*

It's no exaggeration to say the undecideds could go one way or another. *George Bush*

The Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice's Adventures in Wonderland* by Lewis Carroll:

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so very remarkable in that; nor did Alice think it so very much out

of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

In another moment down went Alice after it, never once considering how in the world she was to get out again.

5 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1.5}$$

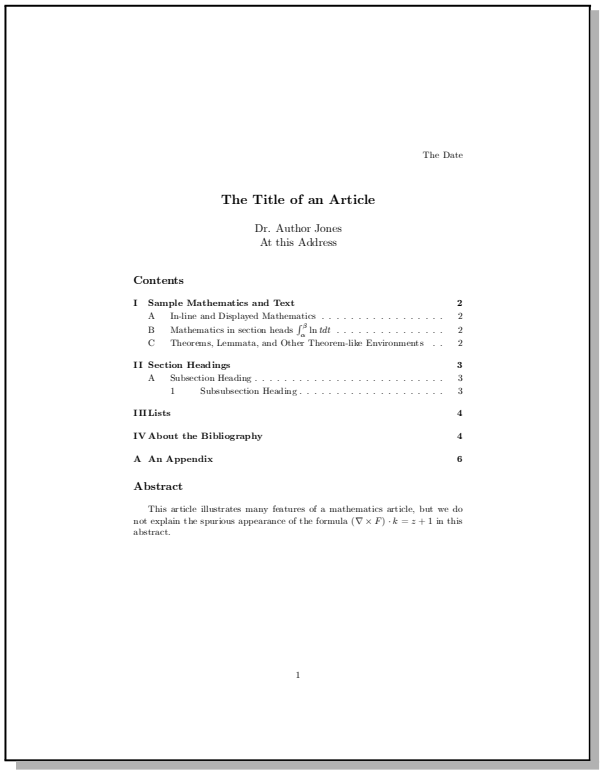
The quadratic equation shown as equation 1.5 is used to demonstrate how equations are numbered in the appendix.

Similar to AIP

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
aip	None

This shell produces documents formatted for the American Institute of Physics. The aip package provides correct section numbering (e.g., II.B.2.) and it superscripts reference numbers in citations and bibliographies. The package presents three or more consecutive reference numbers as a range. Other package formatting involves the date, the abstract, paragraph indention, equation numbering, and appendixes.



The Date

The Title of an Article

Dr. Author Jones
At this Address

Contents

I Sample Mathematics and Text 2
A In-line and Displayed Mathematics . . . 2
B Mathematics in section heads $\int_\alpha^\beta \ln t dt$ . . . 2
C Theorems, Lemmata, and Other Theorem-like Environments . . 2
II Section Headings 3
A Subsection Heading . . . 3
1 Subsubsection Heading . . . 3
III Lists 4
IV About the Bibliography 4
A An Appendix 6

Abstract

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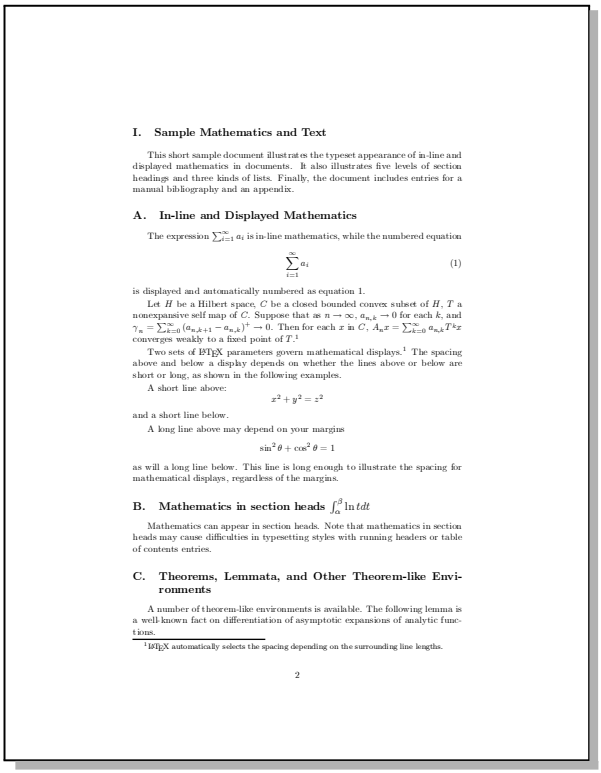

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Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

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$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

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Bunyip Mythical beast of Australian Aboriginal legends.

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Appendix A. An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A1}$$

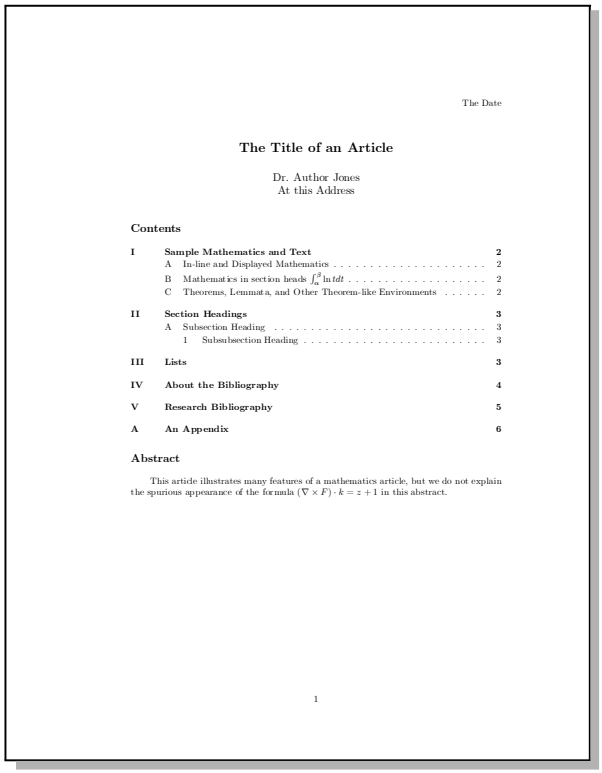
The quadratic equation shown as equation A1 is used to demonstrate how equations are numbered in the appendix.

Similar to AIP - Modified

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20rui	None
aip	None

This shell is a modification of the Similar to AIP shell. It produces documents formatted for the American Institute of Physics. The aip package provides correct section numbering (e.g., II.B.2.) and it superscripts reference numbers in citations and bibliographies. The package presents three or more consecutive reference numbers as a range. Other package formatting involves the date, the abstract, paragraph indention, equation numbering, and appendixes.



The Date

The Title of an Article

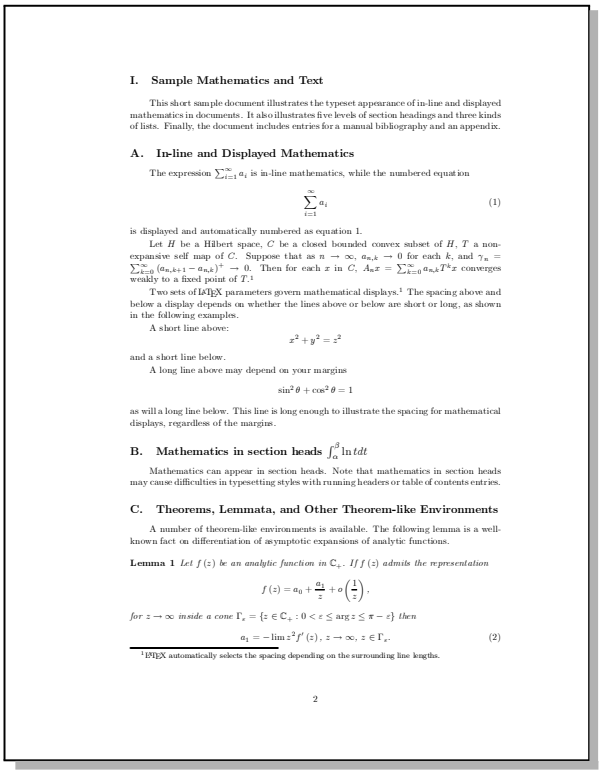
Dr. Author Jones
At this Address

Contents

I Sample Mathematics and Text **2**
A In-line and Displayed Mathematics 2
B Mathematics in section heads $\int_\alpha^\beta \ln t dt$ 2
C Theorems, Lemmata, and Other Theorem-like Environments 2
II Section Headings **3**
A Subsection Heading 3
1 Subsubsection Heading 3
III Lists **3**
IV About the Bibliography **4**
V Research Bibliography **5**
A An Appendix **6**

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.



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A. In-line and Displayed Mathematics

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Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \{a_{n,k+1} - a_{n,k}\}^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.[1]

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B. Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

C. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

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Similar to Bulletin of the American Mathematical Society

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20bams	None

The shell produces documents whose appearance is similar to that of the *Bulletin of the American Mathematical Society*. Blank pages carry no page number and sections, subsections, and subsubsections are treated similarly in the table of contents.

The Title of an Article

Dr. Author Jones
At this Address

The Date

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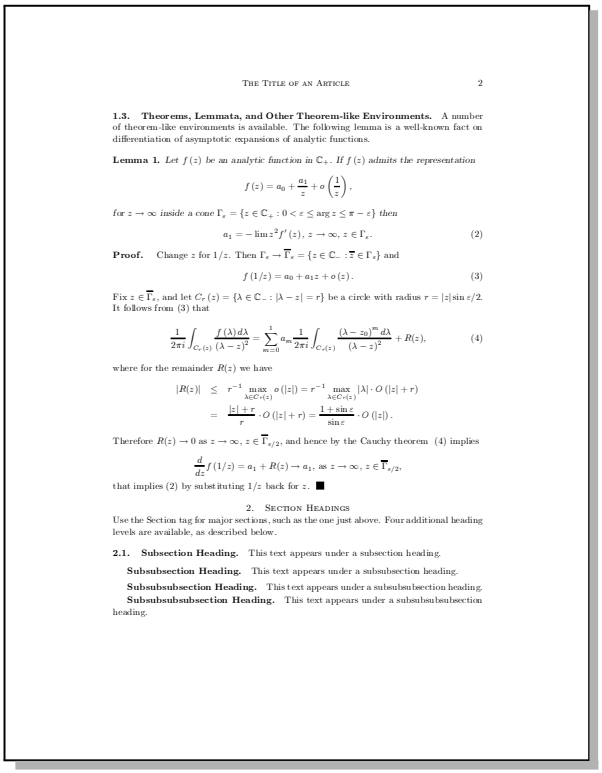

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A. An Appendix

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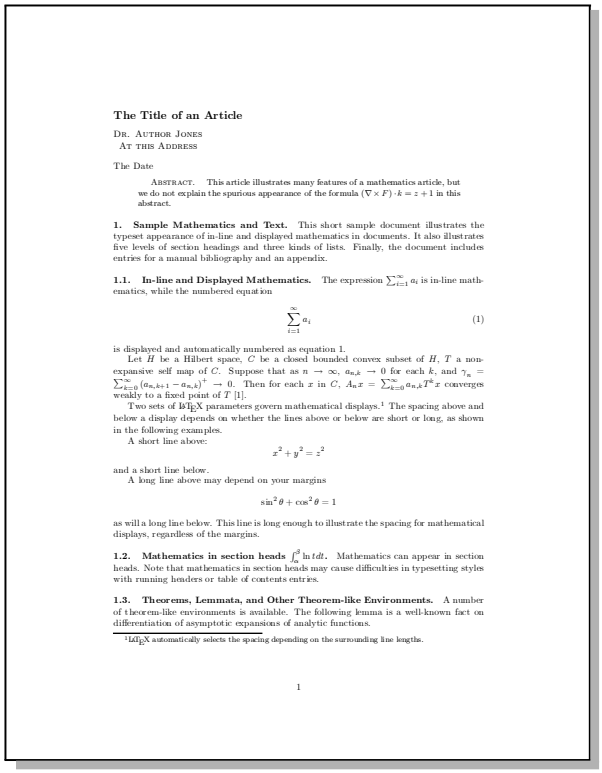
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Similar to MAA Monthly before 1992

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20amm1	None

In this shell, blank pages carry no page number and sections, subsubsections, and subsubsections are treated similarly in the table of contents.



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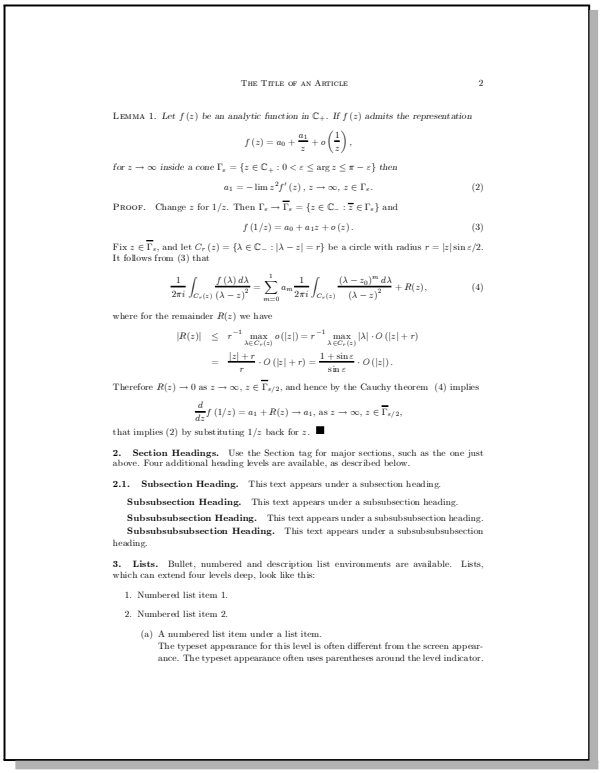

The Title of an Article 2

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A. An Appendix. Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

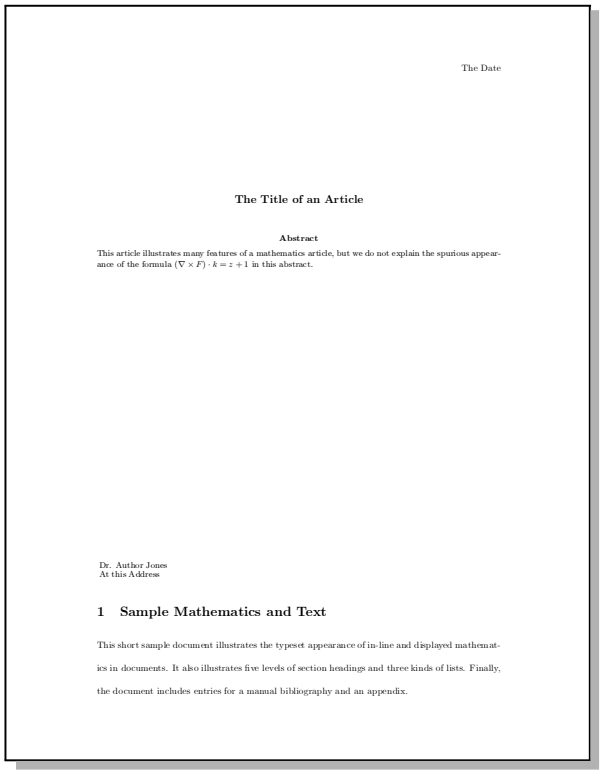
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Similar to North-Holland Journals

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20nhj	None

The shell creates documents for submission to the North-Holland journals. The package associated with the shell prints a description and date at the top right of the title area, which can be a separate page. The shell uses keywords, which appear after the abstract. The author's name and address appear at the left and below the abstract and keywords. Margins are generous.



The Date

The Title of an Article

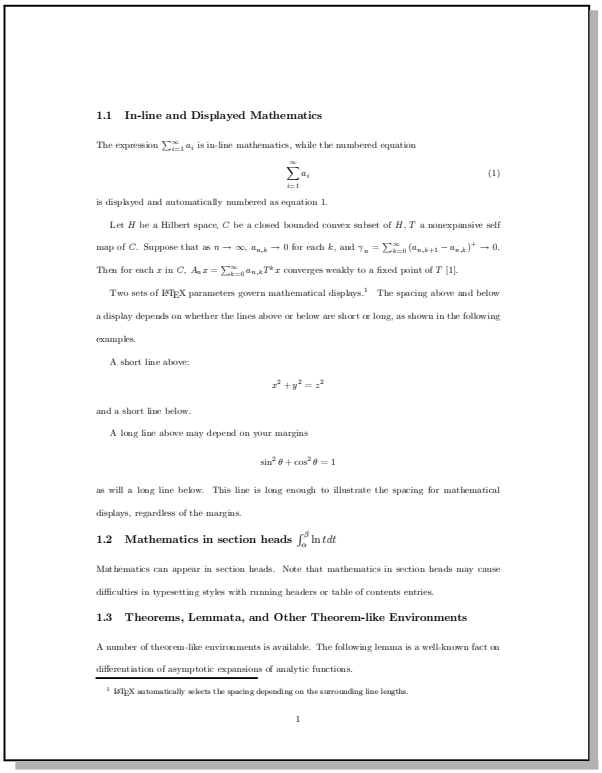
Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Dr. Author Jones
At this Address

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.



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$$\sum_{i=1}^{\infty} a_i \tag{1}$$

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Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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and a short line below.

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$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \leq \arg z \leq \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \; z \to \infty, \; z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

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3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
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      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

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A An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

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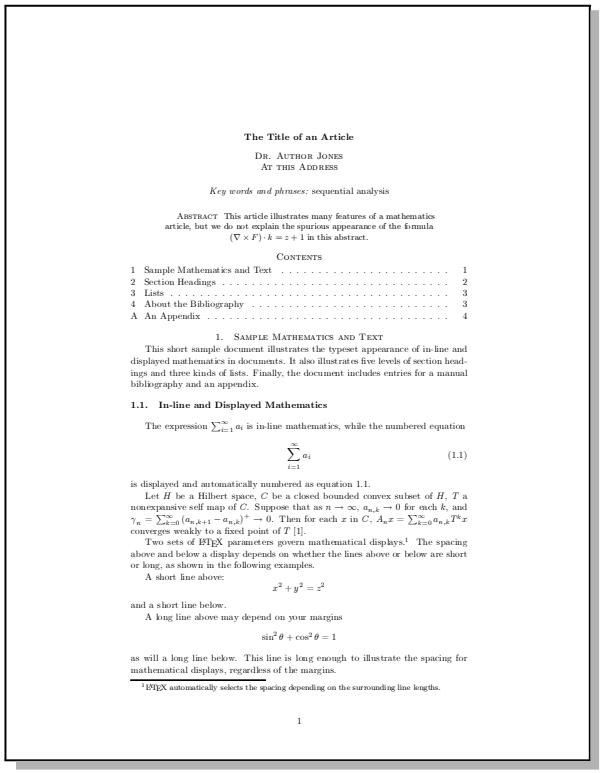
Similar to Sequential Analysis Journal

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20seqa	None

The shell used a front matter field for key words.



The Title of an Article

Dr. Author Jones
At this Address

Key words and phrases: sequential analysis

Abstract This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Contents

1 Sample Mathematics and Text 1
2 Section Headings 2
3 Lists 3
4 About the Bibliography 3
A An Appendix 4

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1. In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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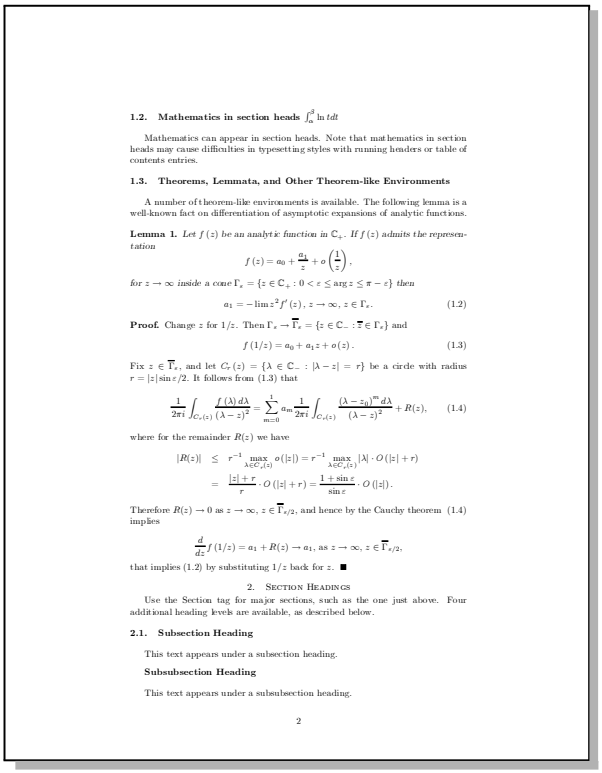

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A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

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A. An Appendix

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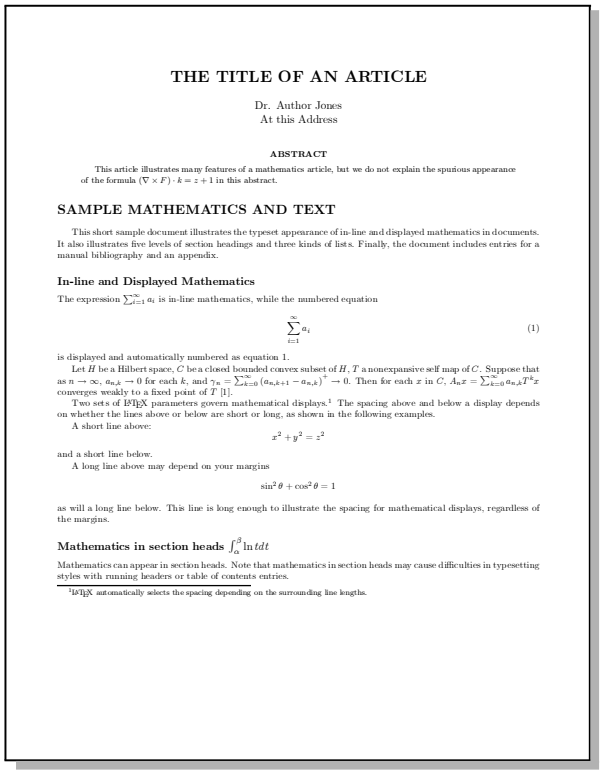
Society for Computer Simulation

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20scsj	None

The shell produces articles with large headings. The margins are narrow at the sides and generous at the bottom of the page.



THE TITLE OF AN ARTICLE

Dr. Author Jones
At this Address

ABSTRACT

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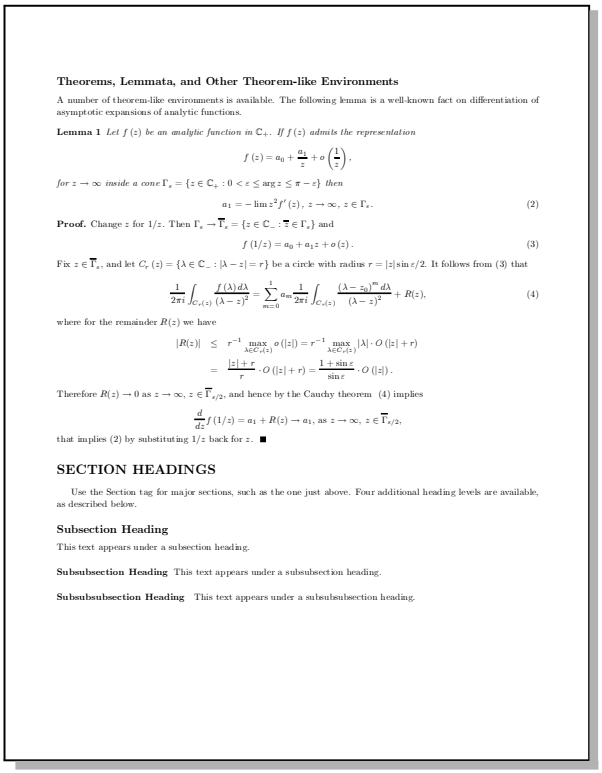

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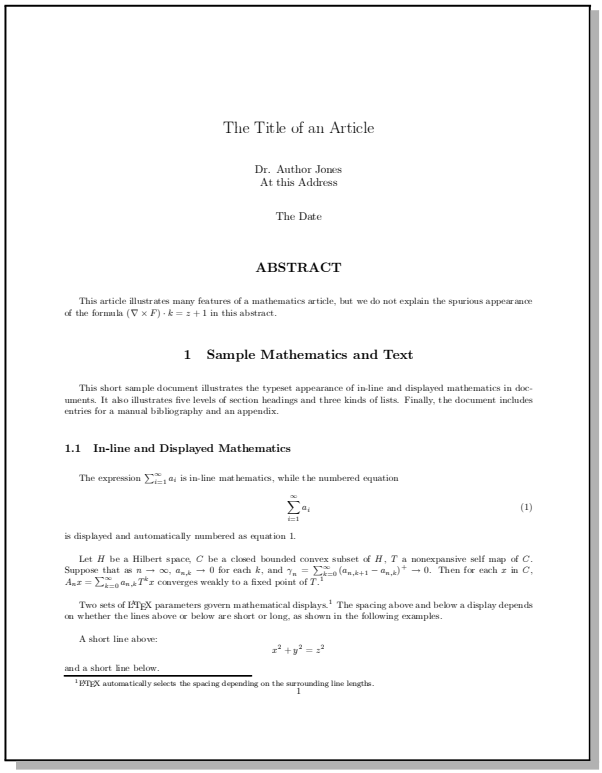
SPIE Proceedings

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20chic	None
spie	None

The spie package used with this shell requires several manual adjustments. Type section titles in upper case, with other section headings in lower case with initial capital letters. See the package documentation for instructions about formatting author and date information.



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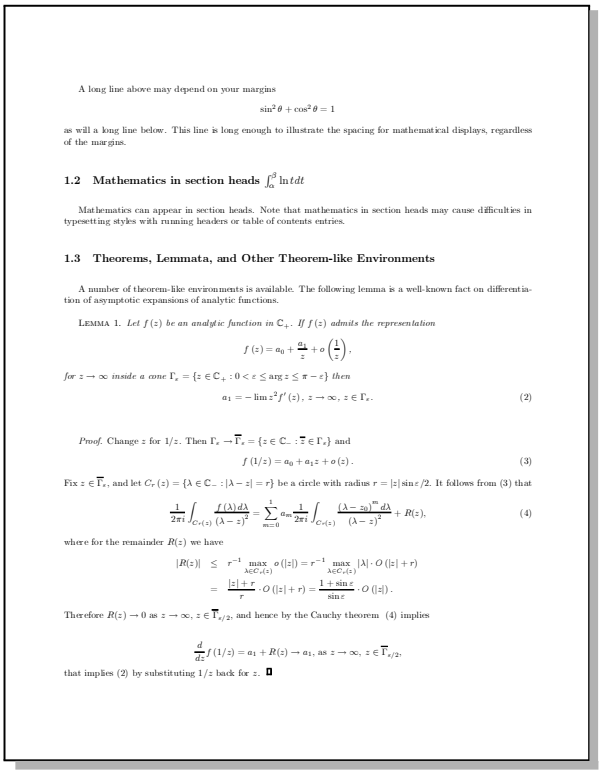

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

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$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

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A An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

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SPIE Proceedings - Modified

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20chic	None
spie	None

The shell modifies the SPIE Proceedings shell to produce double-spaced text. The spie package used with this shell requires several manual adjustments. Type section titles in upper case, with other section headings in lower case with initial capital letters. See the package documentation for instructions about formatting author and date information.

The Title of an Article

Dr. Author Jones

At this Address

The Date

ABSTRACT

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

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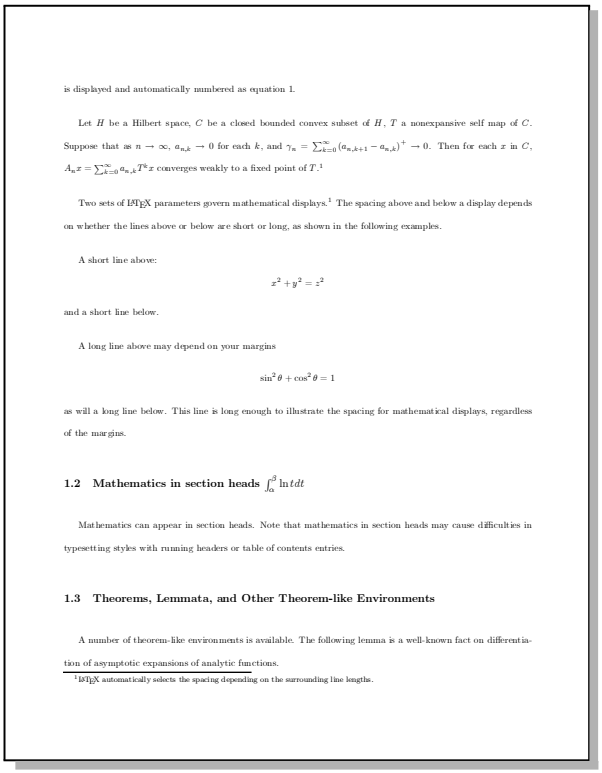

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SPIE Proceedings (new)

Document class base file: spie.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
	None

This shell document provides a sample layout of an article for the *Proceedings of the SPIE.*

The Title of an Article

Anna A. Author1[a] and Barry B. Author2[b]

[a]Affiliation1, Address, City, Country
[b]Affiliation2, Short Version of a Long Address, City, Country

ABSTRACT

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Keywords: Manuscript format, template, SPIE Proceedings, LaTeX

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Further author information: (Send correspondence to A.A.A.)
A.A.A.: E-mail: aaa@fake.edu, Telephone: 1 505 555 1234
B.B.A.: E-mail: bba@fake.edu, Telephone: +33 (0)1 98 76 54 32, Address: A Very Long Address, City, Country
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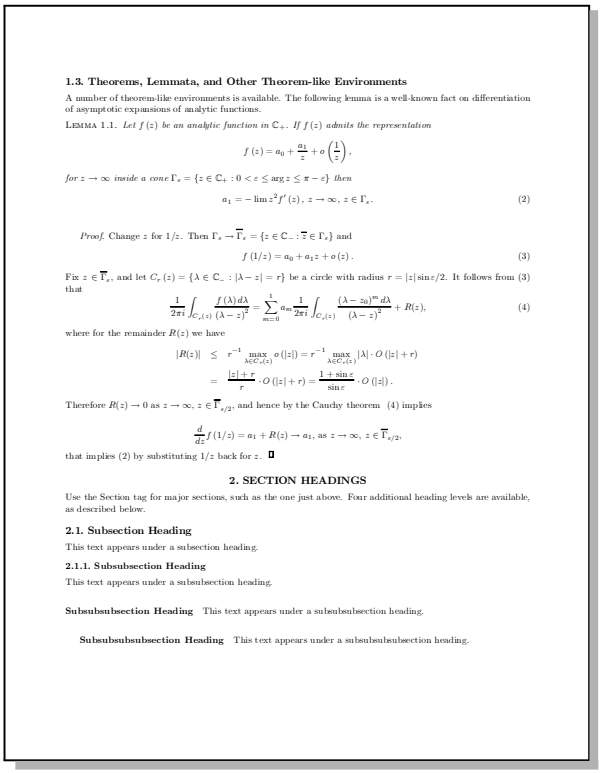

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ACKNOWLEDGMENTS

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Springer-Verlag Heidelberg Journal

Document class base file: svjour.cls

Options and Packages	Defaults
Document class options	Global (for all journals)
Packages:	
amsmath	None

The front matter of the shell contains fields for the journal name, subtitle of the article, author's institute (instead of address), dedication, headnote, offprints, offprints address, and key words.

Name Your Journal manuscript No.
(will be inserted by the editor)

Head note that is usually deleted

The Title of an Article

Do you have a subtitle?
If so, write it here

Dr. Author Jones[1]

The University of Stewart Islande-mail: **author@nowhere.edu**

The date of receipt and acceptance will be inserted by the editor

To mother

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Key words sample – document – Scientific Word – Scientific WorkPlace

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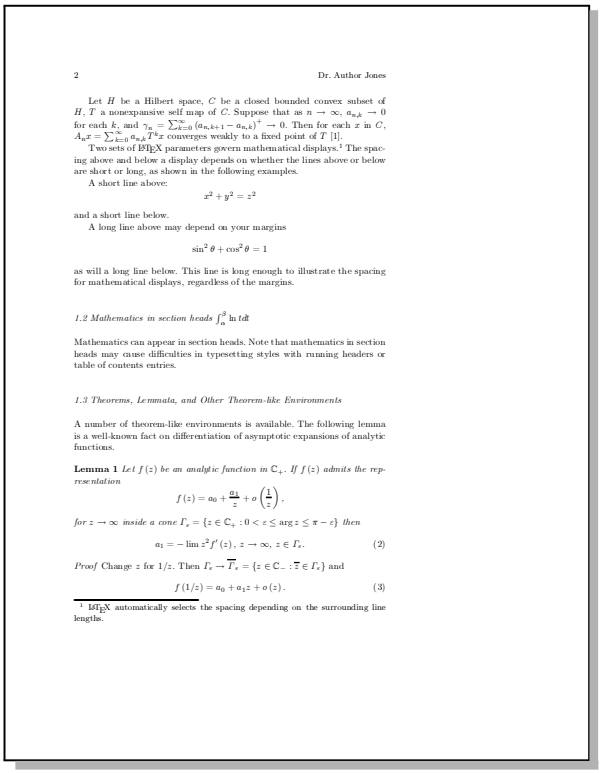
Send offprint requests to: Offprints Assistant
Correspondence to: Address for offprint requests



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1. N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
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3. Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print
4. Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964
5. Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986
6. Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

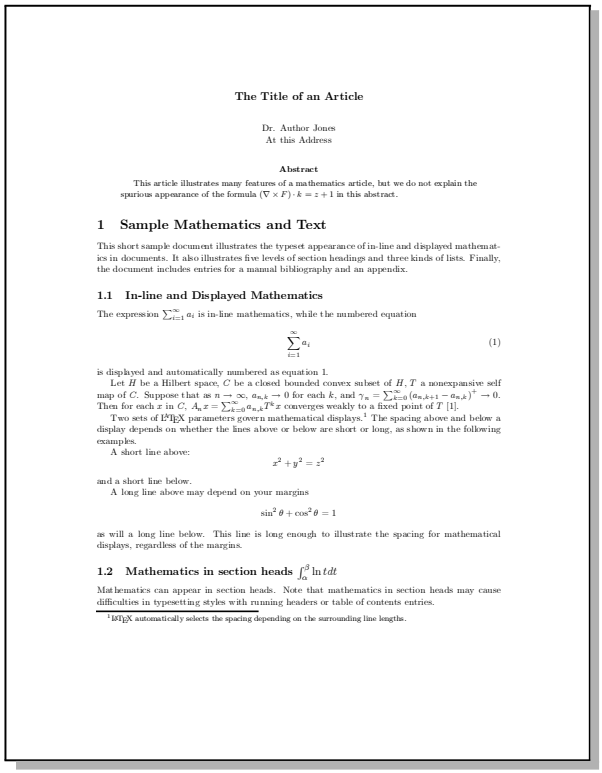
$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (5)$$

The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Squeezed States and Uncertainty Relations

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20ssur	None



The Title of an Article

Dr. Author Jones
At this Address

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a mamal bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_k = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

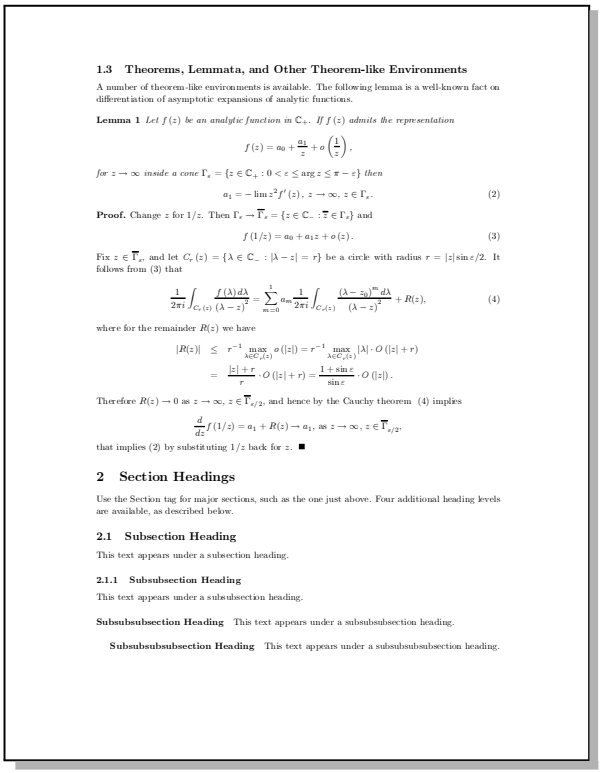
$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

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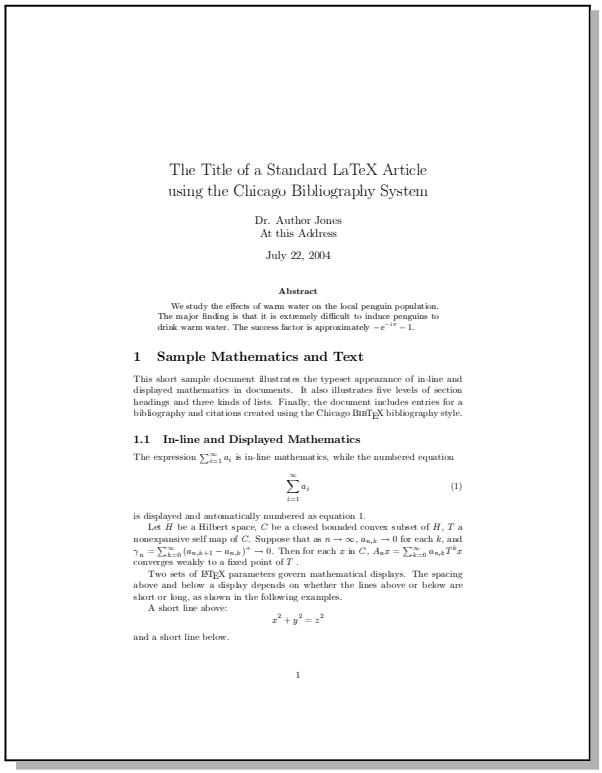
Standard LaTeX Article (Chicago)

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
chicago	None

The shell uses a BibTeX bibliography.



The Title of a Standard LaTeX Article
using the Chicago Bibliography System

Dr. Author Jones
At this Address

July 22, 2004

Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a bibliography and citations created using the Chicago BibTeX bibliography style.

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$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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2.2 Compiling a Bibliography

1. Save this document using a name of your choosing.
2. Choose Typeset, Compile.
3. Check Generate a Bibliography.
4. Choose OK.
5. Choose Typeset, Preview.

2.3 Citations in the Chicago System

The Chicago package also supports a number of other mechanisms for citations. These mechanisms are not supported directly through the SW interface. They are entered as TeX fields. Here are some examples that you can copy and modify.

1. Full author list and year, but without enclosing parentheses: Knuth 1981
2. Full author list: (Knuth)
3. Full author list without parentheses: Knuth
4. Full author list, no parentheses around authors, parentheses around year: Knuth (1981)
5. Abbreviated author list and year: (Knuth 1981)
6. Abbreviated author list and year, no parentheses: Knuth 1981

7. Abbreviated author list: (Knuth)
8. Abbreviated author list, no parentheses: Knuth
9. Abbreviated author list and year, parentheses around year: Knuth (1981)
10. Year information only, with parentheses: (1981)
11. Year information only, without parentheses: 1981

References

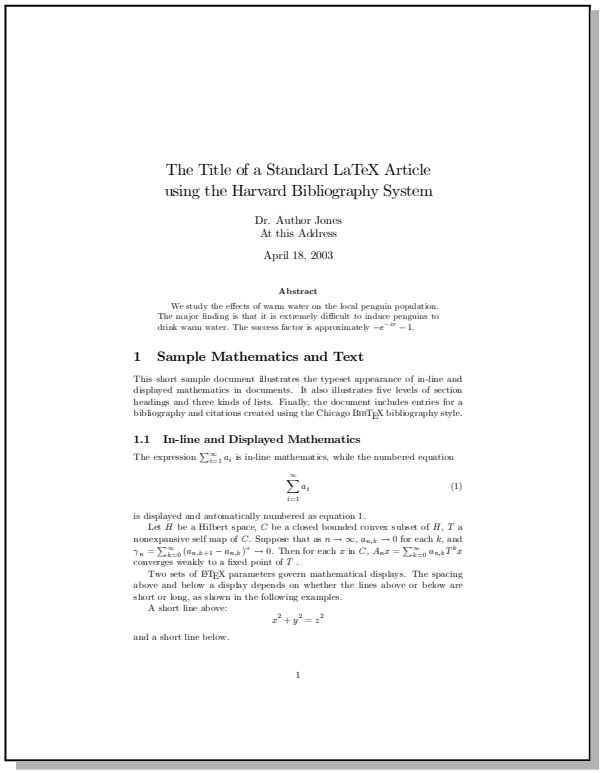
Knuth, D. E. (1981). *Seminumerical Algorithms*. Addison-Wesley.

Standard LaTeX Article (Harvard)

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
harvard	None

The shell uses a BibTeX bibliography.



The Title of a Standard LaTeX Article
using the Harvard Bibliography System

Dr. Author Jones
At this Address

April 18, 2003

Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$.

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1. Save this document using a name of your choosing.
2. Choose Typeset, Compile.
3. Check Generate a Bibliography.
4. Choose OK.
5. Choose Typeset, Preview.

2.3 Citations in the Harvard System

The standard citation mechanism that is supported by the SW Insert, Field, Citation mechanism is the parenthetical citation form, using the LaTeX macro `\cite` and is as follows:

As (Pitson 1978) and (Kopka and Daly 1993, Annex B) describe . . .

2.3.1 `\citeasnoun`

The Harvard package also supports using a citation as a noun using the LaTeX macro `\citeasnoun`. These mechanisms are not supported directly through the SW interface. They are entered as TeX fields. Here are some examples that you can copy and modify.

As Pitson (1978) and Lamport (1986, Annex B) describe . . .

2.3.2 `\possessivecite`

You can use the citation as a possessive noun phrase with the LaTeX macro `\possessivecite`. Multiple citations are not permitted.

Lamport's (1986) description of this feature is . . .

2.3.3 `\citeaffixed`

You can use the LaTeX macro `\citeaffixed` command to allow text to be affixed inside the beginning of the parenthesis of a parenthetical citation.

BibTeX manuals (e.g. Lamport 1986, Pitson 1978) describe . . .

References

Kopka, H. and Daly, P. W.: 1993, *A Guide to LaTeX: Document Preparation for Beginners and Advanced Users*, Addison-Wesley.

Lamport, L.: 1986, *LaTeX: A Document Preparation System*, Addison-Wesley.

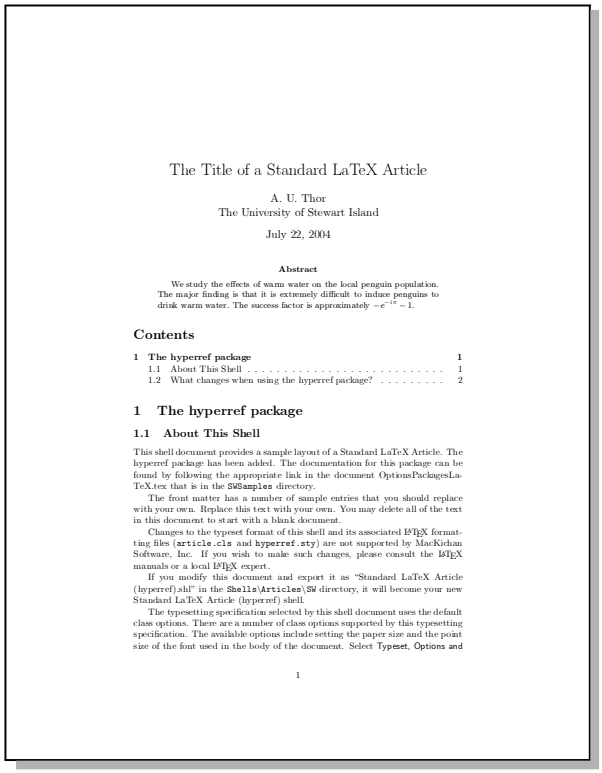
Pitson, J.: 1978, *Style Manual for authors editors and printers of Australian government publications*, 3rd edn, Australian Government Publishing Service, Canberra.

Standard LaTeX Article (hyperref)

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
hyperref	None

This shell provides the same typesetting as the Standard LaTeX Article shell, except the hyperref package is added. You can create active links in a document when you create a PDF file inside SW using Typeset, Preview PDF, Typeset, Print PDF, or Typeset, Compile PDF.



The Title of a Standard LaTeX Article

A. U. Thor
The University of Stewart Island

July 22, 2004

Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$.

Contents

1 The hyperref package 1
1.1 About This Shell 1
1.2 What changes when using the hyperref package? 2

1 The hyperref package

1.1 About This Shell

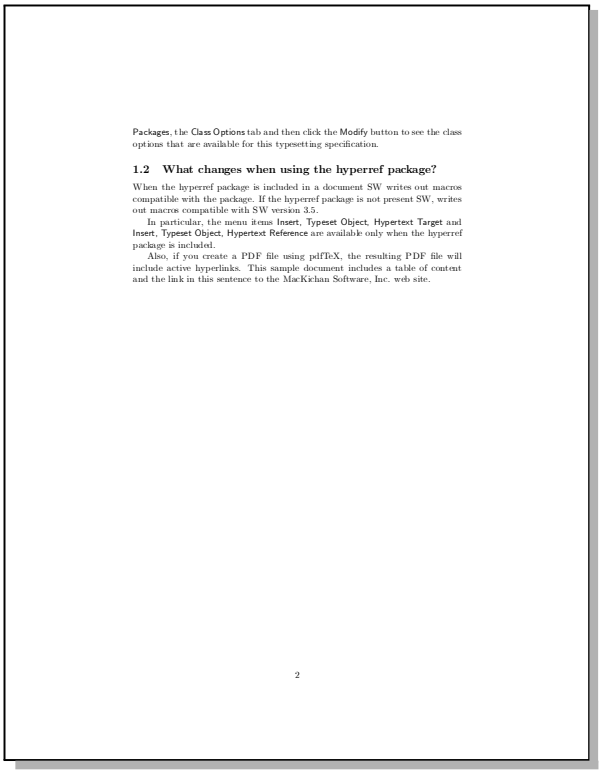
This shell document provides a sample layout of a Standard LaTeX Article. The hyperref package has been added. The documentation for this package can be found by following the appropriate link in the document OptionsPackagesLaTeX.tex that is in the SWSamples directory.

The front matter has a number of sample entries that you should replace with your own. Replace this text with your own. You may delete all of the text in this document to start with a blank document.

Changes to the typeset format of this shell and its associated LaTeX formatting files (article.cls and hyperref.sty) are not supported by MacKichan Software, Inc. If you wish to make such changes, please consult the LaTeX manuals or a local LaTeX expert.

If you modify this document and export it as "Standard LaTeX Article (hyperref).shl" in the Shells\Articles\SW directory, it will become your new Standard LaTeX Article (hyperref) shell.

The typesetting specification selected by this shell document uses the default class options. There are a number of class options supported by this typesetting specification. The available options include setting the paper size and the point size of the font used in the body of the document. Select Typeset, Options and



Packages, the Class Options tab and then click the Modify button to see the class options that are available for this typesetting specification.

1.2 What changes when using the hyperref package?

When the hyperref package is included in a document SW writes out macros compatible with the package. If the hyperref package is not present SW, writes out macros compatible with SW version 3.5.

In particular, the menu items Insert, Typeset Object, Hypertext Target and Insert, Typeset Object, Hypertext Reference are available only when the hyperref package is included.

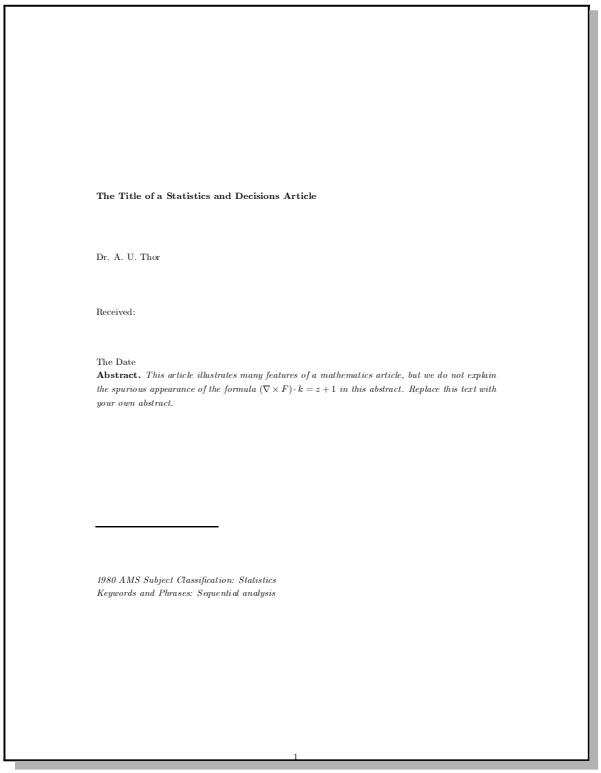
Also, if you create a PDF file using pdfTeX, the resulting PDF file will include active hyperlinks. This sample document includes a table of content and the link in this sentence to the MacKichan Software, Inc. web site.

Statistics and Decisions

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20stde	None

The front matter contains fields for the subject class and for key phrases, which appear at the bottom of the title page.



The Title of a Statistics and Decisions Article

Dr. A. U. Thor

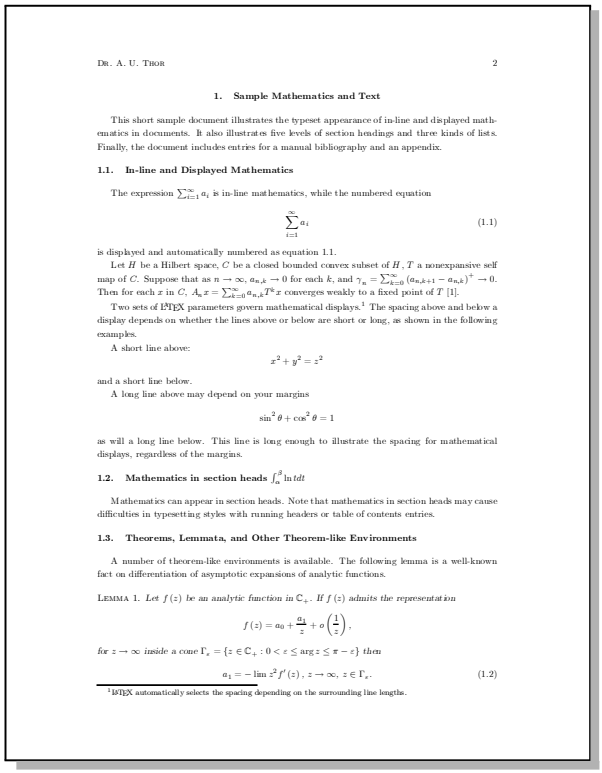
Received:

The Date

Abstract. *This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula* $(\nabla \times F) \cdot k = z + 1$ *in this abstract. Replace this text with your own abstract.*

1980 AMS Subject Classification: Statistics
Keywords and Phrases: Sequential analysis

1



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1.2. Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

LEMMA 1. *Let* $f(z)$ *be an analytic function in* $\mathbb{C}_+$*. If* $f(z)$ *admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ *inside a cone* $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ *then*

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

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Bunyip Mythical beast of Australian Aboriginal legends.

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A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

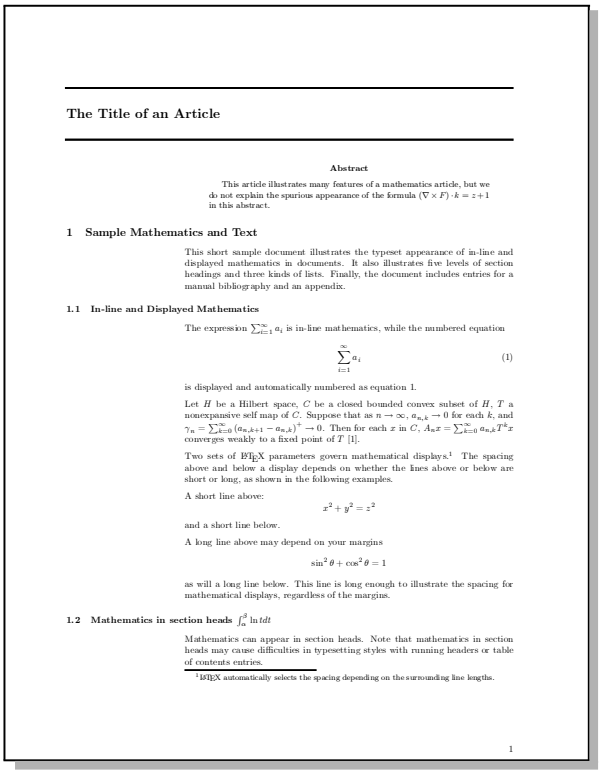
The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

TU Wien

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
refman	None

The Example tag doesn't create a theorem-like environment in this shell.



The Title of an Article

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z+1$ in this abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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1.2 Mathematics in section heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

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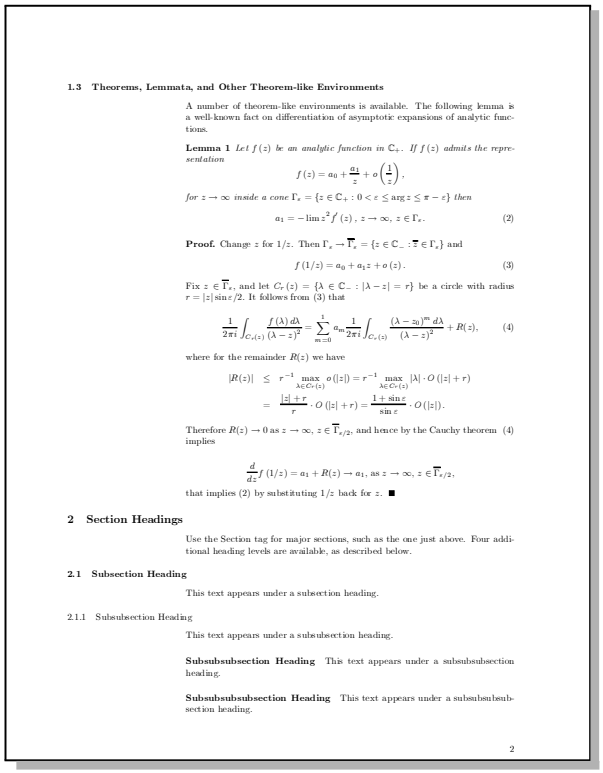
1



1.3 Theorems, Lemmata, and Other Theorem-like Environments

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Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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2

3 Lists

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A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

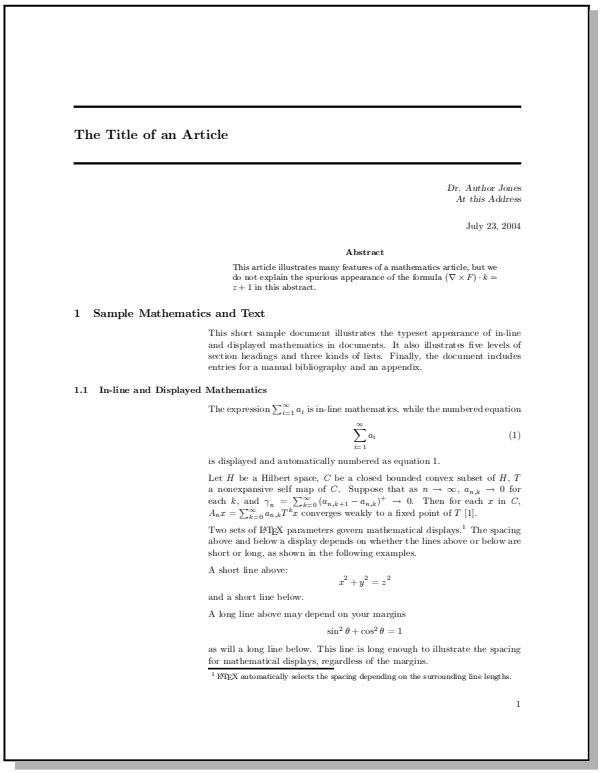
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

TU Wien Article (new)

Document class base file: refart.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	None

For further documentation, follow the appropriate link in the document OptionsPackagesLaTeX.tex in the `SWSamples` directory of your program installation.



The Title of an Article

Dr. Author Jones
At this Address

July 23, 2004

Abstract

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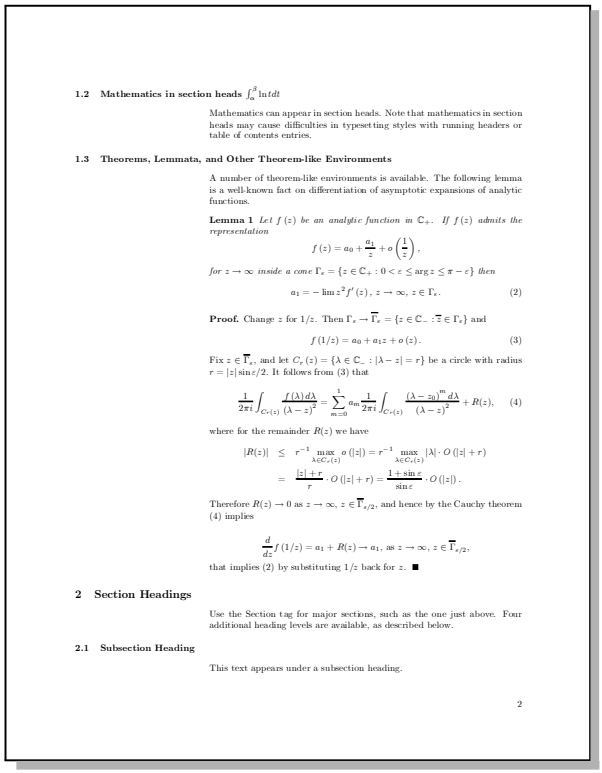

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World Scientific Proceedings 9.00x6.00

Document class base file: ws-procs9x6.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The shell has no fields in the front matter. Instead, the body of the document contains TEX fields for the title, author, and abstract of the article.

April 28, 2003 13:0 WSPC/Trim Size: 9in x 6in for Proceedings WorldScientificProceedings9x6

THE TITLE OF AN ARTICLE

DR. AUTHOR JONES
At this Address

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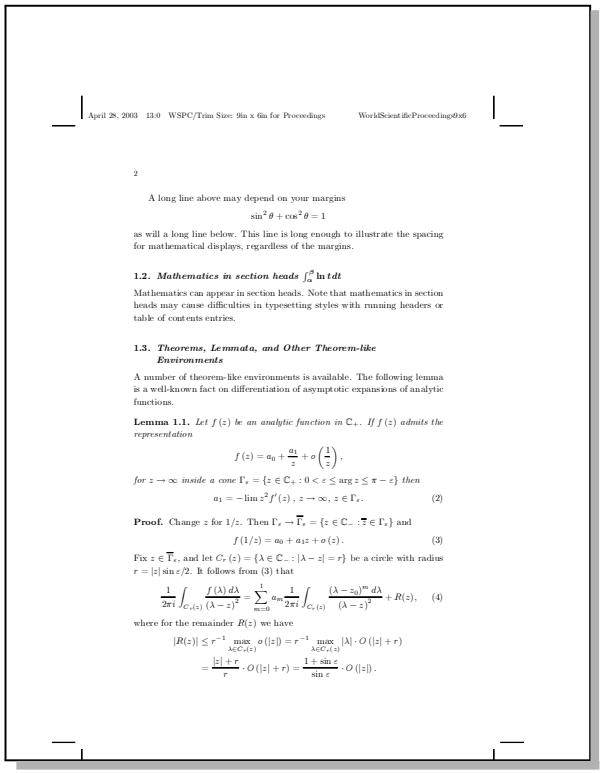

April 28, 2003 13:0 WSPC/Trim Size: 9in x 6in for Proceedings WorldScientificProceedings9x6

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where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$
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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{s/2}$, and hence by the Cauchy theorem (4) implies

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Appendix A. An Appendix

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World Scientific Proceedings 9.75x6.50 (updated)

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Packages:	
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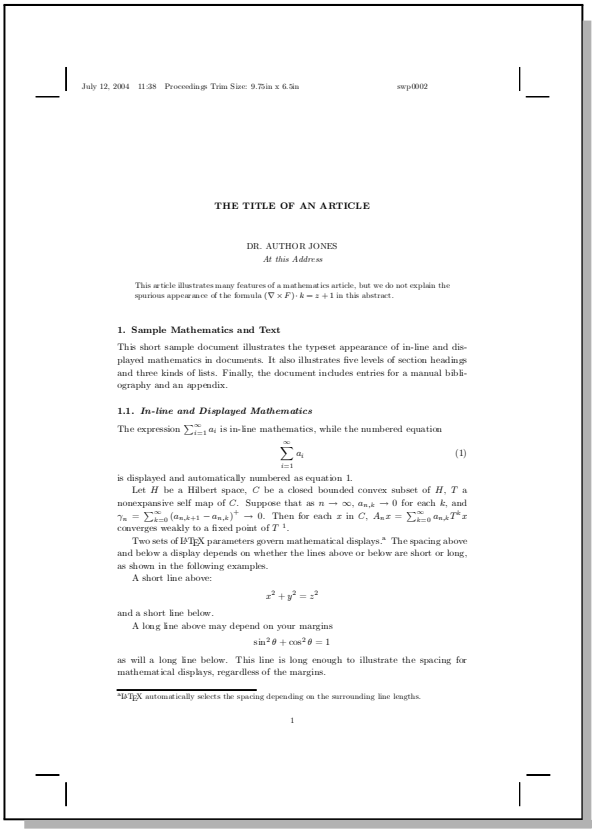

July 12, 2004 11:38 Proceedings Trim Size: 9.75in x 6.5in swp0002

THE TITLE OF AN ARTICLE

DR. AUTHOR JONES
At this Address

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1. *In-line and Displayed Mathematics*

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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is displayed and automatically numbered as equation 1.

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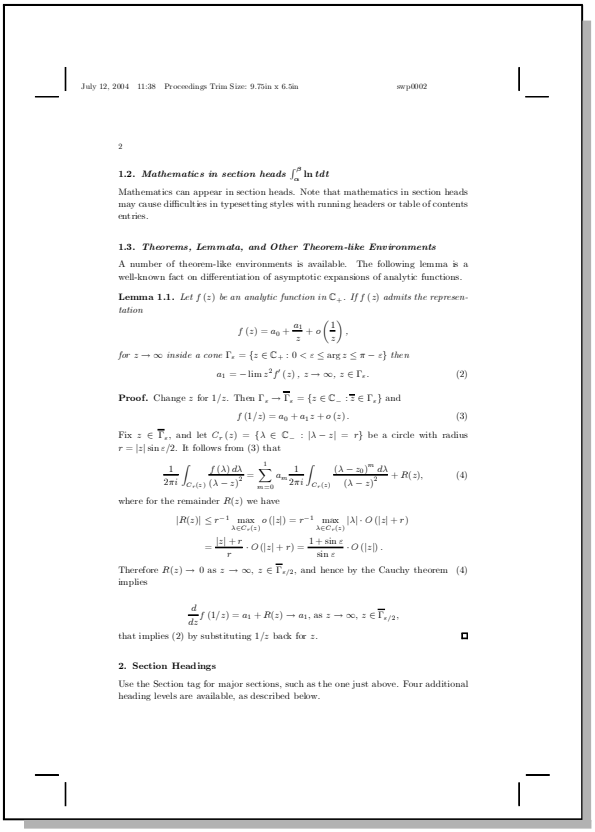

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1.2. *Mathematics in section heads $\int_\alpha^\beta \ln t dt$*

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1.3. *Theorems, Lemmata, and Other Theorem-like Environments*

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1.1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

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$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. □

2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1. *Subsection Heading*

This text appears under a subsection heading.

2.1.1. *Subsubsection Heading*

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Appendix A. An Appendix

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$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

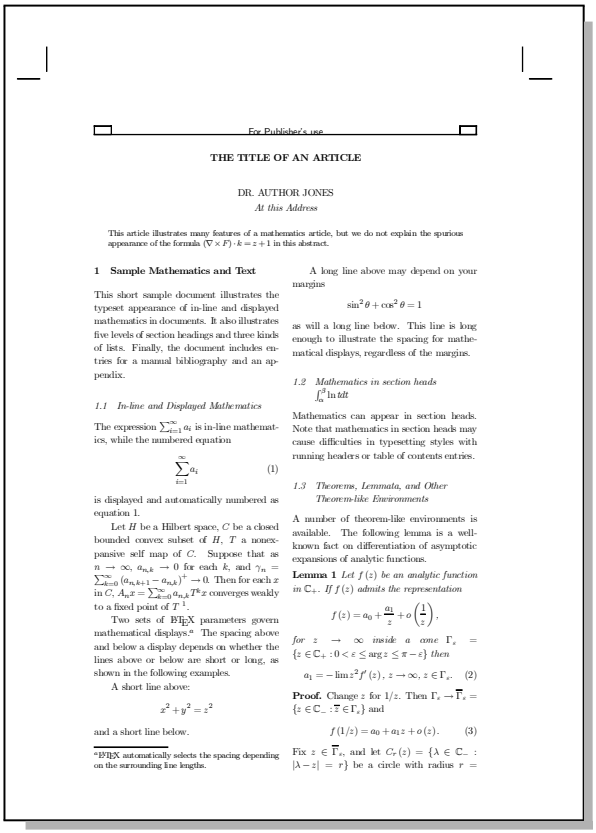
The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

World Scientific Proceedings 10.00x7.00

Document class base file: ws-p10x7.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The shell has no fields in the front matter. Instead, the body of the document contains TEX fields for the title, author, and abstract of the article.



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At this Address

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1.2 Mathematics in section heads
$\int_0^2 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

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Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

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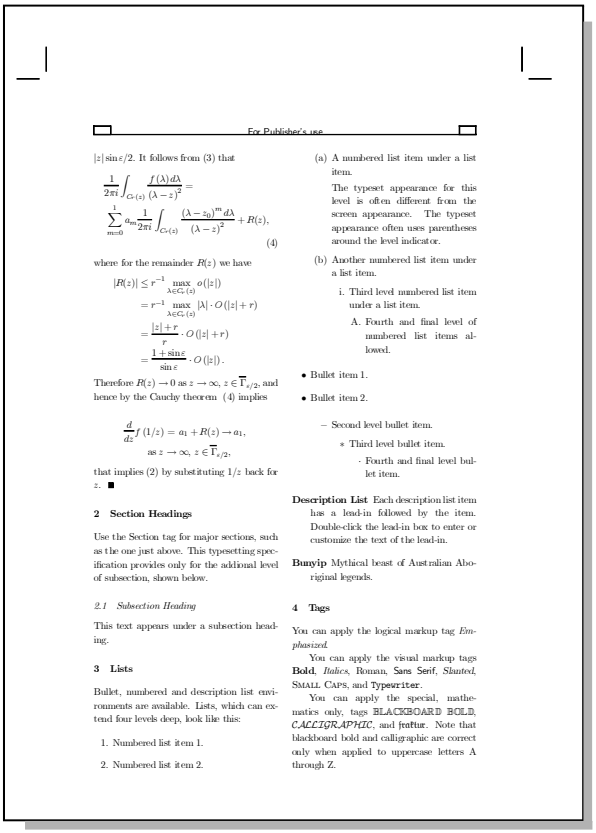

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Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and Typewriter.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

For Publisher's use

You can apply the size tags *tiny*, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George H. W. Bush*
>
> I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*
>
> They misunderestimated me. *George W. Bush*

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Appendix

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World Scientific Proceedings 11.00x8.50

Document class base file: ws-p10x7.cls

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Packages:	
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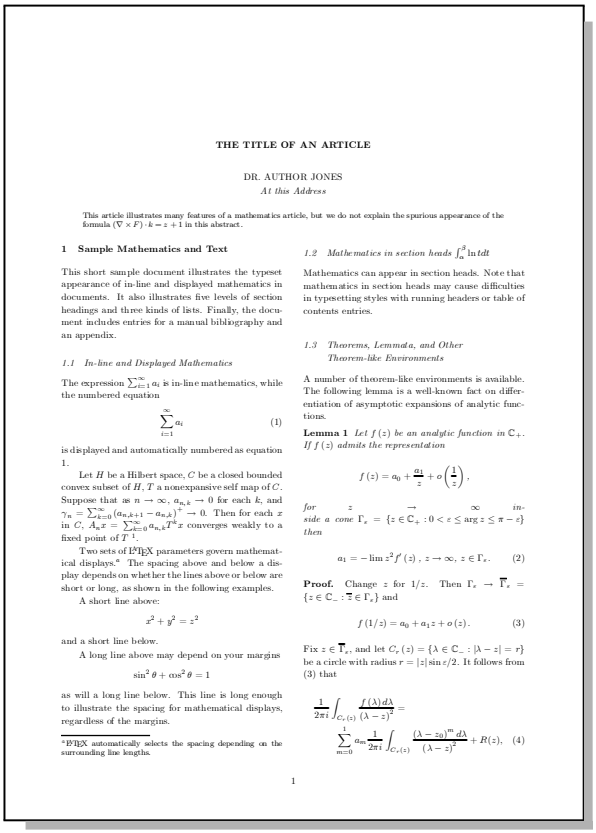

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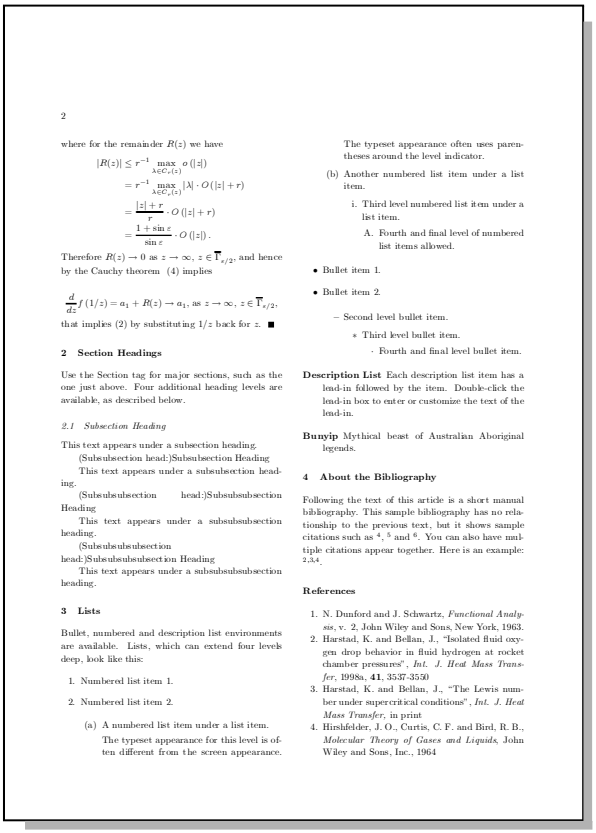

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(Subsubsection head:)Subsubsection Heading

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3 Author Packages for AMS Shells

The shell documents in the directory Author Packages for AMS Shells are available for creating documents suitable for sending to the American Mathematical Society. See **http://www.ams.org/tex/author-info.html** for a complete list of publications.

Contemporary Mathematics (Proceedings)

Document class base file: conm-p-l.cls

Options and Packages	Defaults
Document class options	None
Packages:	
None	

The shell produces documents that follow the typesetting specifications of the publication *Contemporary Mathematics (Proceedings)* from the American Mathematical Society.

Contemporary Mathematics

The Full Title of an AMS Proceedings Article

Author One, Author Two, and Author Three

Dedicatad to the memory of S. Bach.

Abstract. Replace this text with your own abstract.

1. Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1. In-line and Displayed Mathematics. The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

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2000 *Mathematics Subject Classification.* Primary 05C38, 15A15; Secondary 05A15, 15A18.
Key words and phrases. Keyword one, keyword two, keyword three.
Thanks for Author One.
Thanks for Author Two.
This paper is in final form and no version of it will be submitted for publication elsewhere.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

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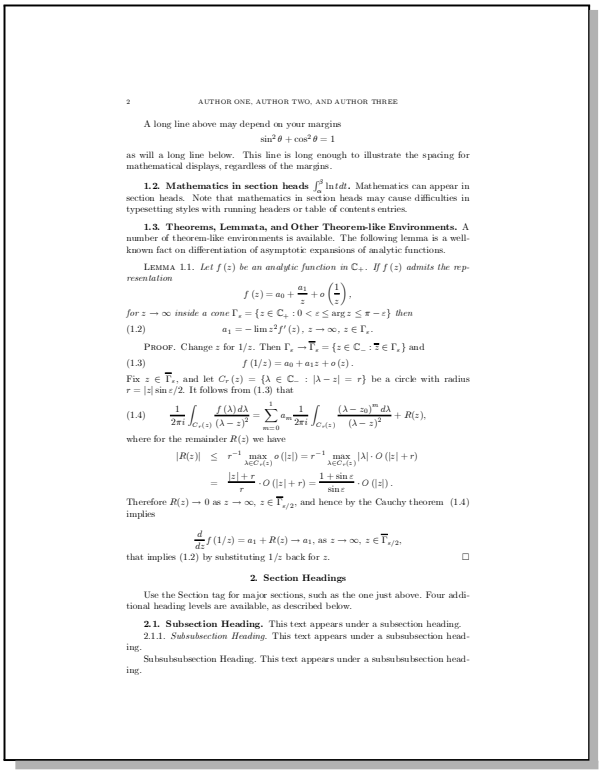

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2. Mathematics in section heads $\int_a^b \ln t dt$**.** Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3. Theorems, Lemmata, and Other Theorem-like Environments. A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1.1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o\left(|z|\right) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O\left(|z| + r\right) \\ &= \frac{|z| + r}{r} \cdot O\left(|z| + r\right) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O\left(|z|\right). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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2. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

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3. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

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  (a) A numbered list item under a list item.
    The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
  (b) Another numbered list item under a list item.
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      (A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List: Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip: Mythical beast of Australian Aboriginal legends.

4. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [**4**], [**5**] and [**6**]. You can also have multiple citations appear together. Here is an example: [**2, 3, 4**].

References

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Appendix A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations

that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A.1}$$

The quadratic equation shown as equation A.1 is used to demonstrate how equations are numbered in the appendix.

(A. One and A. Two) Author OneTwo address line 1, Author OneTwo address line 2
E-mail address, A. One: aone@aonesinst.edu
URL: http://www.authorone.oneuniv.edu

Current address, A. Two: Author Two current address line 1, Author Two current address line 2
E-mail address, A. Two: atwo@atwoinst.edu
URL: http://www.authortwo.twouniv.edu

(A. Three) Author Three address line 1, Author Three address line 2
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Generic Journal

Document class base file: gen-j-l.cls

Options and Packages	Defaults
Document class options	None
Packages:	
None	

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Unspecified Journal
Volume 00, Number 0, Pages 000–000
S ????-????(XX)0000-0

THE FULL TITLE OF AN AMS PROCEEDINGS ARTICLE

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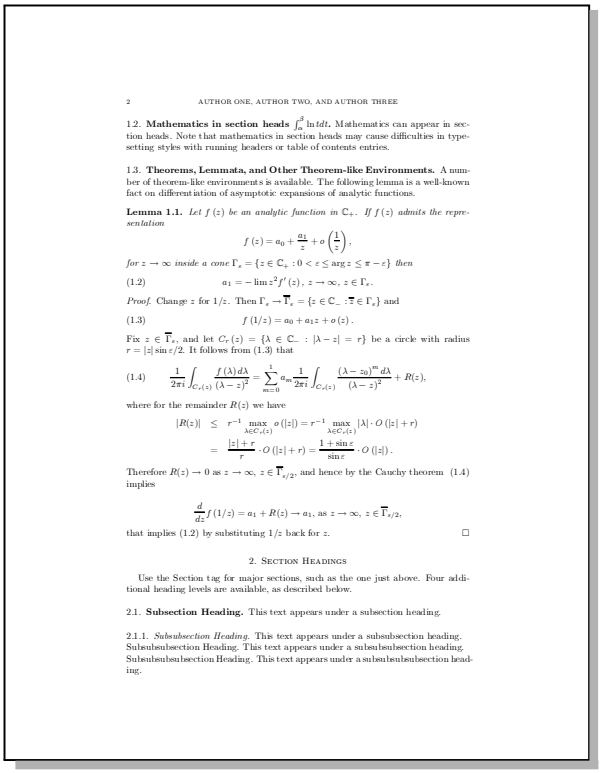

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URL: http://www.authorone.oneuniv.edu

Current address, A. Two: Author Two current address line 1, Author Two current address line 2
E-mail address, A. Two: atwo@atwoinst.edu
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(A. Three) Author Three address line 1, Author Three address line 2
URL: http://www.authorthree.threeuniv.edu

Mathematics of Computation

Document class base file: mcom-l.cls

Options and Packages	Defaults
Document class options	None
Packages:	
None	

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MATHEMATICS OF COMPUTATION
Volume 00, Number 0, Pages 000–000
S 0025-5718(XX)0000-0

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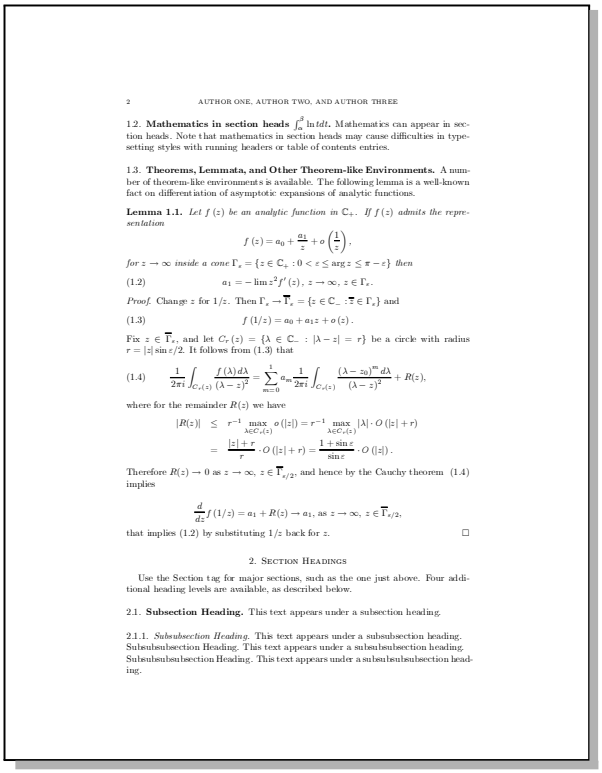

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4 Book Shells

Most book shells are based on the typesetting specifications set in one of two base document classes—`book.cls` or `report.cls`. The program uses several other `.cls` files for customized book shells. Book shells generally have extensive front and back matter. The shells produce documents with up to five heading levels defined for the body of the document, in addition to chapters and, in some cases, parts. The typesetting specifications for many book shells add blank pages where necessary so that chapters and chapter-like elements begin on odd-numbered pages. In this chapter, we include many pages of each sample book so that you can see the many different kinds of pages included in a single shell.

See page 2 for information about base document class defaults and see page 4 for page layout diagrams for the base document classes.

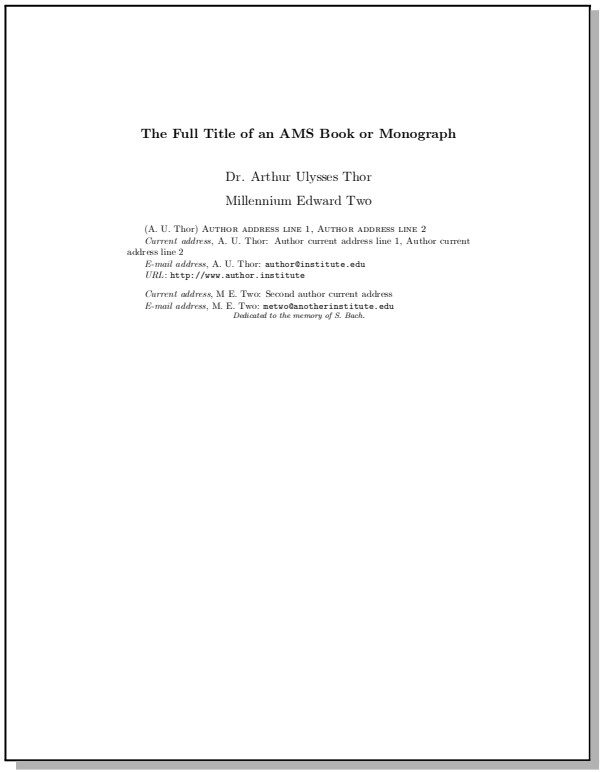
AMS Book or Monograph

Document class base file: amsbook.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The front matter contains a frontmatter environment. Front matter fields include a short title, multiple addresses, email address, URL address, thanks, dedication, and $\mathcal{AMS}$ classification. The preface is an unnumbered chapter in the body of the document.

This shell automatically adds blank pages after the table of contents and preface and where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry no headers or page numbers and are not shown here.



The Full Title of an AMS Book or Monograph

Dr. Arthur Ulysses Thor

Millennium Edward Two

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Current address, A. U. Thor: Author current address line 1, Author current address line 2
E-mail address, A. U. Thor: author@institute.edu
URL: http://www.author.institute

Current address, M E. Two: Second author current address
E-mail address, M. E. Two: metwo@anotherinstitute.edu
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A. U. Thor thanks V. Exalted.
M. E. Two thanks his mother.

Abstract. This document illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z+1$ in this abstract.

Contents

Preface v

Chapter 1. Introduction vii

Chapter 2. Purpose of this Document 1

Chapter 3. Sample Mathematics and Text 3
1. In-line and Displayed Mathematics 3
2. Mathematics in section heads $\int_a^b \ln t dt$ 3
3. Theorems, Lemmata, and Other Theorem-like Environments 3
4. Section Headings 4
5. Tags 4
6. Lists 5
7. About the Bibliography 5

Appendix A. The First Appendix 7

Appendix. Afterword 9

Appendix. Bibliography 11

Preface

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter.

CHAPTER 1

Introduction

The introduction is entered using the usual chapter tag. Since the introduction chapter appears before the `mainmatter` TeX field, it is an unnumbered chapter. The primary difference between the preface and the introduction in this shell document is that the introduction will appear in the table of contents and the page headings for the introduction are automatically handled without the need for the `markboth` TeX field. You may use either or both methods to create chapters at the beginning of your document. You may also delete these preliminary chapters.

CHAPTER 2

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

CHAPTER 3

Sample Mathematics and Text

1. In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [**1**].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2. Mathematics in section heads $\int_a^g \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

LEMMA 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{3.1}$$

PROOF. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{3.2}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3.2) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{3.3}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o\left(|z|\right) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O\left(|z| + r\right) \\ &= \frac{|z| + r}{r} \cdot O\left(|z| + r\right) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O\left(|z|\right). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (3.3) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (3.1) by substituting $1/z$ back for z. □

4. Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

4.1. Subsection Heading. This text appears under a subsection heading.

4.1.1. *Subsubsection Heading.* This text appears under a subsubsection heading.

Subsubsubsection Heading. This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading. This text appears under a subsubsubsubsection heading.

5. Tags

You can apply the logical markup tag *Emphasized*.

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You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{FRAKTUR}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

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Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

6. Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

(1) Numbered list item 1.
(2) Numbered list item 2.
   (a) A numbered list item under a list item.
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         (A) Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List: Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip: Mythical beast of Australian Aboriginal legends.

7. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [**4**], [**5**] and [**6**]. You can also have multiple citations appear together. Here is an example: [**2, 3, 4**].

APPENDIX A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.

Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550
[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print
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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

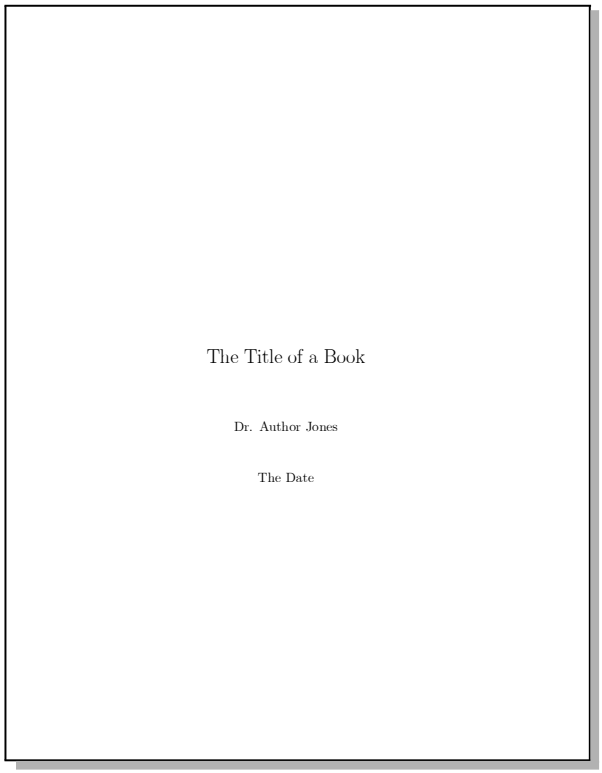
ETP (Electronic Technical Publishing)

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
etpltex	None
amsmath	Standard

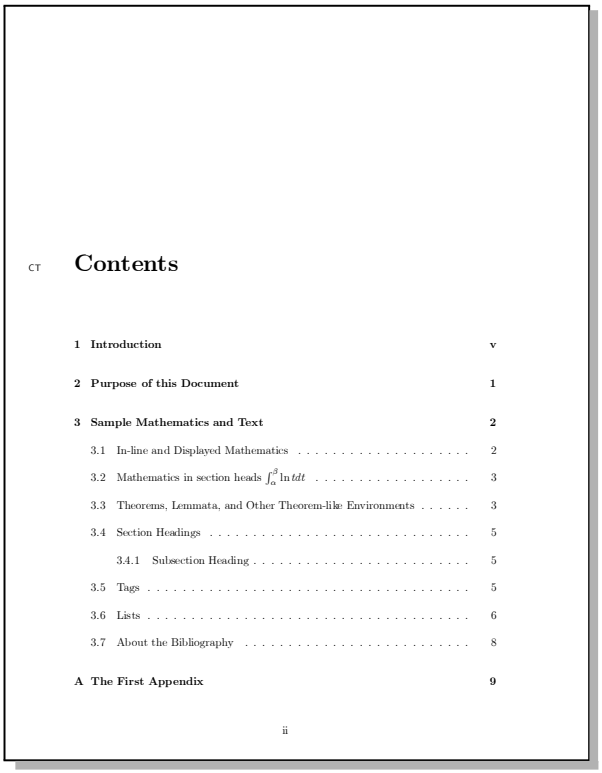
The shell is double-spaced to allow for editorial markup. The marginal notations indicate the heading level and other structural elements in the document. The preface is an unnumbered chapter in the body of the document. Special environments are available for theorems and examples.

This shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry headers and footers, as shown on sample page vi. Other blank pages in the sample are not shown here.


The Title of a Book

Dr. Author Jones

The Date


CT

Contents

1 Introduction v

2 Purpose of this Document 1

3 Sample Mathematics and Text 2

3.1 In-line and Displayed Mathematics 2

3.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$ 3

3.3 Theorems, Lemmata, and Other Theorem-like Environments 3

3.4 Section Headings 5

3.4.1 Subsection Heading 5

3.5 Tags 5

3.6 Lists 6

3.7 About the Bibliography 8

A The First Appendix 9

ii

CT

Preface

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CN

Chapter 1

CT

Introduction

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CN

Chapter 2

CT

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

CN **Chapter 3**

CT **Sample Mathematics and Text**

A **3.1 In-line and Displayed Mathematics**

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{3.1}$$

is displayed and automatically numbered as equation 3.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing

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above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

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A **3.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$**

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

A **3.3 Theorems, Lemmata, and Other Theorem-like Environments**

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{3.2}$$

G *Proof.* Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{3.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (3.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (3.2) by substituting $1/z$ back for z. ■

A **3.4 Section Headings**

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

B **3.4.1 Subsection Heading**

This text appears under a subsection heading.

C **Subsubsection Heading**

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

A **3.5 Tags**

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and Typewriter.

You can apply the special, mathematics only, tags BLACKBOARD BOLD,

CALLIGRAPHIC, and fraktur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

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> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

A

3.6 Lists

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Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

CN

Appendix A

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The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

CT

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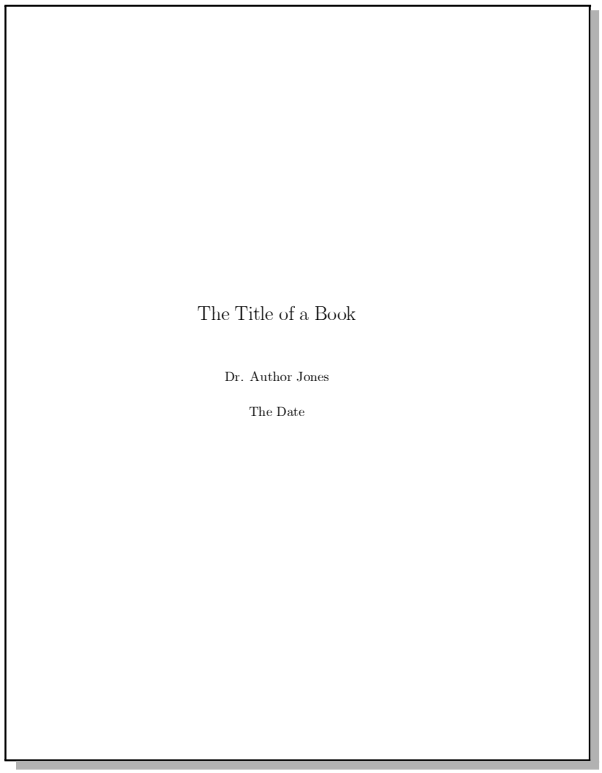
Linda Gilbert Book

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20gilb	None

This shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry no headers or page numbers and are not shown here. The page number for the table of contents always starts at page five and the preface starts at page nine, both marked using lower case Roman numerals. Appendices are not numbered. Objects inside appendices that use the appendix number (like equation numbers) are not numbered correctly. Appendix numbers can be restored by adding a TeX field containing "renewcommand–"thechapter"–"Alph–chapter"" immediately following the "appendix TeX field.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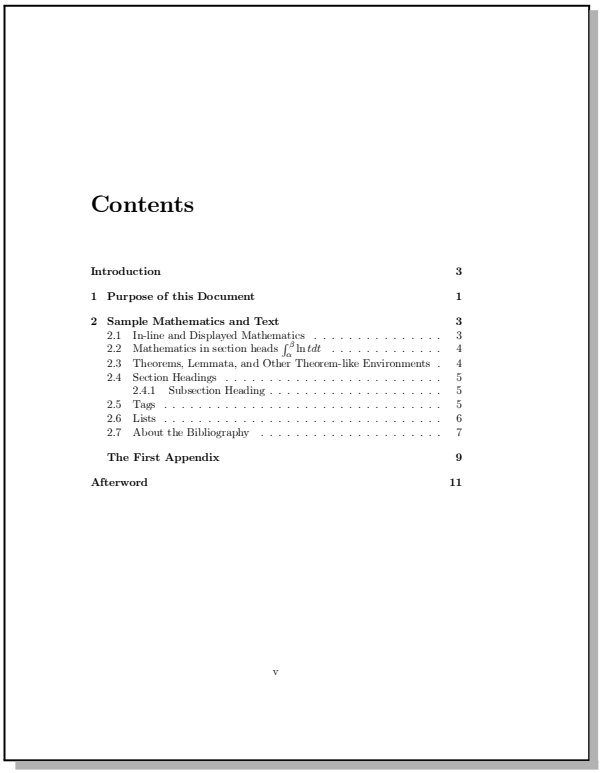
Contents

Introduction 3

1 Purpose of this Document 1

2 Sample Mathematics and Text 3
2.1 In-line and Displayed Mathematics . . . 3
2.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$ . . . 4
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2.4 Section Headings . . . 5
2.4.1 Subsection Heading . . . 5
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The First Appendix 9

Afterword 11

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Chapter 2

Sample Mathematics and Text

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Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

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Appendix

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

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Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

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Options and Packages	Defaults
Document class options	Standard
Packages:	
svcon2e	None
amsmath	Standard

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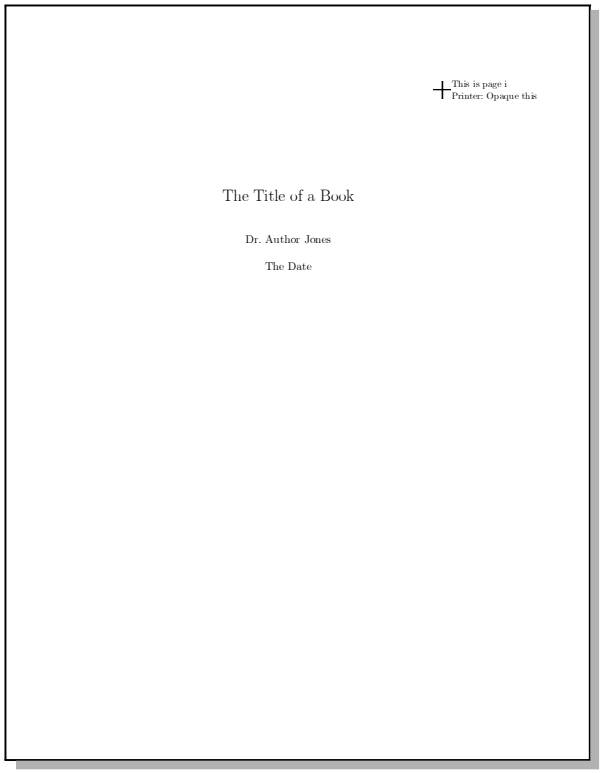
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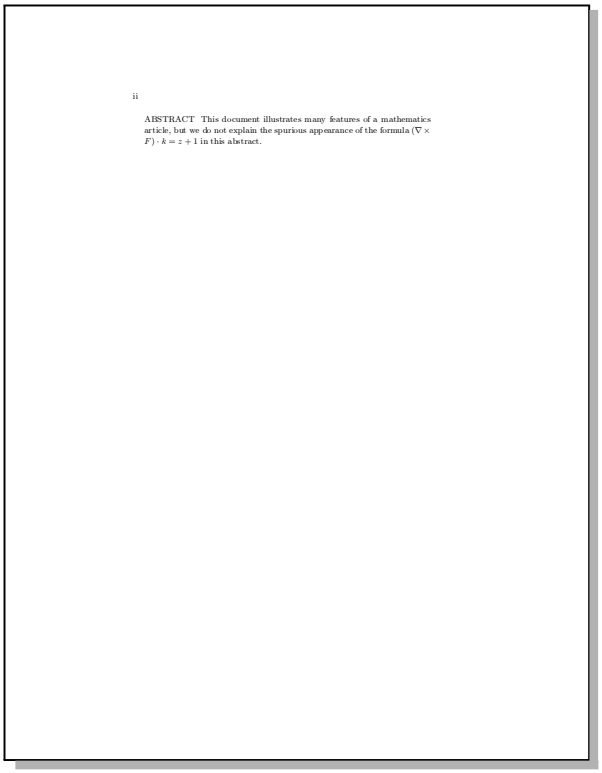
ii

ABSTRACT This document illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Contents

1 Purpose of this Document **1**

2 Sample Mathematics and Text **3**
1 In-line and Displayed Mathematics 3
2 Mathematics in section heads $\int_a^3 \ln t dt$ 3
3 Theorems, Lemmata, and Other Theorem-like Environments 3
4 Section Headings 4
4.1 Subsection Heading 4
5 Tags 5
6 Lists 5
7 About the Bibliography 6

A The First Appendix **7**

B Afterword **9**
1 References 9

Preface

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. This style starts numbering in the document preface using lower case Roman characters. The TEX field at the beginning of the first paragraph in the next chapter changes number to arabic style and resets the page counter to one.

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Sample Mathematics and Text

1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2 Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \; z \to \infty, \; z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, \; z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. ■

4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

4.1 Subsection Heading

This text appears under a subsection heading.

5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{Fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\tiny tiny}$, $_{\scriptstyle scriptsize}$, $_{\footnotesize footnotesize}$, $_{\small small}$, $_{\normalsize normalsize}$, $_{\large large}$, $_{\Large Large}$, $_{\LARGE LARGE}$, $_{\huge huge}$ and $_{\Huge Huge}$.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
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1 References

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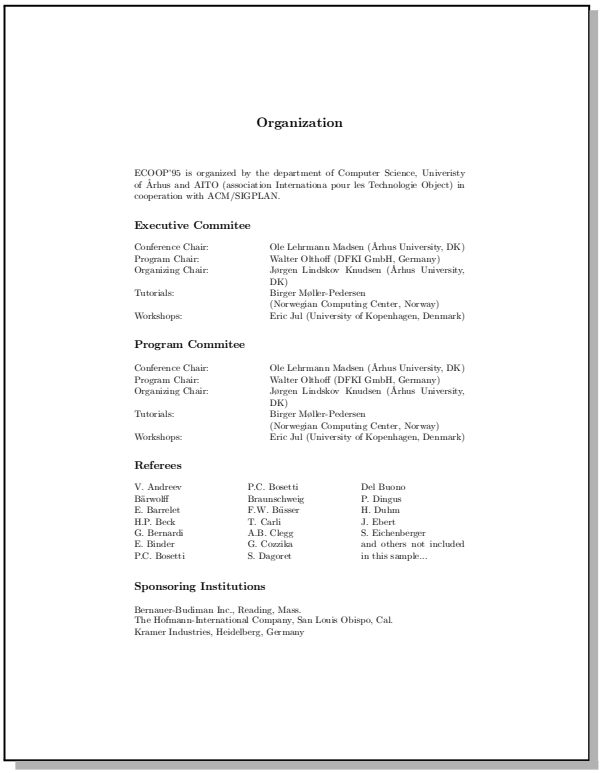
Preface

This textbook is intended for use by students of physics, physical chemistry, and theoretical chemistry. The reader is presumed to have a basic knowledge of atomic and quantum physics at the level provided, for example, by the first few chapters in our book *The Physics of Atoms and Quanta*. The student of physics will find here material which should be included in the basic education of every physicist. This book should furthermore allow students to acquire an appreciation of the breadth and variety within the field of molecular physics and its future as a fascinating area of research.

For the student of chemistry, the concepts introduced in this book will provide a theoretical framework for that entire field of study. With the help of these concepts, it is at least in principle possible to reduce the enormous body of empirical chemical knowledge to a few basic principles: those of quantum mechanics. In addition, modern physical methods whose fundamentals are introduced here are becoming increasingly important in chemistry and now represent indispensable tools for the chemist. As examples, we might mention the structural analysis of complex organic compounds, spectroscopic investigation of very rapid reaction processes or, as a practical application, the remote detection of pollutants in the air.

April 1995

Walter Olthoff
Program Chair
ECOOP'95



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Workshops:	Eric Jul (University of Kopenhagen, Denmark)

Referees

V. Andreev	P.C. Bosetti	Del Buono
Bärwolff	Braunschweig	P. Dingus
E. Barrelet	F.W. Büsser	H. Duhm
H.P. Beck	T. Carli	J. Ebert
G. Bernardi	A.B. Clegg	S. Eichenberger
E. Binder	G. Cozzika	and others not included
P.C. Bosetti	S. Dagoret	in this sample...

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Table of Contents

Hamiltonian Mechanics

Hamiltonian Mechanics unter besonderer Berücksichtigung der höhreren Lehranstalten 1
Ivar Ekeland (Princeton University), Roger Temam (Université de Paris-Sud), Jeffrey Dean, David Grove, Craig Chambers (Università di Geova), Kim B. Bruce (Stanford University), Elisa Bertino (Digita Research Center)

Hamiltonian Mechanics2 7
Ivar Ekeland, Roger Temam

Author Index 13

Subject Index 17

Hamiltonian Mechanics unter besonderer Berücksichtigung der höhreren Lehranstalten

Ivar Ekeland[1], Roger Temam[2] Jeffrey Dean, David Grove, Craig Chambers, Kim B. Bruce, and Elisa Bertino

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Abstract. The abstract should summarize the contents of the paper using at least 70 and at most 150 words. It will be set in 9-point font size and be inset 1.0 cm from the right and left margins. There will be two blank lines before and after the Abstract. . . .

1 Fixed-Period Problems: The Sublinear Case

With this chapter, the preliminaries are over, and we begin the search for periodic solutions to Hamiltonian systems. All this will be done in the convex case; that is, we shall study the boundary-value problem

$$\begin{aligned} \dot{x} &= JH'(t,x) \\ x(0) &= x(T) \end{aligned}$$

with $H(t,\cdot)$ a convex function of x, going to $+\infty$ when $\|x\| \to \infty$.

1.1 Autonomous Systems

In this section, we will consider the case when the Hamiltonian $H(x)$ is autonomous. For the sake of simplicity, we shall also assume that it is C^1.

We shall first consider the question of nontriviality, within the general framework of (A_∞, B_∞)-subquadratic Hamiltonians. In the second subsection, we shall look into the special case when H is $(0, b_\infty)$-subquadratic, and we shall try to derive additional information.

The General Case: Nontriviality. We assume that H is (A_∞, B_∞)-subquadratic at infinity, for some constant symmetric matrices A_∞ and B_∞, with $B_\infty - A_\infty$ positive definite. Set:

$$\gamma := \text{smallest eigenvalue of } \; B_\infty - A_\infty \tag{1}$$

$$\lambda := \text{largest negative eigenvalue of } \; -J\frac{d}{dt} + A_\infty \; . \tag{2}$$

Fig. 1. This is the caption of the figure displaying a white eagle and a white horse on a snow field

Theorem 1 tells us that if $\lambda + \gamma < 0$, the boundary-value problem:

$$\begin{aligned} \dot{x} &= JH'(x) \\ x(0) &= x(T) \end{aligned} \tag{3}$$

has at least one solution $\overline{x}$, which is found by minimizing the dual action functional:

$$\psi(u) = \int_o^T \left[\frac{1}{2}\left(A_o^{-1}u, u\right) + N^*(-u)\right] dt \tag{4}$$

on the range of A, which is a subspace $R(A)_T^2$ with finite codimension. Here

$$N(x) := H(x) - \frac{1}{2}\left(A_\infty x, x\right) \tag{5}$$

is a convex function, and

$$N(x) \leq \frac{1}{2}\left((B_\infty - A_\infty)x, x\right) + c \quad \forall x \; . \tag{6}$$

Proposition 1. *Assume $H'(0) = 0$ and $H(0) = 0$. Set:*

$$\delta := \liminf_{x \to 0} 2N(x) \left\|x\right\|^{-2} \; . \tag{7}$$

If $\gamma < -\lambda < \delta$, the solution $\overline{x} \equiv 0$ is non-zero:

$$\overline{x}(t) \neq 0 \quad \forall t \; . \tag{8}$$

Proof. Condition (7) means that, for every $\delta' > \delta$, there is some $\varepsilon > 0$ such that

$$\|x\| \leq \varepsilon \Rightarrow N(x) \leq \frac{\delta'}{2}\|x\|^2 \; . \tag{9}$$

It is an exercise in convex analysis, into which we shall not go, to show that this implies that there is an $\eta > 0$ such that

$$f\,\|x\| \leq \eta \Rightarrow N^*(y) \leq \frac{1}{2\delta'}\|y\|^2 \; . \tag{10}$$

Since u_1 is a smooth function, we will have $\|hu_1\|_\infty \leq \eta$ for h small enough, and inequality (10) will hold, yielding thereby:

$$\psi(hu_1) \leq \frac{h^2}{2}\frac{1}{\lambda}\|u_1\|_2^2 + \frac{h^2}{2}\frac{1}{\delta'}\|u_1\|^2 \; . \tag{11}$$

If we choose δ' close enough to δ, the quantity $\left(\frac{1}{\lambda} + \frac{1}{\delta'}\right)$ will be negative, and we end up with

$$\psi(hu_1) < 0 \quad \text{for} \quad h \neq 0 \;\; \text{small} \; . \tag{12}$$

On the other hand, we check directly that $\psi(0) = 0$. This shows that 0 cannot be a minimizer of ψ, not even a local one. So $\overline{x} \neq 0$ and $\overline{x} \neq A_o^{-1}(0) = 0$. □

Corollary 1. *Assume H is C^2 and (a_∞, b_∞)-subquadratic at infinity. Let ξ_1, . . . , ξ_N be the equilibria, that is, the solutions of $H'(\xi) = 0$. Denote by ω_k the smallest eigenvalue of $H''(\xi_k)$, and set:*

$$\omega := \text{Min}\left\{\omega_1, \ldots, \omega_k\right\} \; . \tag{13}$$

If:

$$\frac{T}{2\pi}b_\infty < -E\left[-\frac{T}{2\pi}a_\infty\right] < \frac{T}{2\pi}\omega \tag{14}$$

then minimization of ψ yields a non-constant T-periodic solution $\overline{x}$.

We recall once more that by the integer part $E[\alpha]$ of $\alpha \in \mathbb{R}$, we mean the $a \in \mathbb{Z}$ such that $a < \alpha \leq a + 1$. For instance, if we take $a_\infty = 0$, Corollary 2 tells us that $\overline{x}$ exists and is non-constant provided that:

$$\frac{T}{2\pi}b_\infty < 1 < \frac{T}{2\pi} \tag{15}$$

or

$$T \in \left(\frac{2\pi}{\omega}, \frac{2\pi}{b_\infty}\right) \; . \tag{16}$$

Proof. The spectrum of A is $\frac{2\pi}{T}\mathbb{Z} + a_\infty$. The largest negative eigenvalue λ is given by $\frac{2\pi}{T}k_o + a_\infty$, where

$$\frac{2\pi}{T}k_o + a_\infty < 0 \leq \frac{2\pi}{T}(k_o + 1) + a_\infty \; . \tag{17}$$

Hence:

$$k_o = E\left[-\frac{T}{2\pi}a_\infty\right] \; . \tag{18}$$

The condition $\gamma < -\lambda < \delta$ now becomes:

$$b_\infty - a_\infty < -\frac{2\pi}{T}k_o - a_\infty < \omega - a_\infty \tag{19}$$

which is precisely condition (14). □

Table 1. This is the example table taken out of *The TEXbook*, p. 246

Year	World population
8000 B.C.	5,000,000
50 A.D.	200,000,000
1650 A.D.	500,000,000
1945 A.D.	2,300,000,000
1980 A.D.	4,400,000,000

Lemma 1. *Assume that H is C^2 on $\mathbb{R}^{2n}\backslash\{0\}$ and that $H''(x)$ is non-degenerate for any $x \neq 0$. Then any local minimizer $\bar{x}$ of ψ has minimal period T.*

Proof. We know that $\bar{x}$, or $\bar{x} + \xi$ for some constant $\xi \in \mathbb{R}^{2n}$, is a T-periodic solution of the Hamiltonian system:

$$\dot{x} = JH'(x) \ . \tag{20}$$

There is no loss of generality in taking $\xi = 0$. So $\psi(x) \geq \psi(\bar{x})$ for all $\bar{x}$ in some neighbourhood of x in $W^{1,2}\left(\mathbb{R}/T\mathbb{Z}; \mathbb{R}^{2n}\right)$.

But this index is precisely the index $i_T(\bar{x})$ of the T-periodic solution $\bar{x}$ over the interval $(0, T)$, as defined in Sect. 2.6. So

$$i_T(\bar{x}) = 0 \ . \tag{21}$$

Now if $\bar{x}$ has a lower period, T/k say, we would have, by Corollary 31:

$$i_T(\bar{x}) = i_{kT/k}(\bar{x}) \geq k\, i_{T/k}(\bar{x}) + k - 1 \geq k - 1 \geq 1 \ . \tag{22}$$

This would contradict (21), and thus cannot happen. □

Notes and Comments. The results in this section are a refined version of [1]; the minimality result of Proposition 14 was the first of its kind.

To understand the nontriviality conditions, such as the one in formula (16), one may think of a one-parameter family x_T, $T \in (2\pi\omega^{-1}, 2\pi b_\infty^{-1})$ of periodic solutions, $x_T(0) = x_T(T)$, with x_T going away to infinity when $T \to 2\pi\omega^{-1}$, which is the period of the linearized system at 0.

Theorem 1 (Ghoussoub-Preiss). *Assume $H(t, x)$ is $(0, \varepsilon)$-subquadratic at infinity for all $\varepsilon > 0$, and T-periodic in t*

$$H(t, \cdot) \quad \text{is convex} \quad \forall t \tag{23}$$

$$H(\cdot, x) \quad \text{is} \quad T-\text{periodic} \quad \forall x \tag{24}$$

$$H(t, x) \geq n\left(\|x\|\right) \quad \text{with} \quad n(s)s^{-1} \to \infty \ \text{ as } \ s \to \infty \tag{25}$$

$$\forall \varepsilon > 0 \ , \quad \exists c \ : \ H(t, x) \leq \frac{\varepsilon}{2}\|x\|^2 + c \ . \tag{26}$$

Assume also that H is C^2, and $H''(t, x)$ is positive definite everywhere. Then there is a sequence x_k, $k \in \mathbb{N}$, of kT-periodic solutions of the system

$$\dot{x} = JH'(t, x) \tag{27}$$

such that, for every $k \in \mathbb{N}$, there is some $p_k \in \mathbb{N}$ with:

$$p \geq p_k \Rightarrow x_{pk} \neq x_k \ . \tag{28}$$

□

Example 1 (External forcing). Consider the system:

$$\dot{x} = JH'(x) + f(t) \tag{29}$$

where the Hamiltonian H is $(0, b_\infty)$-subquadratic, and the forcing term is a distribution on the circle:

$$f = \frac{d}{dt}F + f_a \quad \text{with} \ \ F \in L^2\left(\mathbb{R}/T\mathbb{Z}; \mathbb{R}^{2n}\right) \ , \tag{30}$$

where $f_a := T^{-1}\int_a^T f(t)dt$. For instance,

$$f(t) = \sum_{k\in\mathbb{N}} \delta_k \xi \ , \tag{31}$$

where δ_k is the Dirac mass at $t = k$ and $\xi \in \mathbb{R}^{2n}$ is a constant, fits the prescription. This means that the system $\dot{x} = JH'(x)$ is being excited by a series of identical shocks at interval T.

Definition 1. *Let $A_\infty(t)$ and $B_\infty(t)$ be symmetric operators in $\mathbb{R}^{2n}$, depending continuously on $t \in [0, T]$, such that $A_\infty(t) \leq B_\infty(t)$ for all t.*

A Borelian function $H : [0, T] \times \mathbb{R}^{2n} \to \mathbb{R}$ is called (A_∞, B_∞)-subquadratic at infinity if there exists a function $N(t, x)$ such that:

$$H(t, x) = \frac{1}{2}\left(A_\infty(t)x, x\right) + N(t, x) \tag{32}$$

$$\forall t \ , \quad N(t, x) \quad \text{is convex with respect to} \ \ x \tag{33}$$

$$N(t, x) \geq n\left(\|x\|\right) \quad \text{with} \ \ n(s)s^{-1} \to +\infty \ \text{ as } \ s \to +\infty \tag{34}$$

$$\exists c \in \mathbb{R} \ : \quad H(t, x) \leq \frac{1}{2}\left(B_\infty(t)x, x\right) + c \quad \forall x \ . \tag{35}$$

If $A_\infty(t) = a_\infty I$ and $B_\infty(t) = b_\infty I$, with $a_\infty \leq b_\infty \in \mathbb{R}$, we shall say that H is (a_∞, b_∞)-subquadratic at infinity. As an example, the function $\|x\|^\alpha$, with $1 \leq \alpha < 2$, is $(0, \varepsilon)$-subquadratic at infinity for every $\varepsilon > 0$. Similarly, the Hamiltonian

$$H(t, x) = \frac{1}{2}k\|k\|^2 + \|x\|^\alpha \tag{36}$$

is $(k, k + \varepsilon)$-subquadratic for every $\varepsilon > 0$. Note that, if $k < 0$, it is not convex.

Notes and Comments. The first results on subharmonics were obtained by Rabinowitz in [5], who showed the existence of infinitely many subharmonics both in the subquadratic and superquadratic case, with suitable growth conditions on H'. Again the duality approach enabled Clarke and Ekeland in [2] to treat the same problem in the convex-subquadratic case, with growth conditions on H only.

Recently, Michalek and Tarantello (see [3] and [4]) have obtained lower bound on the number of subharmonics of period kT, based on symmetry considerations and on pinching estimates, as in Sect. 5.2 of this article.

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Author Index

Abt I. 7
Ahmed T. 3
Andreev V. 24
Andrieu B. 27
Arpagaus M. 34

Babaev A. 25
Bärwolff A. 33
Bán J. 17
Baranov P. 24
Barrelet E. 28
Bartel W. 11
Bassler U. 28
Beck H.P. 35
Behrend H-J. 11
Berger Ch. 1
Bergstein H. 1
Bernardi G. 28
Bernet R. 34
Besançon M. 9
Biddulph P. 22
Binder E. 11
Bischoff A. 33
Blobel V. 13
Borras K. 8
Boseti P.C. 2
Boudry V. 27
Brasse F. 11
Braun U. 2
Braunschweig A. 1
Brison V. 26
Büngener L. 13
Bürger J. 11
Büsser F.W. 13
Buniatian A. 11,37
Buschhorn G. 25

Campbell A.J. 1
Carli T. 25
Charles F. 28
Clarke D. 5
Clegg A.B. 18
Colombo M. 8
Courau A. 26
Coutures Ch. 9

Cozzika G. 9
Criegee L. 11
Cvach J. 27

Dagoret S. 28
Dainton J.B. 19
Dann A.W.E. 22
Dau W.D. 16
Deffur E. 11
Delcourt B. 26
Buono Del A. 28
Devel M. 26
De Roeck A. 11
Dingus P. 27
Dollfus C. 35
Dreis H.B. 2
Droscher A. 8
Düllmann D. 13
Dünger O. 13
Duhm H. 12

Ebbinghaus R. 8
Eberle M. 12
Ebert J. 32
Ebert T.R. 19
Efremenko V. 23
Egli S. 35
Eichenberger S. 35
Eichler R. 34
Eisenhandler E. 20
Ellis N.N. 3
Ellison R.J. 22
Elsen E. 11
Evrard E. 4

Favart L. 4
Feeken D. 13
Felst R. 11
Feltesse A. 9
Fensome I.F. 3
Ferrarotto F. 31
Flamm K. 11
Flauger W. 11
Flieser M. 25
Flügge G. 2
Fomenko A. 24

Fominykh B. 23
Formánek J. 30
Foster J.M. 22
Franke G. 11
Fretwurst E. 12

Gabathuler E. 19
Gamerdinger K. 25
Garvey J. 3
Gayler J. 11
Gellrich A. 13
Gennis M. 11
Genzel H. 1
Godfrey L. 7
Goerlach U. 11
Goerlich L. 6
Gogitidze N. 24
Goodall A.M. 19
Gorelov I. 23
Goritchev P. 23
Grab C. 34
Grässler R. 2
Greenshaw T. 19
Greif H. 25
Grindhammer G. 25

Haack J. 33
Haidt D. 11
Hamon O. 28
Handschuh D. 11
Hanlon E.M. 18
Hapke M. 11
Harjes J. 11
Haydar R. 26
Haynes W.J. 5
Hedberg V. 21
Heinzelmann G. 13
Henderson R.C.W. 18
Henschel H. 33
Herynek I. 29
Hildesheim W. 11
Hill P. 11
Hilton C.D. 22
Hoeger K.C. 22
Huet Ph. 4
Hufnagel H. 14
Huot N. 28

Itterbeck H. 1

Jabiol M.-A. 9
Jachołkowska A. 26
Jacobsson C. 21
Jansen T. 11
Jönsson L. 21
Johannsen A. 13
Johnson D.P. 4
Jung H. 2

Kalmus P.I.P. 20
Kasarian S. 11
Kaschowitz R. 2
Kathage U. 16
Kaufmann H. 33
Kenyon I.R. 3
Kermiche S. 26
Kiesling C. 25
Klein M. 33
Kleinwort C. 13
Knies G. 11
Ko W. 7
Köhler T. 1
Kolanoski H. 8
Kole F. 7
Kolya S.D. 22
Korbel V. 11
Korn M. 8
Kostka P. 33
Kotelnikov S.K. 24
Krehbiel H. 11
Krücker D. 2
Krüger U. 11
Kubenka J.P. 25
Kuhlen M. 25
Kurča T. 17
Kurzhöfer J. 8
Kuznik B. 32

Lamarche F. 27
Lander R. 7
Landon M.P.J. 20
Lange W. 33
Lanius P. 25
Laporte J.F. 9
Lebedev A. 24
Leuschner A. 11
Levonian S. 11,24
Lewin D. 11
Ley Ch. 2
Lindner A. 8

Subject Index

Absorption 327
Absorption of radiation 289–292, 299, 300
Actinides 244
Aharonov-Bohm effect 142–146
Angular momentum 101–112
– algebraic treatment 391–396
Angular momentum addition 185–193
Angular momentum commutation relations 101
Angular momentum quantization 9–10, 104–106
Angular momentum states 107, 321, 391–396
Antiquark 83
α-rays 101–103
Atomic theory 8–10, 219–249, 327
Average value
(*see also* Expectation value) 15–16, 25, 34, 37, 357

Baker-Hausdorff formula 23
Balmer formula 8
Balmer series 125
Baryon 220, 224
Basis 98
Basis system 164, 376
Bell inequality 379–381, 382
Bessel functions 201, 313, 337
– spherical 304–306, 309, 313–314, 322
Bound state 73–74, 78–79, 116–118, 202, 267, 273, 306, 348, 351
Boundary conditions 59, 70
Bra 159
Breit-Wigner formula 80, 84, 332

Brillouin-Wigner perturbation theory 203

Cathode rays 8
Causality 357–359
Center-of-mass frame 232, 274, 338
Central potential 113–135, 303–314
Centrifugal potential 115–116, 323
Characteristic function 33
Clebsch-Gordan coefficients 191–193
Cold emission 88
Combination principle, Ritz's 124
Commutation relations 27, 44, 353, 391
Commutator 21–22, 27, 44, 344
Compatibility of measurements 99
Complete orthonormal set 31, 40, 160, 360
Complete orthonormal system, *see* Complete orthonormal set
Complete set of observables, *see* Complete set of operators

Eigenfunction 34, 46, 344–346
– radial 321
–– calculation 322–324
EPR argument 377–378
Exchange term 228, 231, 237, 241, 268, 272

f-sum rule 302
Fermi energy 223

H_2^+ molecule 26
Half-life 65
Holzwarth energies 68

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multicol	None
cl2emono	None
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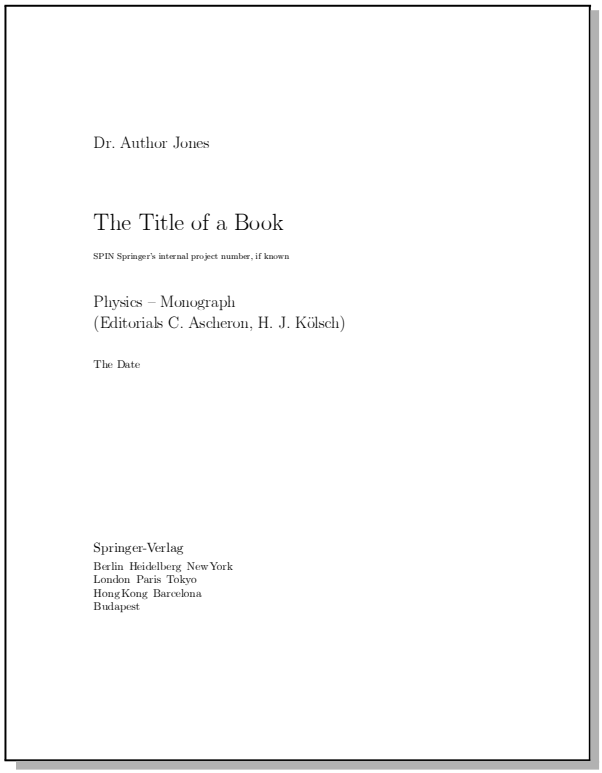
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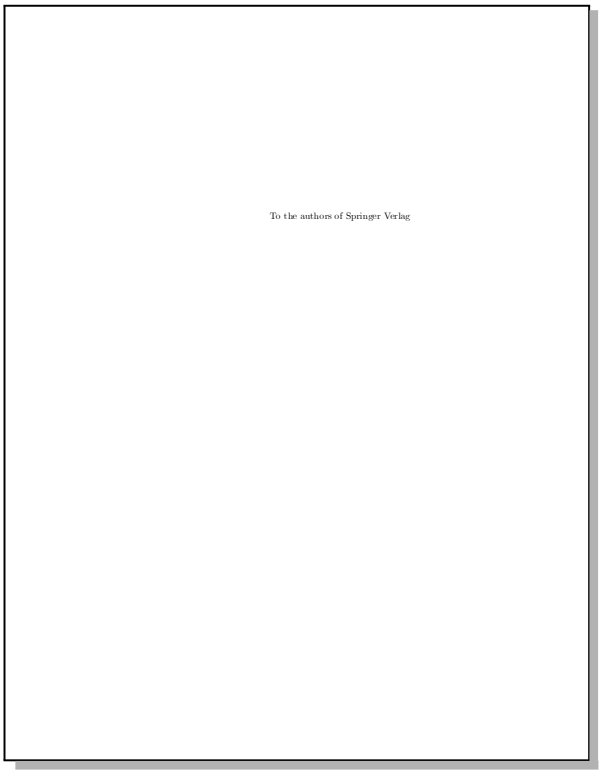
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Preface

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place(s), *Firstname Surname*
month year *Firstname Surname*

Contents

1. Purpose of this Document 1

2. Sample Mathematics and Text 3
2.1 In-line and Displayed Mathematics 3
2.2 Mathematics in section heads $\int_a^\partial \ln tdt$ 3
2.3 Theorems, Lemmata, and Other Theorem-like Environments 4
2.4 Section Headings 4
2.4.1 Subsection Heading 5
2.5 Tags 5
2.6 Lists 5
2.7 About the Bibliography 6

A. The First Appendix 7

1. Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

2. Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2.2 Mathematics in section heads $\int_a^\partial \ln tdt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

2.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 2.3.1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{n=0}^{1} a_n \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^n\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$
$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,.$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z.

2.4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.4.1 Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading. This text appears under a subsubsection heading.

Subsubsubsection Heading. This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading. This text appears under a subsubsubsubsection heading.

2.5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{froftur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   a) A numbered list item under a list item.
      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.

   b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    - Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item.

Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

2.7 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

A. The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.

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1. N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
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amsmath	Standard

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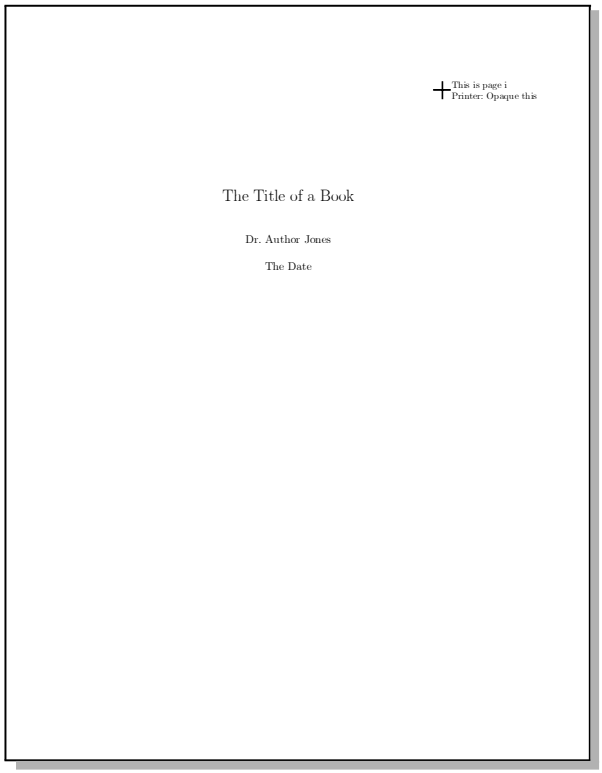
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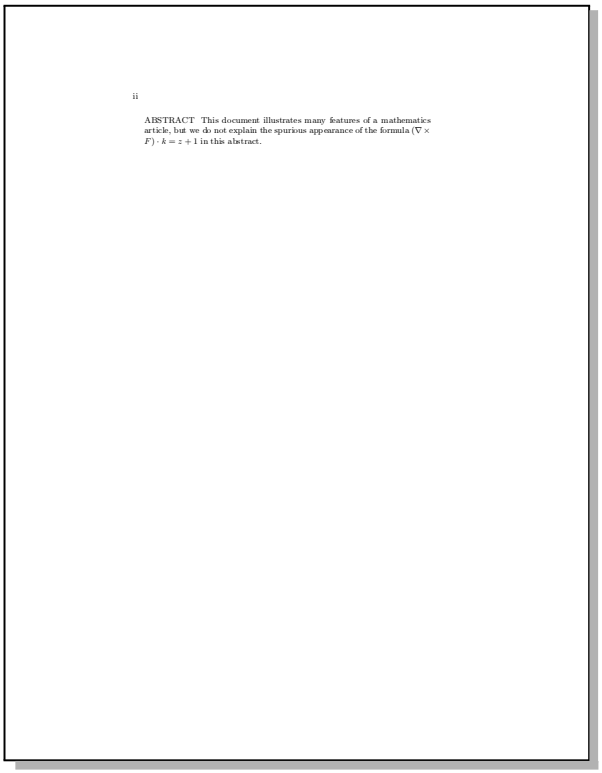
ii

ABSTRACT This document illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Contents

1 Purpose of this Document **1**

2 Sample Mathematics and Text **3**
2.1 In-line and Displayed Mathematics 3
2.2 Mathematics in section heads $\int_a^b \ln t dt$ 3
2.3 Theorems, Lemmata, and Other Theorem-like Environments 4
2.4 Section Headings 4
2.4.1 Subsection Heading 5
2.5 Tags 5
2.6 Lists 5
2.7 About the Bibliography 6

A The First Appendix **7**

B Afterword **9**
B.1 References 9

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1

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2

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A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

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Appendix A

The First Appendix

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Appendix B

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Document class base file: report.cls

Options and Packages	Defaults
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amsmath	Standard

The preface is an unnumbered chapter in the body of the document with pages numbered in lowercase roman numerals.

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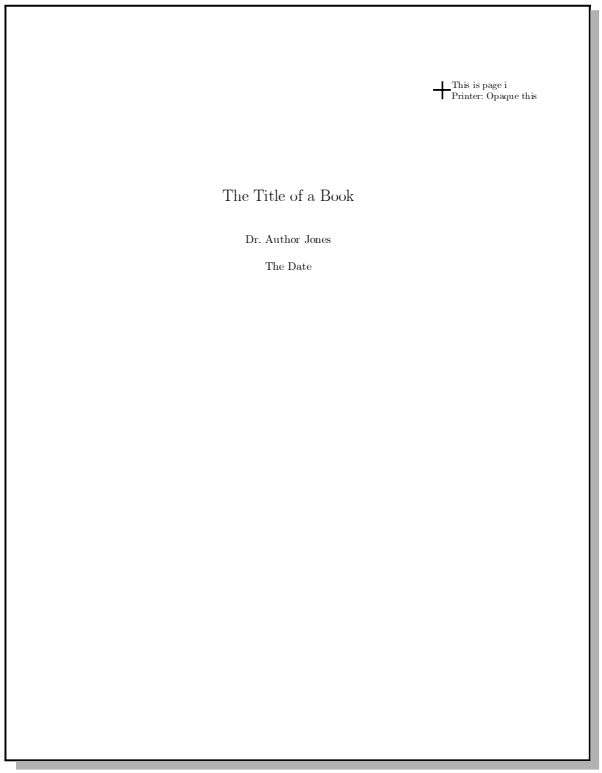
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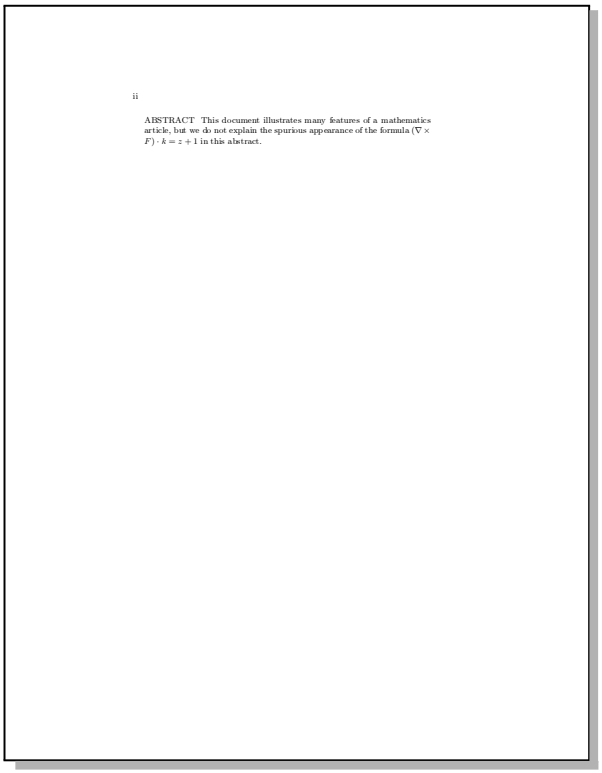
The Title of a Book

Dr. Author Jones

The Date


ii

ABSTRACT This document illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z + 1$ in this abstract.

Contents

1 Purpose of this Document **1**

2 Sample Mathematics and Text **3**
2.1 In-line and Displayed Mathematics 3
2.2 Mathematics in section heads $\int_a^b \ln t dt$ 4
2.3 Theorems, Lemmata, and Other Theorem-like Environments 4
2.4 Section Headings 5
2.4.1 Subsection Heading 5
2.5 Tags 5
2.6 Lists 5
2.7 About the Bibliography 6

A The First Appendix **7**

B Afterword **9**

References **11**

Preface

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. This style starts numbering in the document preface using lower case Roman characters. The TEX field at the beginning of the first paragraph in the next chapter changes number to arabic style and resets the page counter to one.

1
Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

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2
Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

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2.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

2.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1,\ \text{as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. ■

2.4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.4.1 Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading

This text appears under a subsubsubsection heading.

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2.5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\tiny tiny}$, $^{\scriptsize scriptsize}$, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

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> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
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Appendix A
The First Appendix

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Appendix B
Afterword

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World Scientific Book 9.00x6.00

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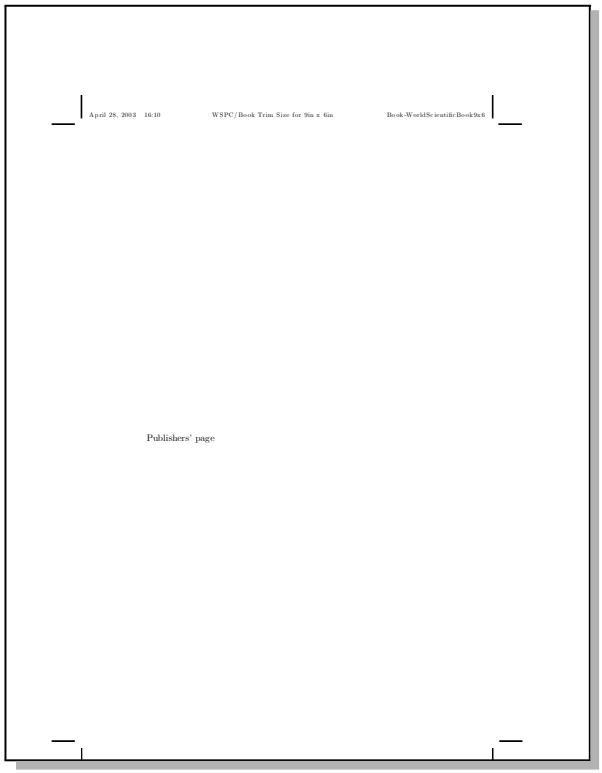
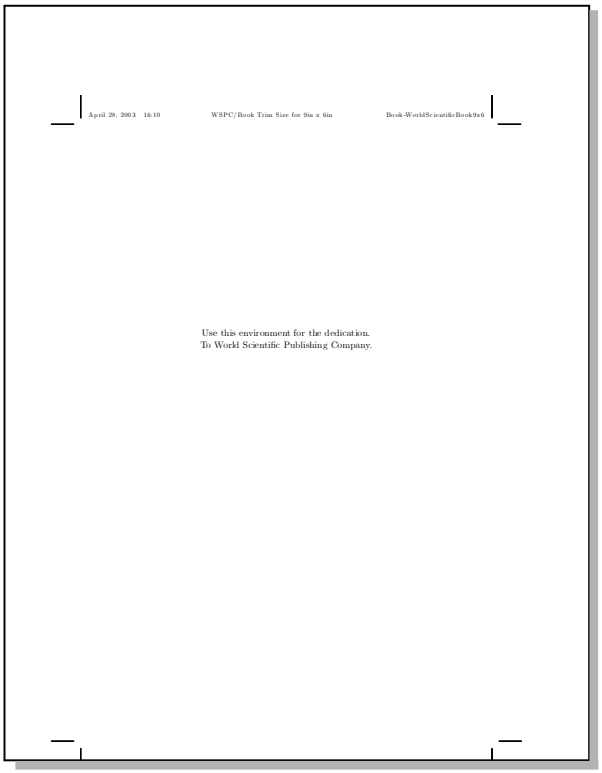
Packages:	
amsmath	Standard

The front matter for this shell is limited. Three front matter fields appear in the body of the document: the dedication, the preface, and the table of contents.

This shell inserts "Publisher's pages" (see sample page i) before the body of the document. The shell also automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry headers and page numbers as shown on sample page viii. Other blank pages in the sample are not shown here. Note the crop marks.





Preface

This environment is used for the Preface.
Another preface paragraph.

Contents

Preface vii

1. Purpose of this Document 1

2. Sample Mathematics and Text 3
   2.1 In-line and Displayed Mathematics . . . 3
   2.2 Mathematics in section heads $\int_a^b \ln t dt$ . . . 4
   2.3 Theorems, Lemmata, and Other Theorem-like Environments 4
   2.4 Section Headings . . . 5
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   2.5 Tags . . . 5
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   2.7 About the Bibliography . . . 6

Appendix A The First Appendix 7

Afterword 9

Bibliography 11

Chapter 1

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Chapter 2

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amsmath	Standard

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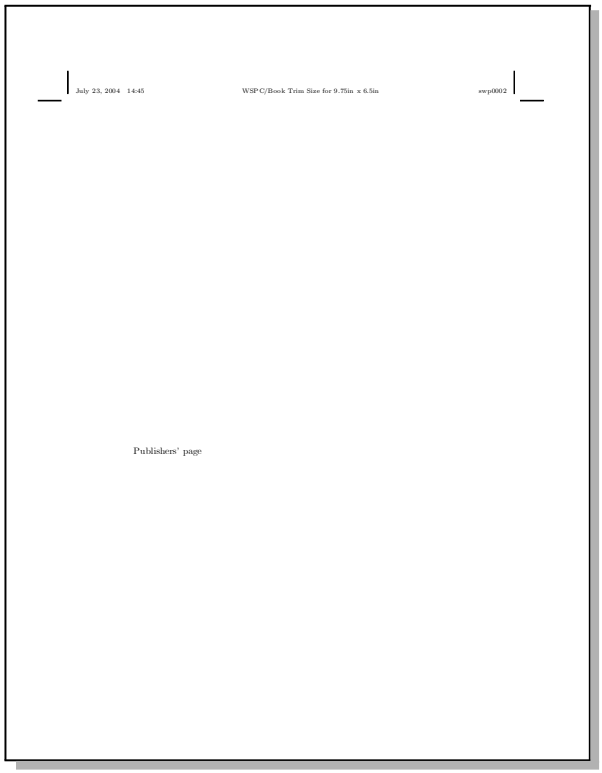

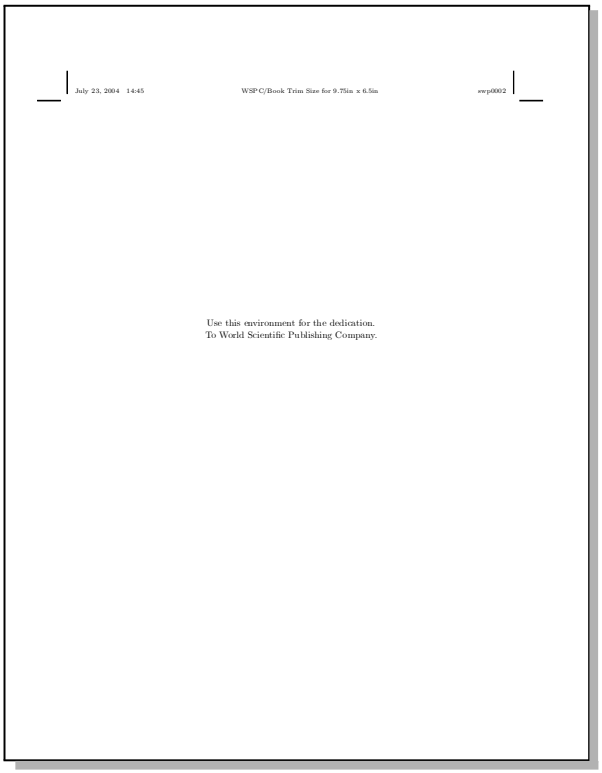

Preface

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Contents

Preface vii

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Appendix A The First Appendix 7

Afterword 9

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$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r)$$
$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. □

2.4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.4.1 *Subsection Heading*

This text appears under a subsection heading.

2.5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, *CALLIGRAPHIC*, and frattur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, and LARGE.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

(1) Numbered list item 1.
(2) Numbered list item 2.
   (a) A numbered list item under a list item.
      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item.
Double-dick the lead-in box to enter or customize the text of the lead-in.
Bunyip Mythical beast of Australian Aboriginal legends.

2.7 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text. The typesetting specification does not display citations and they are not used in this sample document.

Appendix A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.

Bibliography

N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

5 Exam and Syllabus Shells

Exam and syllabus shells are based on the typesetting specifications set in one of two base document classes—`article.cls` or `report.cls`. Exam shells usually have limited front and back matter, if any.

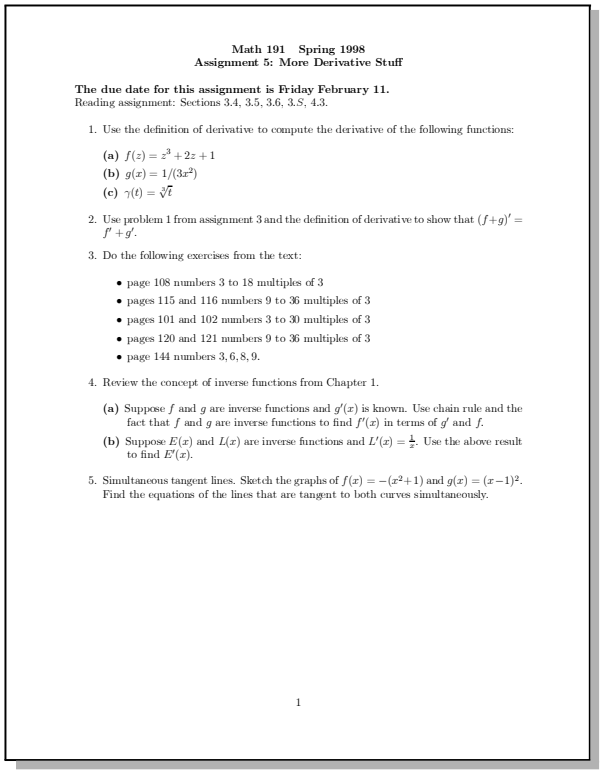
See page 2 for information about base document class defaults and see page 4 for page layout diagrams for the base document classes.

Assignment

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
amsmath	Standard

The front matter is empty in this shell.



Math 191 Spring 1998
Assignment 5: More Derivative Stuff

The due date for this assignment is Friday February 11.
Reading assignment: Sections 3.4, 3.5, 3.6, 3.S, 4.3.

1. Use the definition of derivative to compute the derivative of the following functions:

   (a) $f(z) = z^3 + 2z + 1$
   (b) $g(x) = 1/(3x^2)$
   (c) $\gamma(t) = \sqrt[3]{t}$

2. Use problem 1 from assignment 3 and the definition of derivative to show that $(f+g)' = f' + g'$.

3. Do the following exercises from the text:

   - page 108 numbers 3 to 18 multiples of 3
   - pages 115 and 116 numbers 9 to 36 multiples of 3
   - pages 101 and 102 numbers 3 to 30 multiples of 3
   - pages 120 and 121 numbers 9 to 36 multiples of 3
   - page 144 numbers 3, 6, 8, 9.

4. Review the concept of inverse functions from Chapter 1.

   (a) Suppose f and g are inverse functions and $g'(x)$ is known. Use chain rule and the fact that f and g are inverse functions to find $f'(x)$ in terms of g' and f.
   (b) Suppose $E(x)$ and $L(x)$ are inverse functions and $L'(x) = \frac{1}{x}$. Use the above result to find $E'(x)$.

5. Simultaneous tangent lines. Sketch the graphs of $f(x) = -(x^2+1)$ and $g(x) = (x-1)^2$. Find the equations of the lines that are tangent to both curves simultaneously.

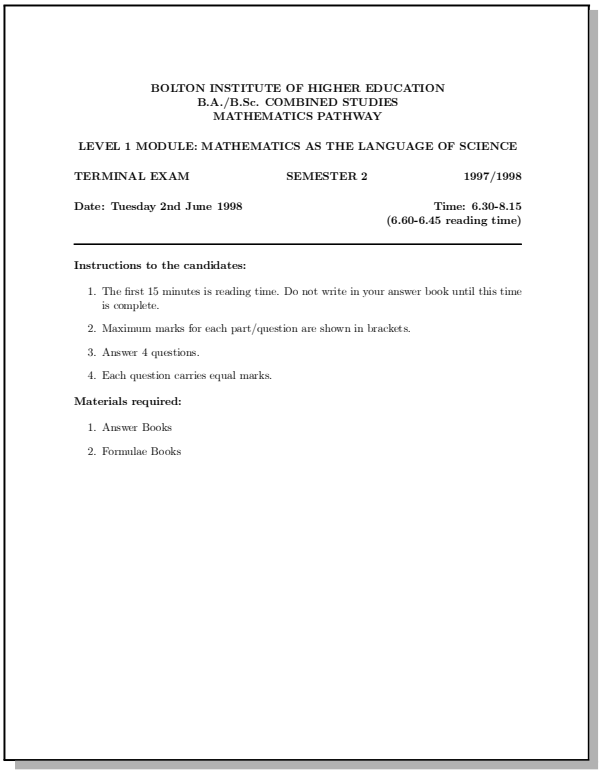
1

Bolton Institute

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20bolt	None
latexsym	None
amsmath	Standard

The front matter for this shell, shown below, includes a header for the title, module information, exam number, semester, year, time, reading time, and a running header.



BOLTON INSTITUTE OF HIGHER EDUCATION
B.A./B.Sc. COMBINED STUDIES
MATHEMATICS PATHWAY

LEVEL 1 MODULE: MATHEMATICS AS THE LANGUAGE OF SCIENCE

TERMINAL EXAM SEMESTER 2 1997/1998

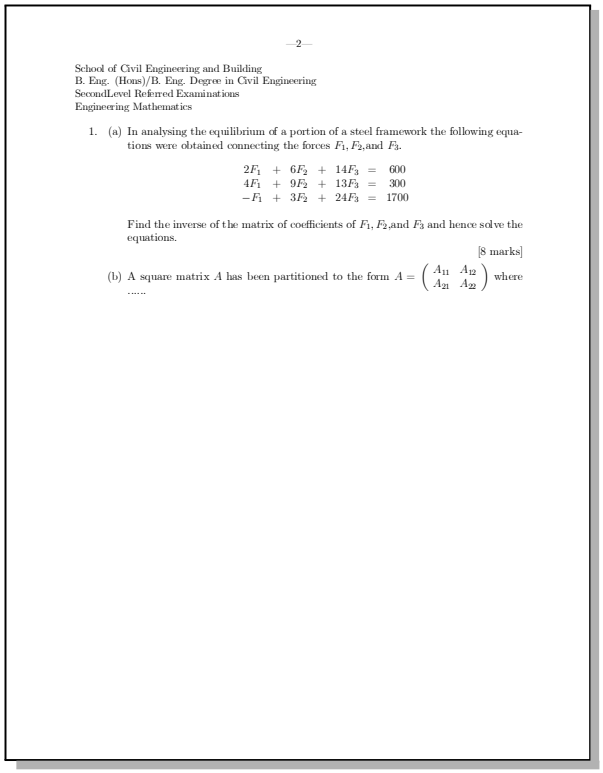
Date: Tuesday 2nd June 1998 Time: 6.30-8.15
(6.60-6.45 reading time)

Instructions to the candidates:

1. The first 15 minutes is reading time. Do not write in your answer book until this time is complete.
2. Maximum marks for each part/question are shown in brackets.
3. Answer 4 questions.
4. Each question carries equal marks.

Materials required:

1. Answer Books
2. Formulae Books



School of Civil Engineering and Building
B. Eng. (Hons)/B. Eng. Degree in Civil Engineering
SecondLevel Referred Examinations
Engineering Mathematics

1. (a) In analysing the equilibrium of a portion of a steel framework the following equations were obtained connecting the forces F_1, F_2,and F_3.

$$\begin{aligned} 2F_1 &+ 6F_2 + 14F_3 = 600 \\ 4F_1 &+ 9F_2 + 13F_3 = 300 \\ -F_1 &+ 3F_2 + 24F_3 = 1700 \end{aligned}$$

Find the inverse of the matrix of coefficients of F_1, F_2,and F_3 and hence solve the equations.

[8 marks]

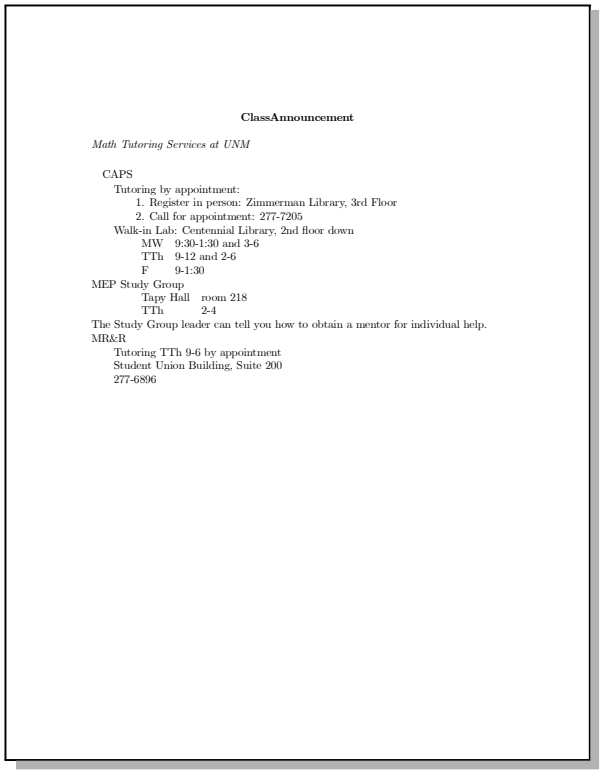
(b) A square matrix A has been partitioned to the form $A = \begin{pmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \end{pmatrix}$ where .....

Class Announcement

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
amsmath	Standard

The front matter is empty in this shell.



ClassAnnouncement

Math Tutoring Services at UNM

CAPS
Tutoring by appointment:
1. Register in person: Zimmerman Library, 3rd Floor
2. Call for appointment: 277-7205

Walk-in Lab: Centennial Library, 2nd floor down
MW 9:30-1:30 and 3-6
TTh 9-12 and 2-6
F 9-1:30

MEP Study Group
Tapy Hall room 218
TTh 2-4
The Study Group leader can tell you how to obtain a mentor for individual help.

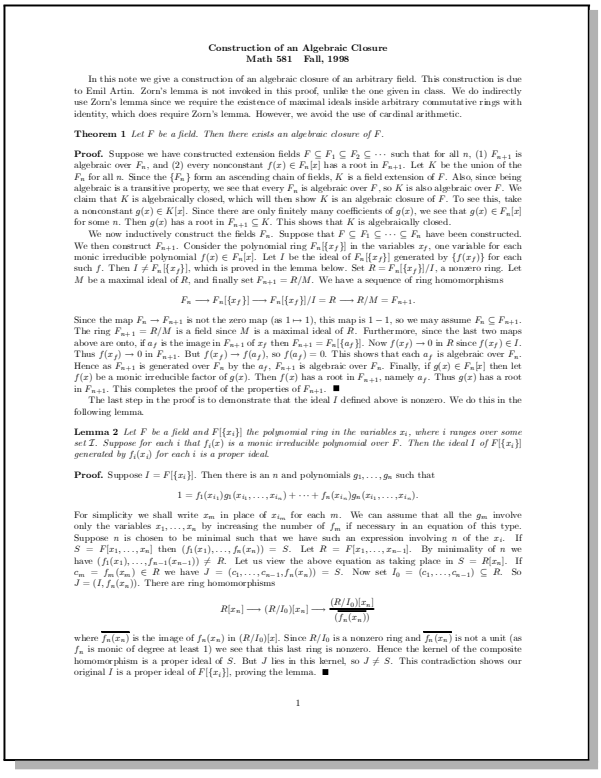
MR&R
Tutoring TTh 9-6 by appointment
Student Union Building, Suite 200
277-6896

Class Handout

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The front matter is empty in this shell.



Construction of an Algebraic Closure
Math 581 Fall, 1998

In this note we give a construction of an algebraic closure of an arbitrary field. This construction is due to Emil Artin. Zorn's lemma is not invoked in this proof, unlike the one given in class. We do indirectly use Zorn's lemma since we require the existence of maximal ideals inside arbitrary commutative rings with identity, which does require Zorn's lemma. However, we avoid the use of cardinal arithmetic.

Theorem 1 *Let F be a field. Then there exists an algebraic closure of F.*

Proof. Suppose we have constructed extension fields $F \subseteq F_1 \subseteq F_2 \subseteq \cdots$ such that for all n, (1) F_{n+1} is algebraic over F_n, and (2) every nonconstant $f(x) \in F_n[x]$ has a root in F_{n+1}. Let K be the union of the F_n for all n. Since the $\{F_n\}$ form an ascending chain of fields, K is a field extension of F. Also, since being algebraic is a transitive property, we see that every F_n is algebraic over F, so K is also algebraic over F. We claim that K is algebraically closed, which will then show K is an algebraic closure of F. To see this, take a nonconstant $g(x) \in K[x]$. Since there are only finitely many coefficients of $g(x)$, we see that $g(x) \in F_n[x]$ for some n. Then $g(x)$ has a root in $F_{n+1} \subseteq K$. This shows that K is algebraically closed.

We now inductively construct the fields F_n. Suppose that $F \subseteq F_1 \subseteq \cdots \subseteq F_n$ have been constructed. We then construct F_{n+1}. Consider the polynomial ring $F_n[\{x_f\}]$ in the variables x_f, one variable for each monic irreducible polynomial $f(x) \in F_n[x]$. Let I be the ideal of $F_n[\{x_f\}]$ generated by $\{f(x_f)\}$ for each such f. Then $I \neq F_n[\{x_f\}]$, which is proved in the lemma below. Set $R = F_n[\{x_f\}]/I$, a nonzero ring. Let M be a maximal ideal of R, and finally set $F_{n+1} = R/M$. We have a sequence of ring homomorphisms

$$F_n \longrightarrow F_n[\{x_f\}] \longrightarrow F_n[\{x_f\}]/I = R \longrightarrow R/M = F_{n+1}.$$

Since the map $F_n \to F_{n+1}$ is not the zero map (as $1 \mapsto 1$), this map is $1-1$, so we may assume $F_n \subseteq F_{n+1}$. The ring $F_{n+1} = R/M$ is a field since M is a maximal ideal of R. Furthermore, since the last two maps above are onto, if a_f is the image in F_{n+1} of x_f then $F_{n+1} = F_n[\{a_f\}]$. Now $f(x_f) \to 0$ in R since $f(x_f) \in I$. Thus $f(x_f) \to 0$ in F_{n+1}. But $f(x_f) \to f(a_f)$, so $f(a_f) = 0$. This shows that each a_f is algebraic over F_n. Hence as F_{n+1} is generated over F_n by the a_f, F_{n+1} is algebraic over F_n. Finally, if $g(x) \in F_n[x]$ then let $f(x)$ be a monic irreducible factor of $g(x)$. Then $f(x)$ has a root in F_{n+1}, namely a_f. Thus $g(x)$ has a root in F_{n+1}. This completes the proof of the properties of F_{n+1}. ■

The last step in the proof is to demonstrate that the ideal I defined above is nonzero. We do this in the following lemma.

Lemma 2 *Let F be a field and $F[\{x_i\}]$ the polynomial ring in the variables x_i, where i ranges over some set $\mathcal{I}$. Suppose for each i that $f_i(x)$ is a monic irreducible polynomial over F. Then the ideal I of $F[\{x_i\}]$ generated by $f_i(x_i)$ for each i is a proper ideal.*

Proof. Suppose $I = F[\{x_i\}]$. Then there is an n and polynomials $g_1, \ldots, g_n$ such that

$$1 = f_1(x_{i_1})g_1(x_{i_1}, \ldots, x_{i_n}) + \cdots + f_n(x_{i_n})g_n(x_{i_1}, \ldots, x_{i_n}).$$

For simplicity we shall write x_m in place of x_{i_m} for each m. We can assume that all the g_m involve only the variables $x_1, \ldots, x_n$ by increasing the number of f_m if necessary in an equation of this type. Suppose n is chosen to be minimal such that we have such an expression involving n of the x_i. If $S = F[x_1, \ldots, x_n]$ then $(f_1(x_1), \ldots, f_n(x_n)) = S$. Let $R = F[x_1, \ldots, x_{n-1}]$. By minimality of n we have $(f_1(x_1), \ldots, f_{n-1}(x_{n-1})) \neq R$. Let us view the above equation as taking place in $S = R[x_n]$. If $c_m = f_m(x_m) \in R$ we have $J = (c_1, \ldots, c_{n-1}, f_n(x_n)) = S$. Now set $I_0 = (c_1, \ldots, c_{n-1}) \subseteq R$. So $J = (I, f_n(x_n))$. There are ring homomorphisms

$$R[x_n] \longrightarrow (R/I_0)[x_n] \longrightarrow \frac{(R/I_0)[x_n]}{(\overline{f_n(x_n)})}$$

where $\overline{f_n(x_n)}$ is the image of $f_n(x_n)$ in $(R/I_0)[x]$. Since R/I_0 is a nonzero ring and $\overline{f_n(x_n)}$ is not a unit (as f_n is monic of degree at least 1) we see that this last ring is nonzero. Hence the kernel of the composite homomorphism is a proper ideal of S. But J lies in this kernel, so $J \neq S$. This contradiction shows our original I is a proper ideal of $F[\{x_i\}]$, proving the lemma. ■

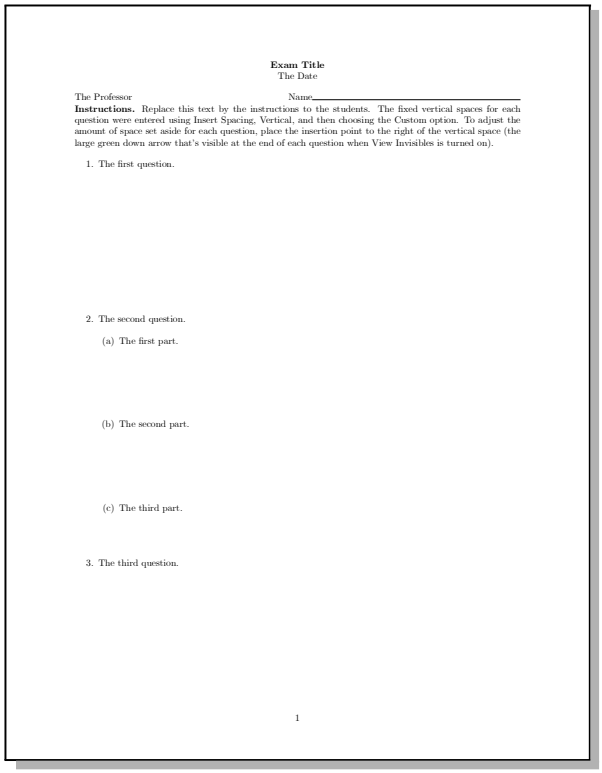
1

SW Exam #1 - 8.5 x 11 Page

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
sw20exm1	None

The front matter is empty in this shell.



Exam Title
The Date

The Professor Name_____

Instructions. Replace this text by the instructions to the students. The fixed vertical spaces for each question were entered using Insert Spacing, Vertical, and then choosing the Custom option. To adjust the amount of space set aside for each question, place the insertion point to the right of the vertical space (the large green down arrow that's visible at the end of each question when View Invisibles is turned on).

1. The first question.

2. The second question.

   (a) The first part.

   (b) The second part.

   (c) The third part.

3. The third question.

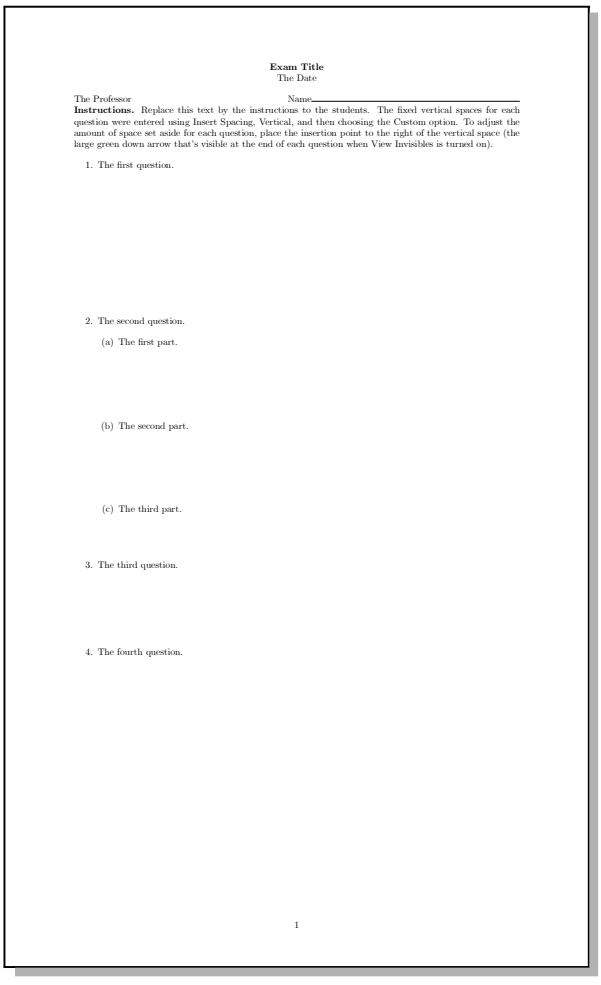
1

SW Exam #1 - 8.5 x 14 Page

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
sw20exm2	None

The front matter is empty in this shell.



Exam Title
The Date

The Professor Name:_____

Instructions. Replace this text by the instructions to the students. The fixed vertical spaces for each question were entered using Insert Spacing, Vertical, and then choosing the Custom option. To adjust the amount of space set aside for each question, place the insertion point to the right of the vertical space (the large green down arrow that's visible at the end of each question when View Invisibles is turned on).

1. The first question.

2. The second question.
   (a) The first part.
   (b) The second part.
   (c) The third part.

3. The third question.

4. The fourth question.

1

SW Exam #2

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
sw20exm3	None

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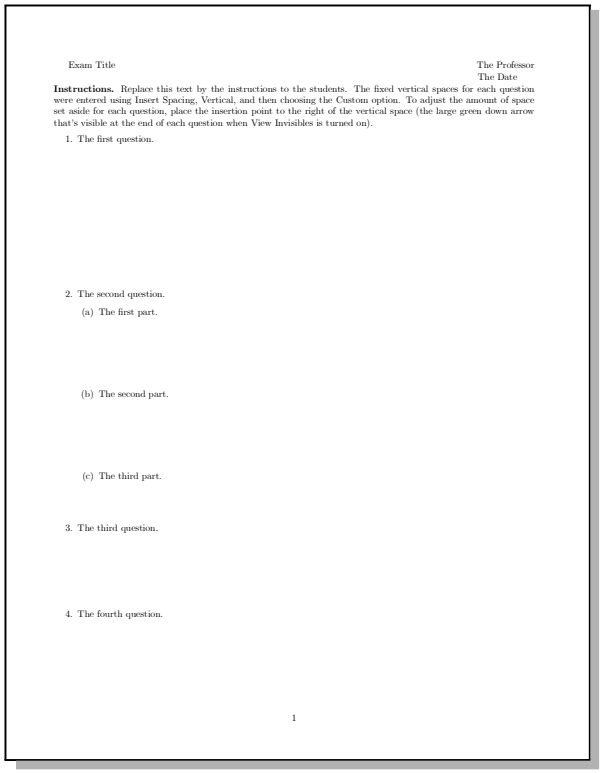

Exam Title

The Professor
The Date

Instructions. Replace this text by the instructions to the students. The fixed vertical spaces for each question were entered using Insert Spacing, Vertical, and then choosing the Custom option. To adjust the amount of space set aside for each question, place the insertion point to the right of the vertical space (the large green down arrow that's visible at the end of each question when View Invisibles is turned on).

1. The first question.

2. The second question.
   (a) The first part.
   (b) The second part.
   (c) The third part.

3. The third question.

4. The fourth question.

1

SW Exam #3

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard
sw20exm4	None

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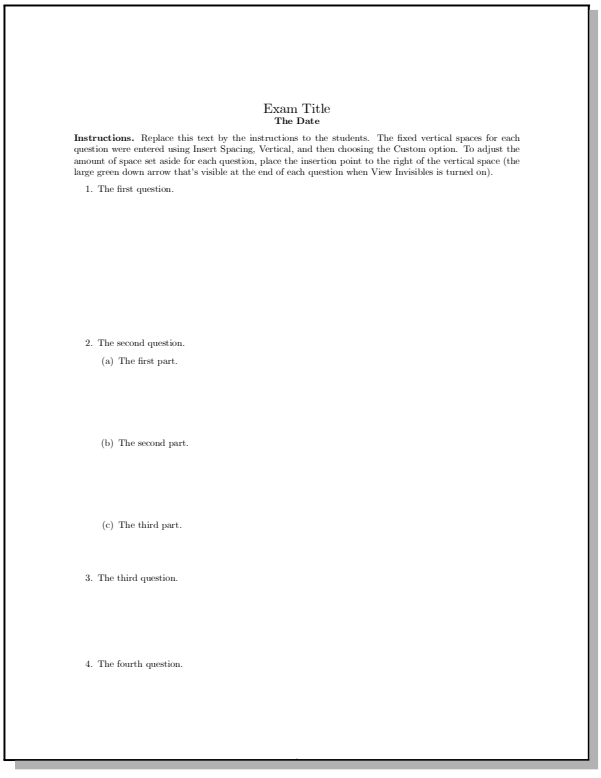


Exam Title

The Date

Instructions. Replace this text by the instructions to the students. The fixed vertical spaces for each question were entered using Insert Spacing, Vertical, and then choosing the Custom option. To adjust the amount of space set aside for each question, place the insertion point to the right of the vertical space (the large green down arrow that's visible at the end of each question when View Invisibles is turned on).

1. The first question.

2. The second question.
   (a) The first part.
   (b) The second part.
   (c) The third part.

3. The third question.

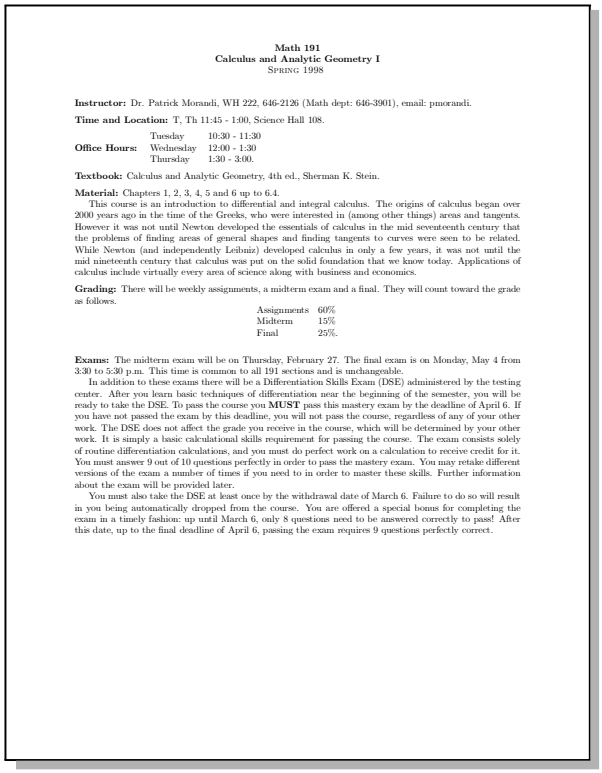
4. The fourth question.

Syllabus

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The front matter is empty. Title information appears in the body of the document.



Math 191
Calculus and Analytic Geometry I
SPRING 1998

Instructor: Dr. Patrick Morandi, WH 222, 646-2126 (Math dept: 646-3901), email: pmorandi.

Time and Location: T, Th 11:45 - 1:00, Science Hall 108.

Office Hours: Tuesday 10:30 - 11:30; Wednesday 12:00 - 1:30; Thursday 1:30 - 3:00.

Textbook: Calculus and Analytic Geometry, 4th ed., Sherman K. Stein.

Material: Chapters 1, 2, 3, 4, 5 and 6 up to 6.4.

This course is an introduction to differential and integral calculus. The origins of calculus began over 2000 years ago in the time of the Greeks, who were interested in (among other things) areas and tangents. However it was not until Newton developed the essentials of calculus in the mid seventeenth century that the problems of finding areas of general shapes and finding tangents to curves were seen to be related. While Newton (and independently Leibniz) developed calculus in only a few years, it was not until the mid nineteenth century that calculus was put on the solid foundation that we know today. Applications of calculus include virtually every area of science along with business and economics.

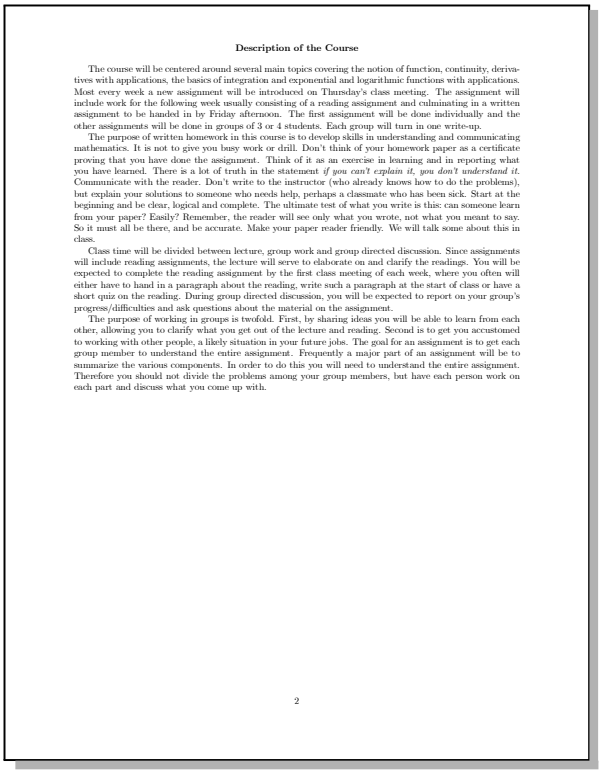
Grading: There will be weekly assignments, a midterm exam and a final. They will count toward the grade as follows.

Assignments	60%
Midterm	15%
Final	25%.

Exams: The midterm exam will be on Thursday, February 27. The final exam is on Monday, May 4 from 3:30 to 5:30 p.m. This time is common to all 191 sections and is unchangeable.

In addition to these exams there will be a Differentiation Skills Exam (DSE) administered by the testing center. After you learn basic techniques of differentiation near the beginning of the semester, you will be ready to take the DSE. To pass the course you **MUST** pass this mastery exam by the deadline of April 6. If you have not passed the exam by this deadline, you will not pass the course, regardless of any of your other work. The DSE does not affect the grade you receive in the course, which will be determined by your other work. It is simply a basic calculational skills requirement for passing the course. The exam consists solely of routine differentiation calculations, and you must do perfect work on a calculation to receive credit for it. You must answer 9 out of 10 questions perfectly in order to pass the mastery exam. You may retake different versions of the exam a number of times if you need to in order to master these skills. Further information about the exam will be provided later.

You must also take the DSE at least once by the withdrawal date of March 6. Failure to do so will result in you being automatically dropped from the course. You are offered a special bonus for completing the exam in a timely fashion: up until March 6, only 8 questions need to be answered correctly to pass! After this date, up to the final deadline of April 6, passing the exam requires 9 questions perfectly correct.



Description of the Course

The course will be centered around several main topics covering the notion of function, continuity, derivatives with applications, the basics of integration and exponential and logarithmic functions with applications. Most every week a new assignment will be introduced on Thursday's class meeting. The assignment will include work for the following week usually consisting of a reading assignment and culminating in a written assignment to be handed in by Friday afternoon. The first assignment will be done individually and the other assignments will be done in groups of 3 or 4 students. Each group will turn in one write-up.

The purpose of written homework in this course is to develop skills in understanding and communicating mathematics. It is not to give you busy work or drill. Don't think of your homework paper as a certificate proving that you have done the assignment. Think of it as an exercise in learning and in reporting what you have learned. There is a lot of truth in the statement *if you can't explain it, you don't understand it.* Communicate with the reader. Don't write to the instructor (who already knows how to do the problems), but explain your solutions to someone who needs help, perhaps a classmate who has been sick. Start at the beginning and be clear, logical and complete. The ultimate test of what you write is this: can someone learn from your paper? Easily? Remember, the reader will see only what you wrote, not what you meant to say. So it must all be there, and be accurate. Make your paper reader friendly. We will talk some about this in class.

Class time will be divided between lecture, group work and group directed discussion. Since assignments will include reading assignments, the lecture will serve to elaborate on and clarify the readings. You will be expected to complete the reading assignment by the first class meeting of each week, where you often will either have to hand in a paragraph about the reading, write such a paragraph at the start of class or have a short quiz on the reading. During group directed discussion, you will be expected to report on your group's progress/difficulties and ask questions about the material on the assignment.

The purpose of working in groups is twofold. First, by sharing ideas you will be able to learn from each other, allowing you to clarify what you get out of the lecture and reading. Second is to get you accustomed to working with other people, a likely situation in your future jobs. The goal for an assignment is to get each group member to understand the entire assignment. Frequently a major part of an assignment will be to summarize the various components. In order to do this you will need to understand the entire assignment. Therefore you should not divide the problems among your group members, but have each person work on each part and discuss what you come up with.

2

6 Other Document Shells

With one exception, the shells in this category are based on the typesetting specifications set in one of three base document classes—`article.cls`, `book.cls`, or `report.cls`. The shells produce both short documents (faxes, letters, memos, press releases, resumes, and slides) and long (books and reports). Obviously, the structure and elements in these document shells differ widely. Many of the shells were designed for earlier versions of the program.

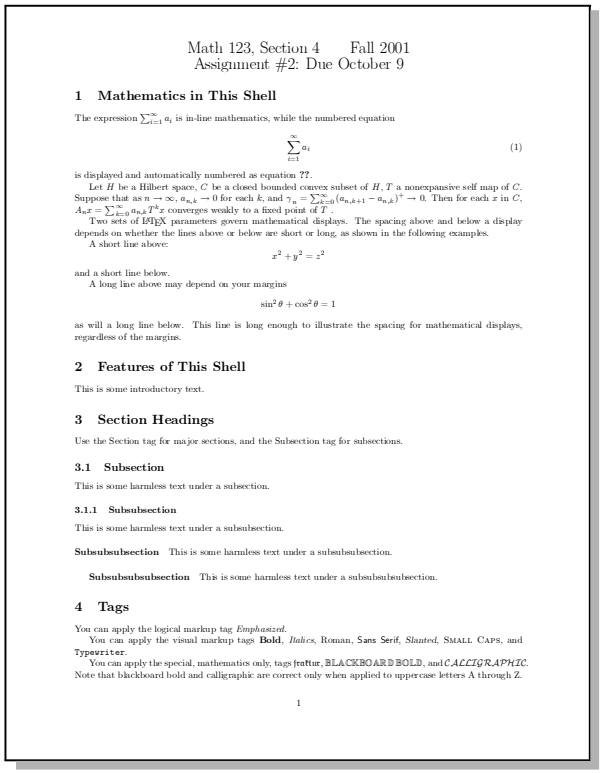
See page 2 for information about base document class defaults and see page 4 for page layout diagrams for the base document classes.

Assorted - Basic Assignment

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The front matter is blank. Title information appears in the body of the document.



Math 123, Section 4 Fall 2001
Assignment #2: Due October 9

1 Mathematics in This Shell

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation ??.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays. The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2 Features of This Shell

This is some introductory text.

3 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

3.1 Subsection

This is some harmless text under a subsection.

3.1.1 Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

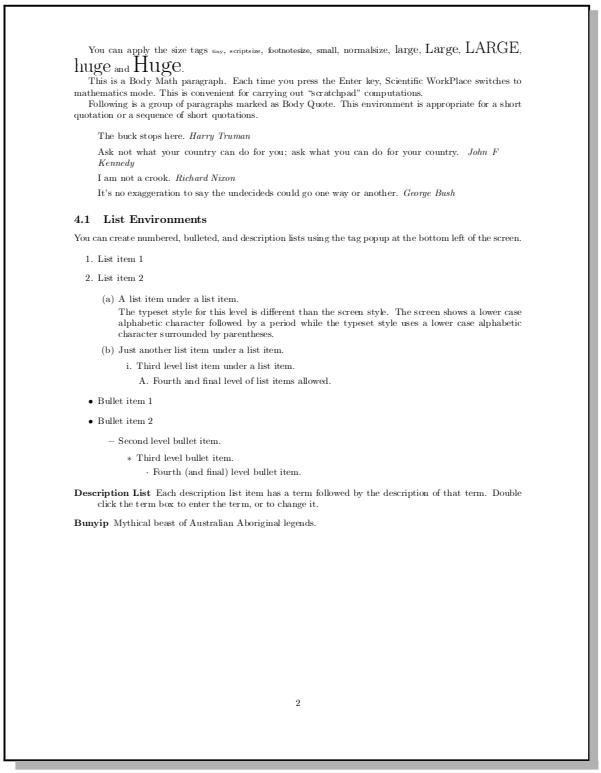
Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

4 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathfrak{fraktur}$, $\mathbb{BLACKBOARD\ BOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.



You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

4.1 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.
   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   (b) Just another list item under a list item.
      i. Third level list item under a list item.
         A. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

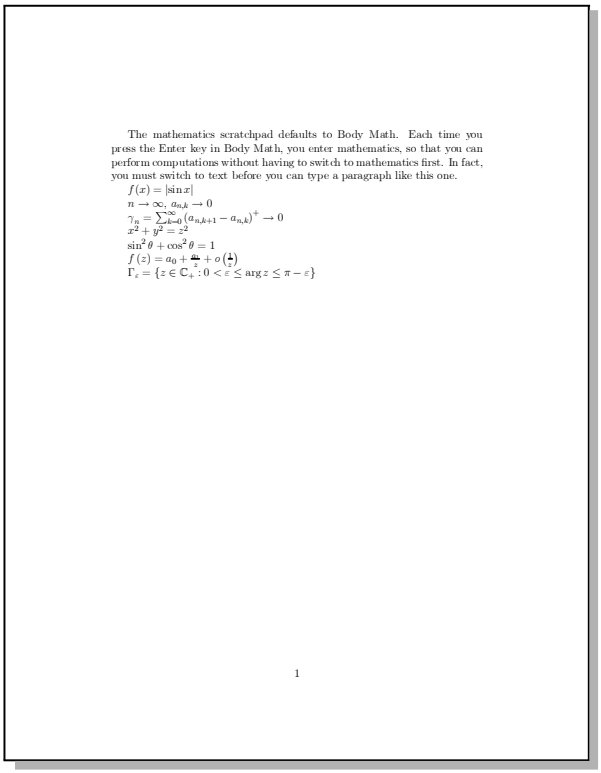
Bunyip Mythical beast of Australian Aboriginal legends.

Assorted - Math Scratchpad

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
latexsym	None

When you open a new document with the Blank Document shell, the document window is empty. The shell sets the environment for mathematical computations by opening in Body Math. The shell defaults to Body Math whenever the insertion point is in Body Math and you begin a new paragraph. Thus, you can begin entering mathematics immediately without having to switch from text to mathematics first.


The mathematics scratchpad defaults to Body Math. Each time you press the Enter key in Body Math, you enter mathematics, so that you can perform computations without having to switch to mathematics first. In fact, you must switch to text before you can type a paragraph like this one.

$f(x) = |\sin x|$

$n \to \infty,\ a_{n,k} \to 0$

$\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$

$x^2 + y^2 = z^2$

$\sin^2\theta + \cos^2\theta = 1$

$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right)$

$\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \leq \arg z \leq \pi - \varepsilon\}$

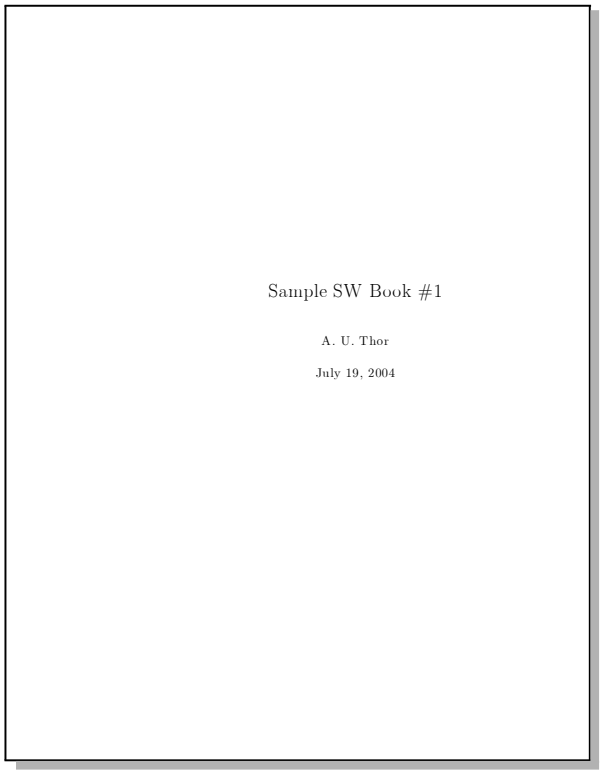
1

Book - SW Book #1

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk, sw20obk1	None

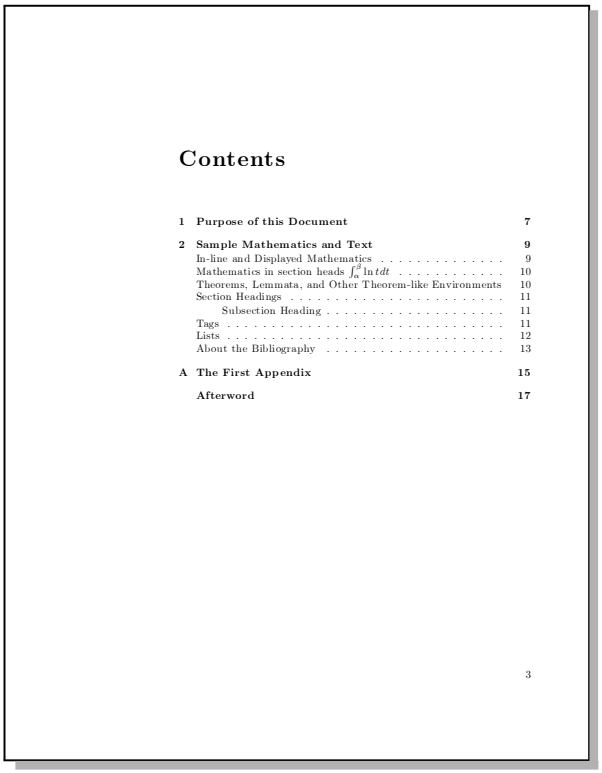
The preface is an unnumbered chapter in the body of the document. The shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry headers with page numbers, as shown on sample page 8. Other blank pages in the sample are not shown here.



Sample SW Book #1

A. U. Thor

July 19, 2004



Contents

1 Purpose of this Document 7

2 Sample Mathematics and Text 9
In-line and Displayed Mathematics . . . 9
Mathematics in section heads $\int_a^b \ln t dt$ . . . 10
Theorems, Lemmata, and Other Theorem-like Environments 10
Section Headings . . . 11
Subsection Heading . . . 11
Tags . . . 11
Lists . . . 12
About the Bibliography . . . 13

A The First Appendix 15

Afterword 17

3

Preface

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The `markboth` TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Chapter 1

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Chapter 2

Sample Mathematics and Text

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. ■

Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

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Tags

You can apply the logical markup tag *Emphasized*.

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> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
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   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

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Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Appendix A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents.

Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

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Book - SW Book #2

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk, sw20obk2	None

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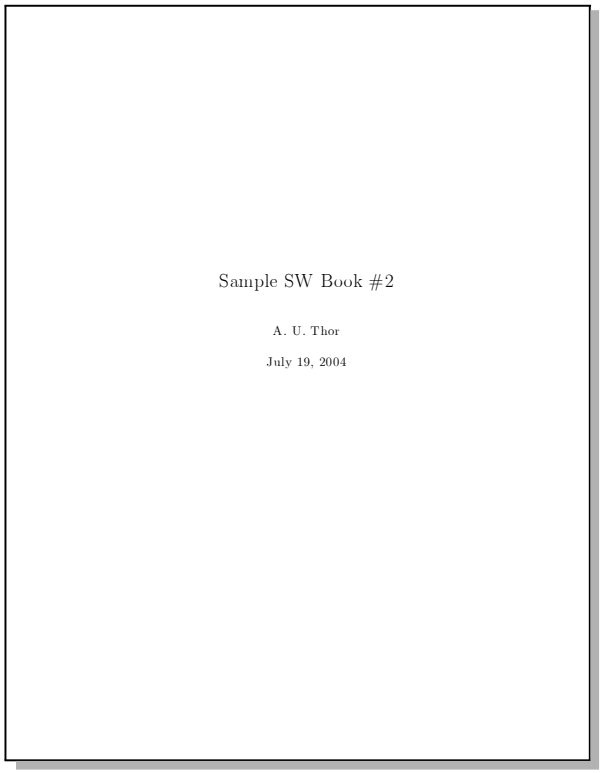

Sample SW Book #2

A. U. Thor

July 19, 2004

Contents

1 Purpose of this Document 7

2 Sample Mathematics and Text 9
In-line and Displayed Mathematics . . . 9
Mathematics in section heads $\int_a^g \ln t dt$ . . . 9
Theorems, Lemmata, and Other Theorem-like Environments . . . 10
Section Headings . . . 10
Subsection Heading . . . 10
Tags . . . 10
Lists . . . 11
About the Bibliography . . . 11

A The First Appendix 13

Afterword 15

CONTENTS 3

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$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \quad (2.2)$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

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You can apply the size tags $_{\rm tiny}$, $_{\rm scriptsize}$, $_{\rm footnotesize}$, $_{\rm small}$, $_{\rm normalsize}$, $_{\rm large}$, $_{\rm Large}$, $_{\rm LARGE}$, $_{\rm huge}$ and $_{\rm Huge}$.

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>
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>
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>
> It's no exaggeration to say the undecideds could go one way or another. *George H. W. Bush*
>
> I did not have sexual relations with that woman, Miss Lewinsky. *Bill Clinton*
>
> They misunderestimated me. *George W. Bush*

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

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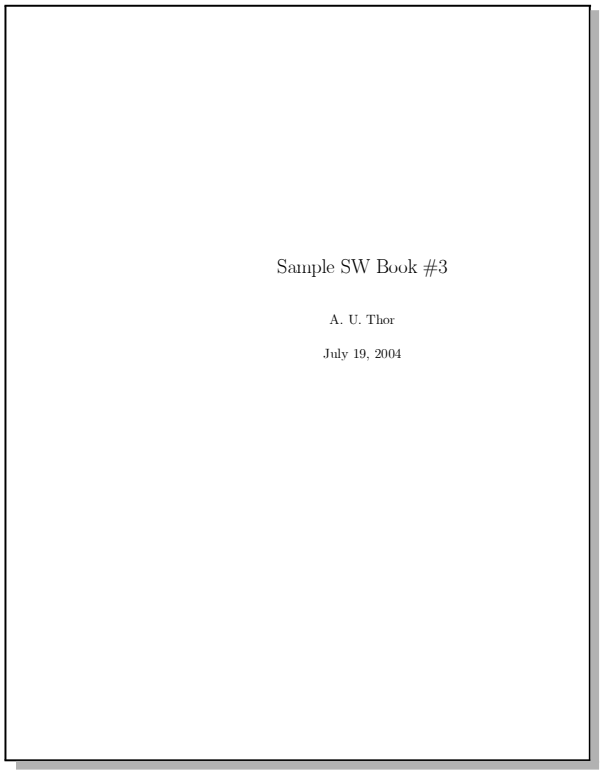
Book - SW Book #3

Document class base file: book.cls

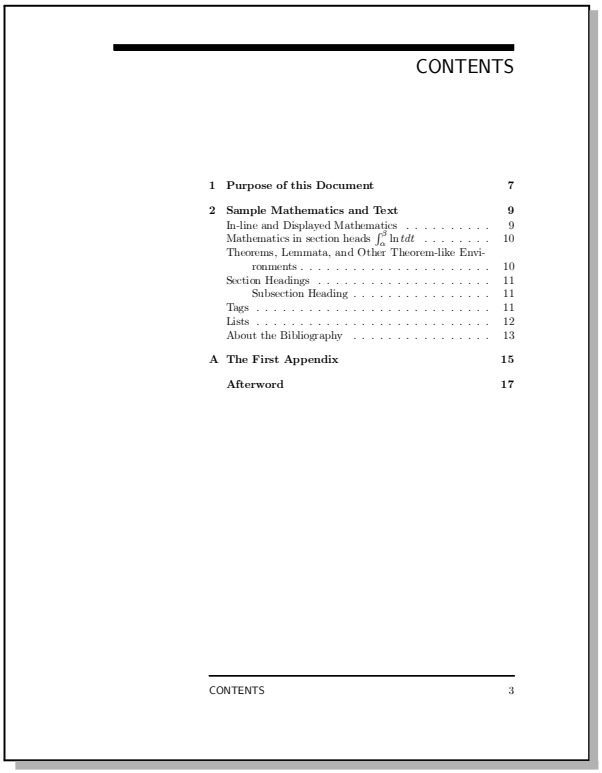
Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk, sw20obk3	None

The preface is an unnumbered chapter in the body of the document. The shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry footers with page numbers, as shown on sample page 8. Other blank pages in the sample are not shown here.


Sample SW Book #3

A. U. Thor

July 19, 2004


CONTENTS

1 Purpose of this Document 7

2 Sample Mathematics and Text 9

In-line and Displayed Mathematics 9

Mathematics in section heads $\int_a^b \ln t dt$ 10

Theorems, Lemmata, and Other Theorem-like Environments 10

Section Headings 11

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Tags 11

Lists 12

About the Bibliography 13

A The First Appendix 15

Afterword 17

PREFACE

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1 PURPOSE OF THIS DOCUMENT

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

2 SAMPLE MATHEMATICS AND TEXT

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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Mathematics in section heads $\int_\alpha^\beta \ln t dt$

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Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

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Section Headings

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Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

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Bunyip Mythical beast of Australian Aboriginal legends.

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A THE FIRST APPENDIX

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

AFTERWORD

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents.

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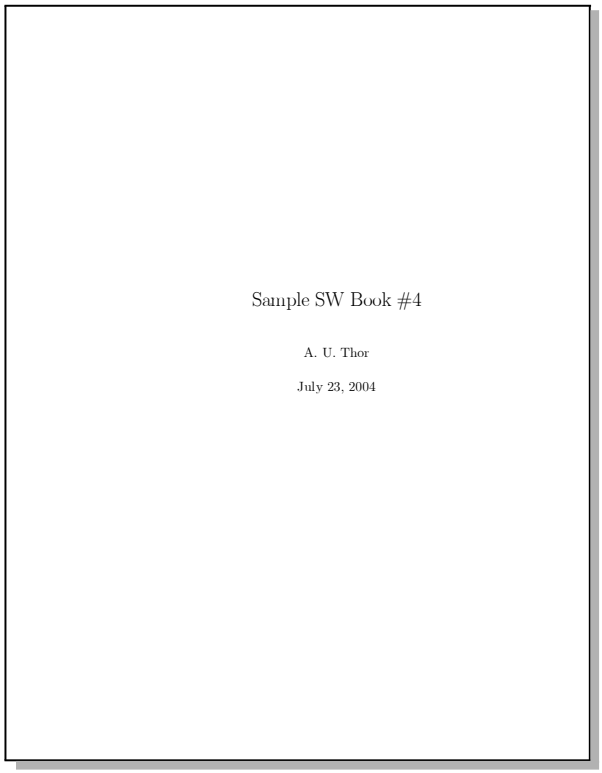
Book - SW Book #4

Document class base file: book.cls

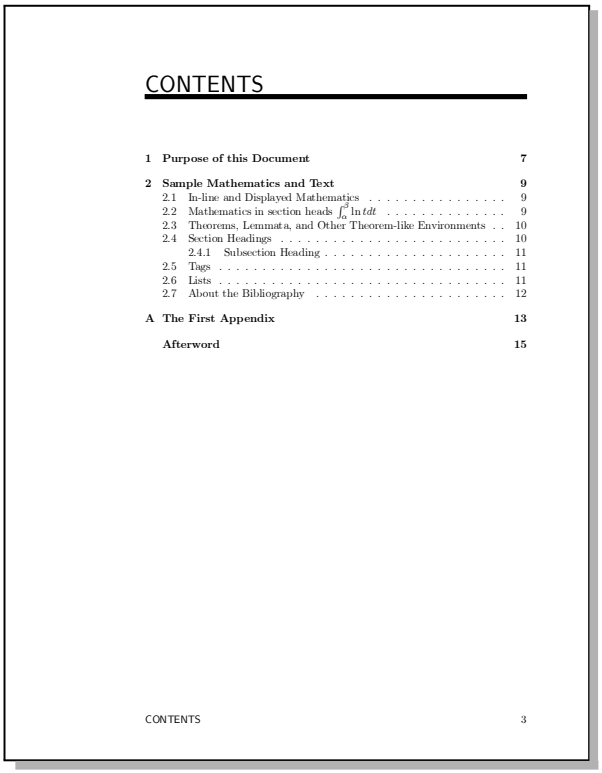
Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk, sw20obk4	None

The preface is an unnumbered chapter in the body of the document. The shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages carry footers with page numbers, as shown on sample page 8. Other blank pages in the sample are not shown here.


Sample SW Book #4

A. U. Thor

July 23, 2004


CONTENTS

1 Purpose of this Document 7

2 Sample Mathematics and Text 9
2.1 In-line and Displayed Mathematics . . . 9
2.2 Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$ . . . 9
2.3 Theorems, Lemmata, and Other Theorem-like Environments . . . 10
2.4 Section Headings . . . 10
2.4.1 Subsection Heading . . . 11
2.5 Tags . . . 11
2.6 Lists . . . 11
2.7 About the Bibliography . . . 12

A The First Appendix 13

Afterword 15

CONTENTS 3

PREFACE

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Book - SW Book #5

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk, sw20obk5	None

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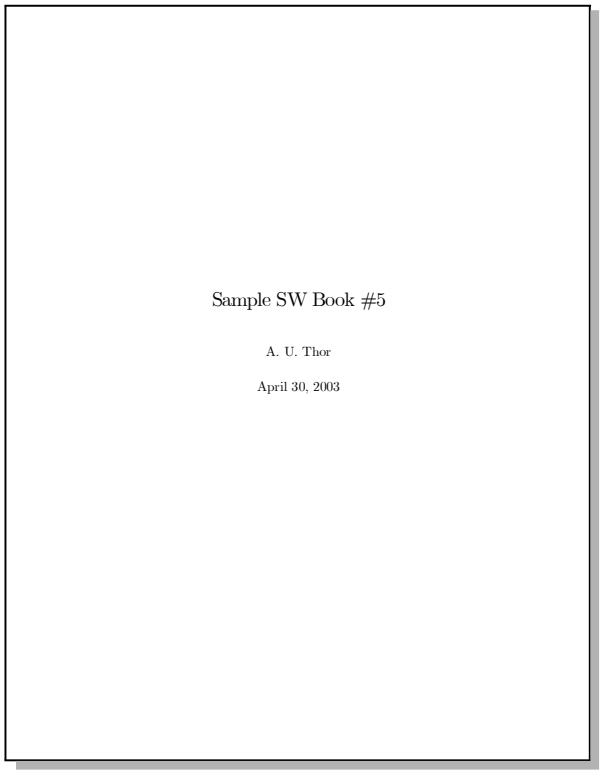
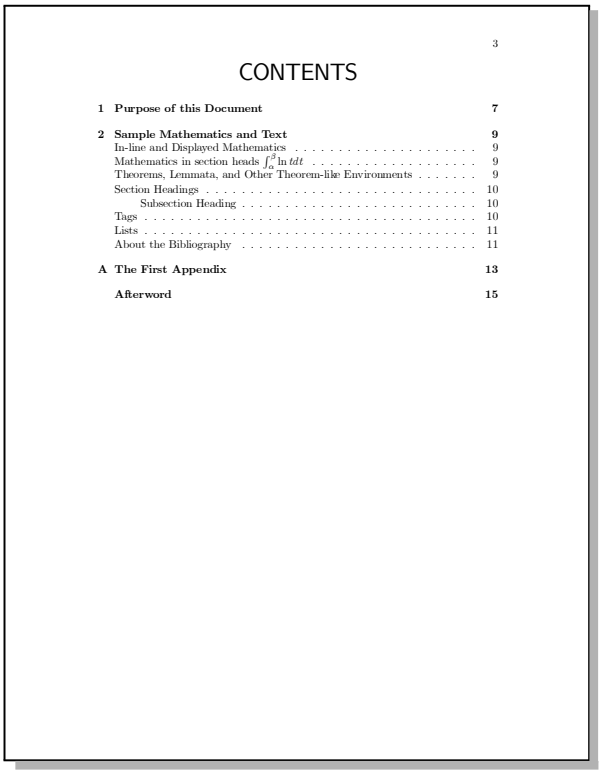


Sample SW Book #5

A. U. Thor

April 30, 2003



3

CONTENTS

1 Purpose of this Document **7**

2 Sample Mathematics and Text **9**
In-line and Displayed Mathematics . . . 9
Mathematics in section heads $\int_0^3 \ln t dt$ . . . 9
Theorems, Lemmata, and Other Theorem-like Environments . . . 9
Section Headings . . . 10
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Lists . . . 11
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Afterword **15**

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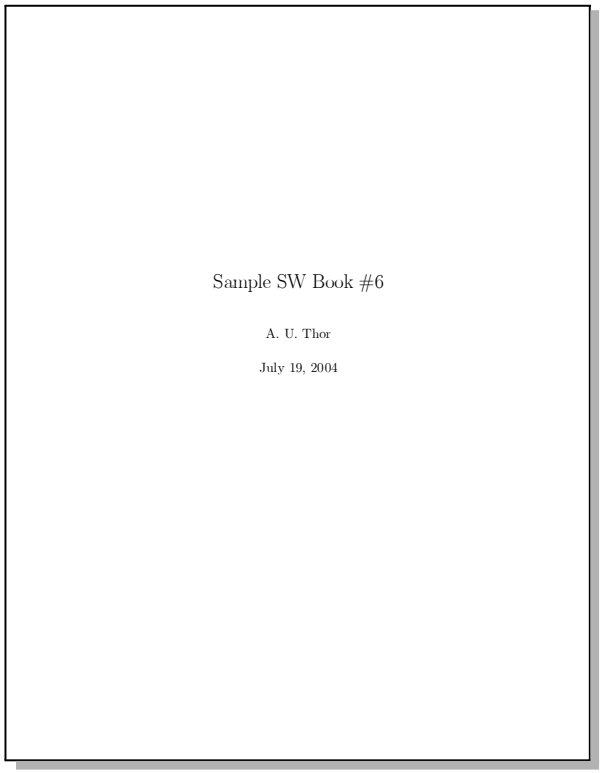
tcibkpk, sw20obk6	None

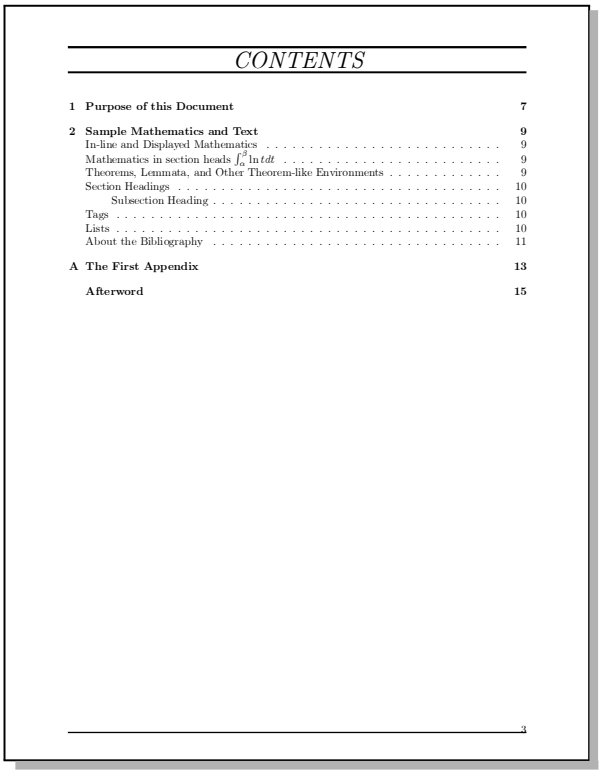
The preface is an unnumbered chapter in the body of the document. The shell automatically adds blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages page numbers at the bottom of the page, as shown on sample page 8. Other blank pages in the sample are not shown here.



Sample SW Book #6

A. U. Thor

July 19, 2004



CONTENTS

1 Purpose of this Document **7**

2 Sample Mathematics and Text **9**
In-line and Displayed Mathematics . . . 9
Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$ . . . 9
Theorems, Lemmata, and Other Theorem-like Environments . . . 9
Section Headings . . . 10
Subsection Heading . . . 10
Tags . . . 10
Lists . . . 10
About the Bibliography . . . 11

A The First Appendix **13**

Afterword **15**

PREFACE

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The `markboth` TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Chapter 1 PURPOSE OF THIS DOCUMENT

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Chapter 2 SAMPLE MATHEMATICS AND TEXT

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in section heads

$$\int_{\alpha}^{\beta} \ln t dt$$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz}f(1/z) = a_1 + R(z) \to a_1, \quad \text{as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. ■

Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags 𝔹𝕃𝔸ℂ𝕂𝔹𝕆𝔸ℝ𝔻 𝔹𝕆𝕃𝔻, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only for uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level numbered list item.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    * Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Appendix A THE FIRST APPENDIX

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

AFTERWORD

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents.

BIBLIOGRAPHY

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Tmnsfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Fax - SW Fax #1

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tcimemo	None
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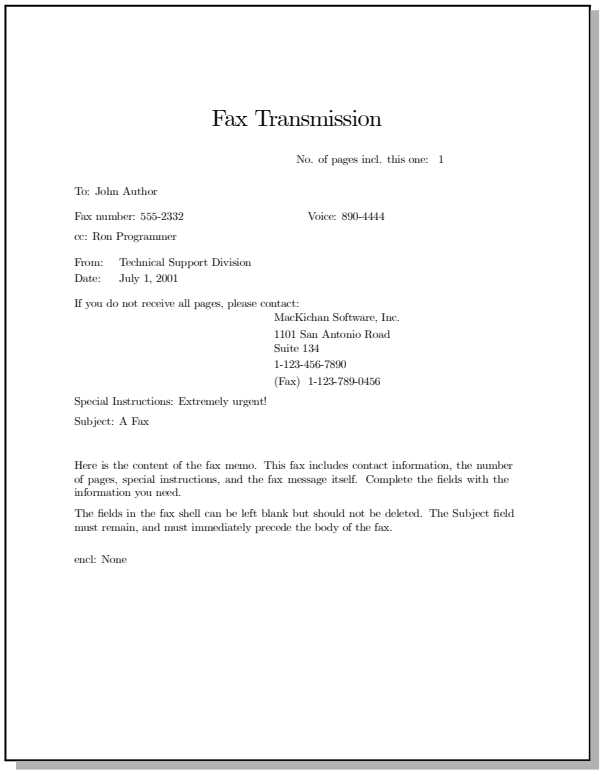

Fax Transmission

No. of pages incl. this one: 1

To: John Author

Fax number: 555-2332 Voice: 890-4444

cc: Ron Programmer

From: Technical Support Division
Date: July 1, 2001

If you do not receive all pages, please contact:

MacKichan Software, Inc.
1101 San Antonio Road
Suite 134
1-123-456-7890
(Fax) 1-123-789-0456

Special Instructions: Extremely urgent!

Subject: A Fax

Here is the content of the fax memo. This fax includes contact information, the number of pages, special instructions, and the fax message itself. Complete the fields with the information you need.

The fields in the fax shell can be left blank but should not be deleted. The Subject field must remain, and must immediately precede the body of the fax.

encl: None

Fax - SW Fax #2

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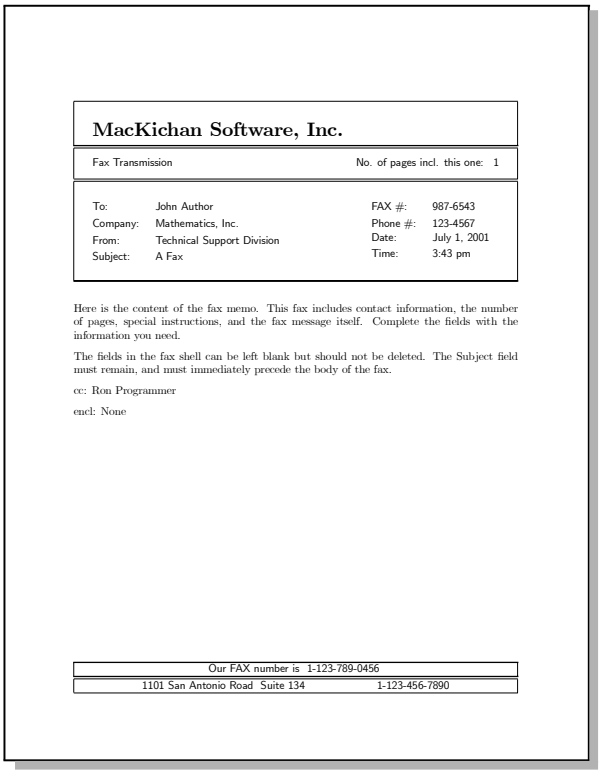

MacKichan Software, Inc.

Fax Transmission — No. of pages incl. this one: 1

To:	John Author	FAX #:	987-6543
Company:	Mathematics, Inc.	Phone #:	123-4567
From:	Technical Support Division	Date:	July 1, 2001
Subject:	A Fax	Time:	3:43 pm

Here is the content of the fax memo. This fax includes contact information, the number of pages, special instructions, and the fax message itself. Complete the fields with the information you need.

The fields in the fax shell can be left blank but should not be deleted. The Subject field must remain, and must immediately precede the body of the fax.

cc: Ron Programmer

encl: None

Our FAX number is 1-123-789-0456

1101 San Antonio Road Suite 134 1-123-456-7890

Fax - SW Fax #3

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
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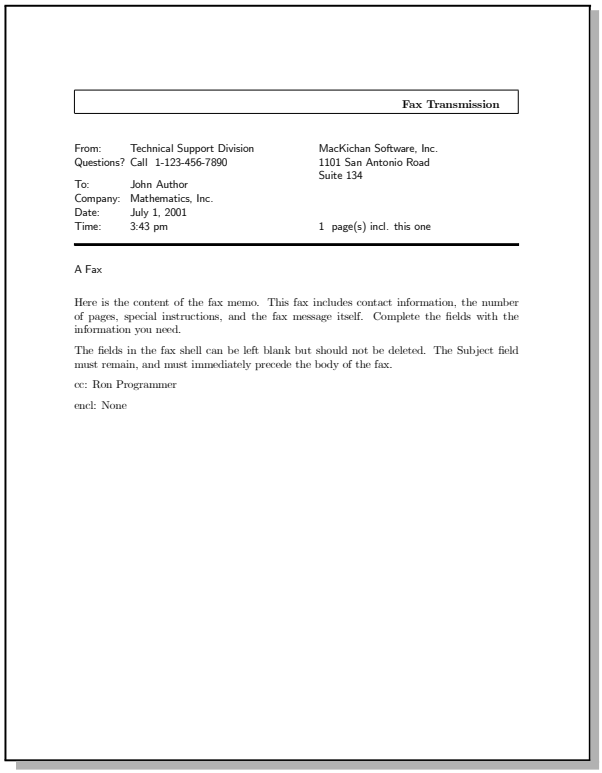
sw20fax3	None

The shell contains fields to fill with information about the name, address, telephone, and fax number of the sender and recipient; the number of pages in the fax message; special instructions; and subject of the message.



Fax Transmission

From: Technical Support Division
Questions? Call 1-123-456-7890

MacKichan Software, Inc.
1101 San Antonio Road
Suite 134

To: John Author
Company: Mathematics, Inc.
Date: July 1, 2001
Time: 3:43 pm

1 page(s) incl. this one

A Fax

Here is the content of the fax memo. This fax includes contact information, the number of pages, special instructions, and the fax message itself. Complete the fields with the information you need.

The fields in the fax shell can be left blank but should not be deleted. The Subject field must remain, and must immediately precede the body of the fax.

cc: Ron Programmer

encl: None

Letter - Informal

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20infl	None

This simple shell contains fields in the body of the document to fill with the date, closing, and signature.

June 3, 2001

Dear Simon,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Getting Started with Scientific WorkPlace, Scientific Word, and Scientific Notebook describes how to install and activate these three products, and how to get started creating your own documents. The chapters cover installation; creating, revising, saving, and printing a simple document. Additional chapters cover how to enter text and mathematics, format using tags, preview and print, using hyperlinks, and customize the program. Additionally, the manual describes how to compute and plot with the integrated computer algebra system in Scientific WorkPlace and Scientific Notebook. Final chapters address how to typeset your documents and how to take advantage of automatic numbering, indexing, and cross-referencing in Scientific WorkPlace and Scientific Word, and how to get help when you need it.

Creating Documents with Scientific WorkPlace and Scientific Word is organized by tasks, giving step-by-step instructions for completing both simple and more advanced user tasks. It begins with the basic word processing tasks required for nearly every document: opening, saving, and closing documents; entering and editing text and mathematics; previewing and printing when you typeset a document and when you don't; and formatting documents. The second half explains more advanced tasks, including using graphics and tables, structuring documents for LaTeX typesetting and for online use, managing documents with the Document Manager, and customizing your installation. A full index simplifies finding the information you need.

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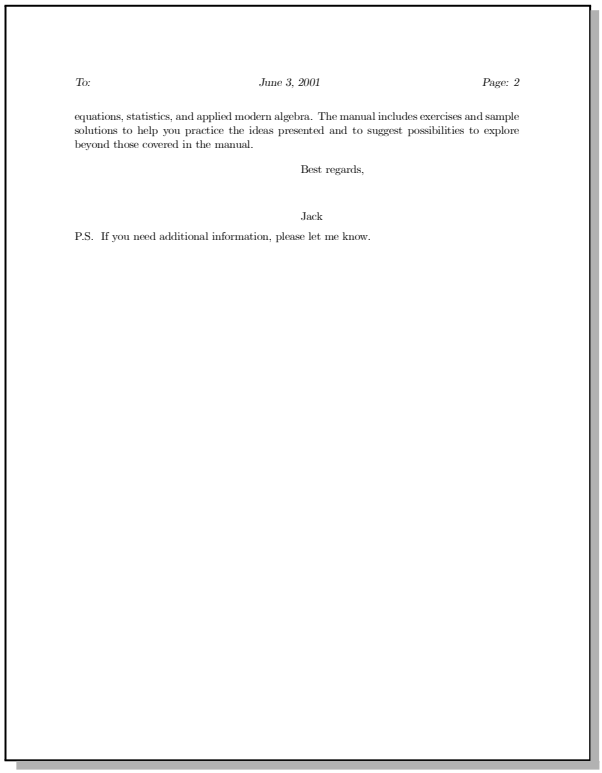

To: *June 3, 2001* *Page: 2*

equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Best regards,

Jack

P.S. If you need additional information, please let me know.

Letter - Similar to TeXbook Example

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20klet	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the signature of the sender, the date, copies, and postscript.

MacKichan Software, Inc.

600 Ericksen Avenue NE, Suite 300
Bainbridge Island, WA 98110

Michele Well, Analyst

June 3, 2001

John Brown
506 Blackhawk
Las Cruces, NM 88001

Dear John,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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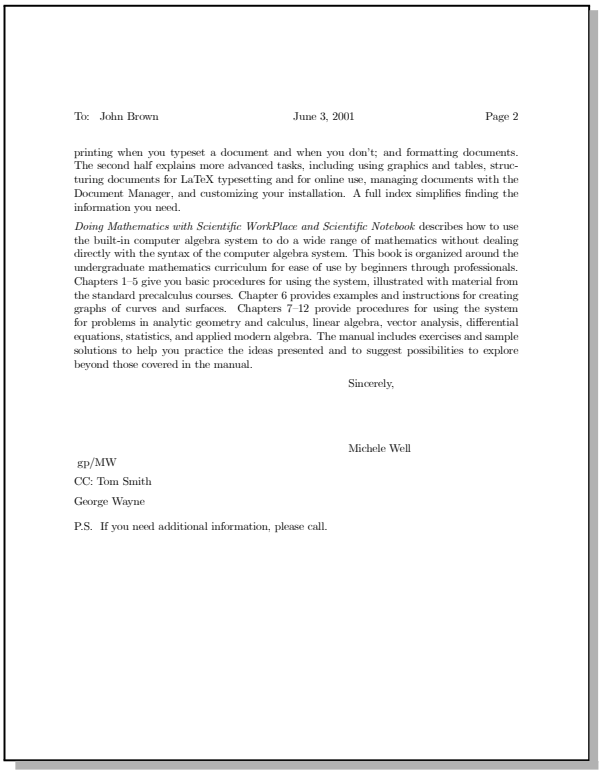

To: John Brown June 3, 2001 Page 2

printing when you typeset a document and when you don't; and formatting documents. The second half explains more advanced tasks, including using graphics and tables, structuring documents for LaTeX typesetting and for online use, managing documents with the Document Manager, and customizing your installation. A full index simplifies finding the information you need.

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Sincerely,

Michele Well

gp/MW

CC: Tom Smith

George Wayne

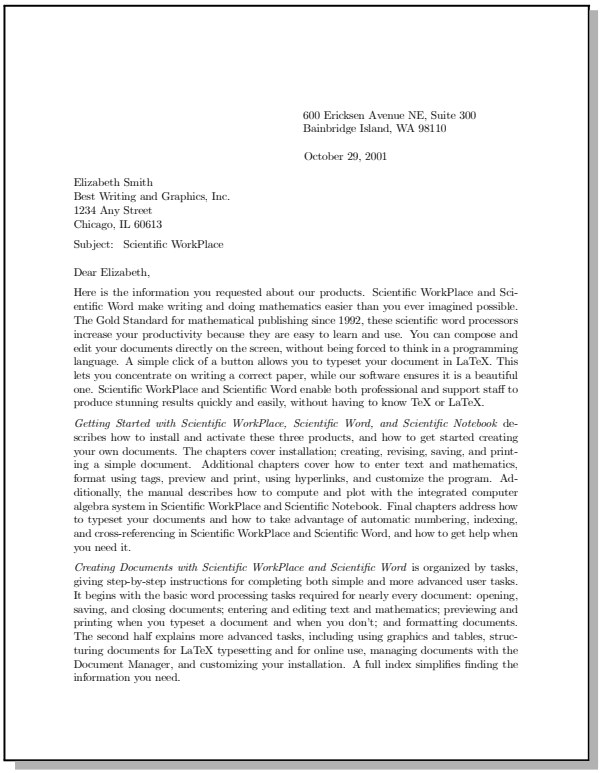
P.S. If you need additional information, please call.

Letter - SW Letter #1

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let1	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.



600 Ericksen Avenue NE, Suite 300
Bainbridge Island, WA 98110

October 29, 2001

Elizabeth Smith
Best Writing and Graphics, Inc.
1234 Any Street
Chicago, IL 60613

Subject: Scientific WorkPlace

Dear Elizabeth,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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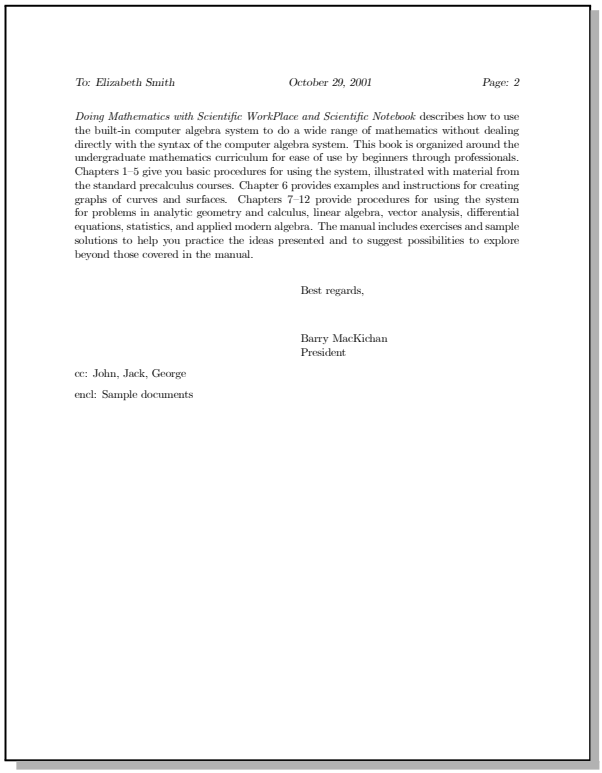

To: Elizabeth Smith *October 29, 2001* *Page: 2*

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Best regards,

Barry MacKichan
President

cc: John, Jack, George

encl: Sample documents

Letter - SW Letter #2

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let2	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.

MacKichan Software, Inc.

February 28, 2001

Marcus Phillips
ABC Development Corporation
1234 Any Street
Chicago, IL 60613

Subject: Scientific WorkPlace

Dear Marcus,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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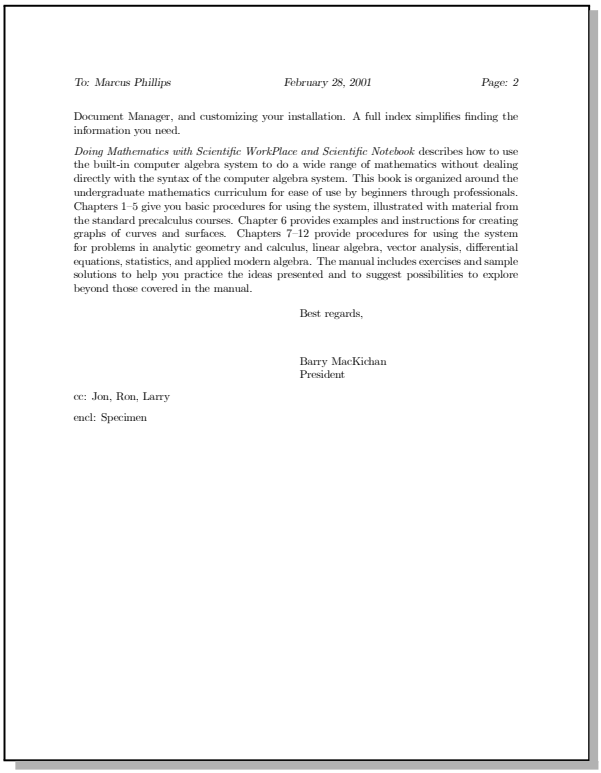


To: Marcus Phillips *February 28, 2001* *Page: 2*

Document Manager, and customizing your installation. A full index simplifies finding the information you need.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Best regards,

Barry MacKichan
President

cc: Jon, Ron, Larry

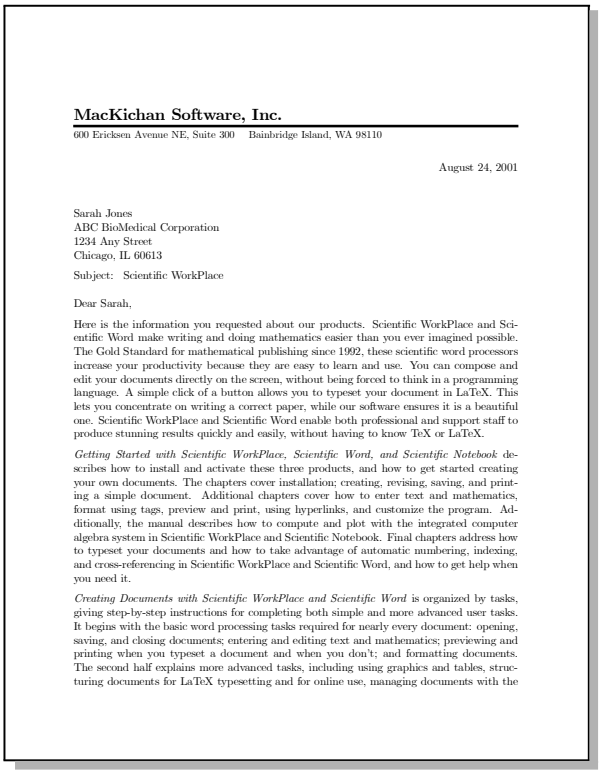
encl: Specimen

Letter - SW Letter #3

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let3	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.



MacKichan Software, Inc.
600 Ericksen Avenue NE, Suite 300 Bainbridge Island, WA 98110

August 24, 2001

Sarah Jones
ABC BioMedical Corporation
1234 Any Street
Chicago, IL 60613

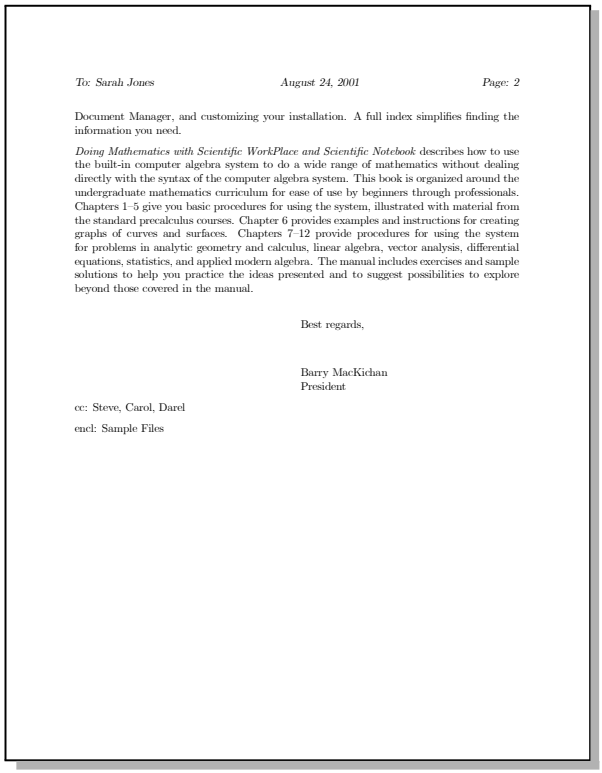
Subject: Scientific WorkPlace

Dear Sarah,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Getting Started with Scientific WorkPlace, Scientific Word, and Scientific Notebook describes how to install and activate these three products, and how to get started creating your own documents. The chapters cover installation; creating, revising, saving, and printing a simple document. Additional chapters cover how to enter text and mathematics, format using tags, preview and print, using hyperlinks, and customize the program. Additionally, the manual describes how to compute and plot with the integrated computer algebra system in Scientific WorkPlace and Scientific Notebook. Final chapters address how to typeset your documents and how to take advantage of automatic numbering, indexing, and cross-referencing in Scientific WorkPlace and Scientific Word, and how to get help when you need it.

Creating Documents with Scientific WorkPlace and Scientific Word is organized by tasks, giving step-by-step instructions for completing both simple and more advanced user tasks. It begins with the basic word processing tasks required for nearly every document: opening, saving, and closing documents; entering and editing text and mathematics; previewing and printing when you typeset a document and when you don't; and formatting documents. The second half explains more advanced tasks, including using graphics and tables, structuring documents for LaTeX typesetting and for online use, managing documents with the



To: Sarah Jones *August 24, 2001* *Page: 2*

Document Manager, and customizing your installation. A full index simplifies finding the information you need.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Best regards,

Barry MacKichan
President

cc: Steve, Carol, Darel

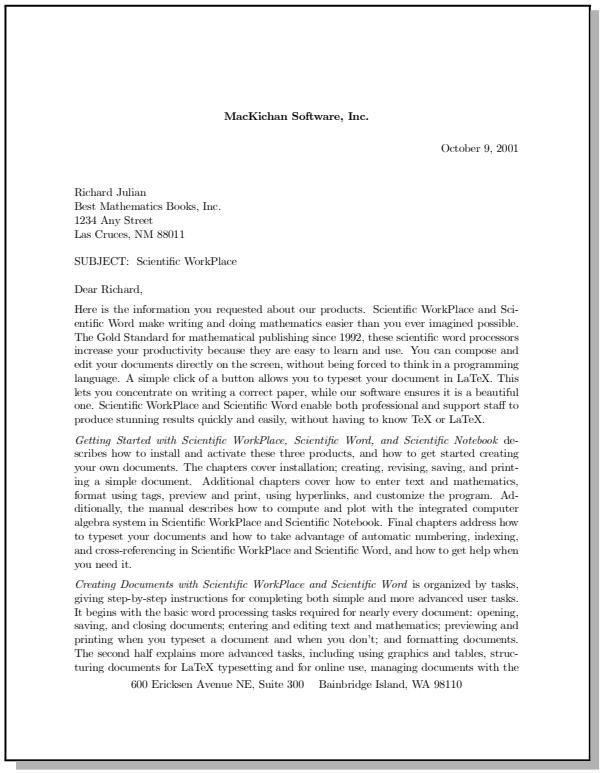
encl: Sample Files

Letter - SW Letter #4

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let4	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.



MacKichan Software, Inc.

October 9, 2001

Richard Julian
Best Mathematics Books, Inc.
1234 Any Street
Las Cruces, NM 88011

SUBJECT: Scientific WorkPlace

Dear Richard,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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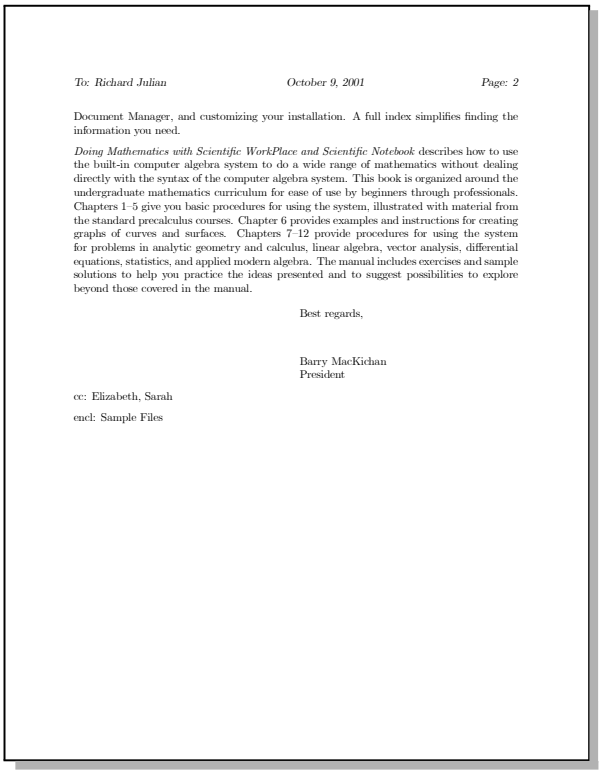

To: Richard Julian *October 9, 2001* *Page: 2*

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Best regards,

Barry MacKichan
President

cc: Elizabeth, Sarah

encl: Sample Files

Letter - SW Letter #5

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let5	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.

July 9, 2001

Matthew Johnson
Castro Valley Achievement, Inc.
1234 Any Street
Castro Valley, CA 94552

Subject: Scientific WorkPlace

Dear Matthew,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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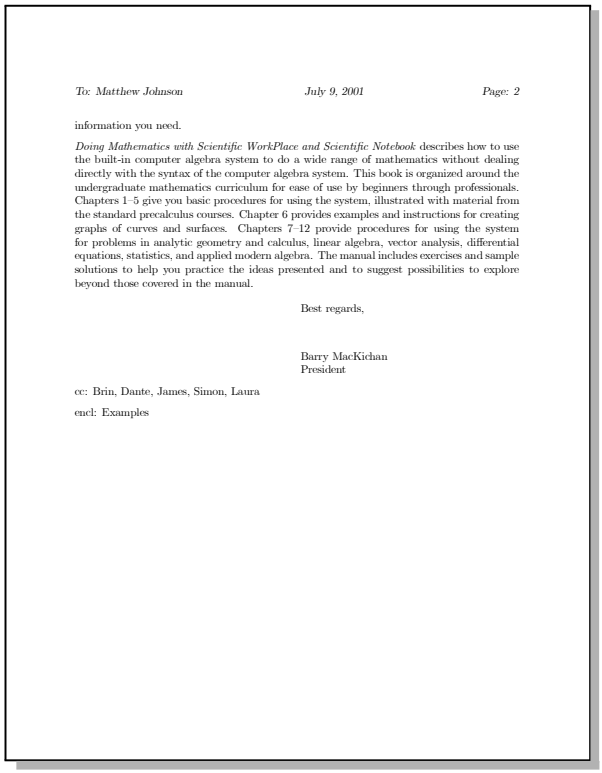

To: Matthew Johnson *July 9, 2001* *Page: 2*

information you need.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Best regards,

Barry MacKichan
President

cc: Brin, Dante, James, Simon, Laura

encl: Examples

Letter - SW Letter #6

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
lettopti	None
sw20let6	None

The shell contains fields in the body of the document to fill with information about the name and address of the sender and recipient, the date, the subject, the opening and closing, and copies and enclosures.

MacKichan Software, Inc.
600 Ericksen Avenue NE, Suite 300
Bainbridge Island, WA 98110

July 24, 2001

Sally Thompson
Nursing Specialties Corporation
1234 Glenridge Drive
Fort Worth, TX 76130

SUBJECT: Scientific WorkPlace and the Word Pro equation editor

Dear Sally,

Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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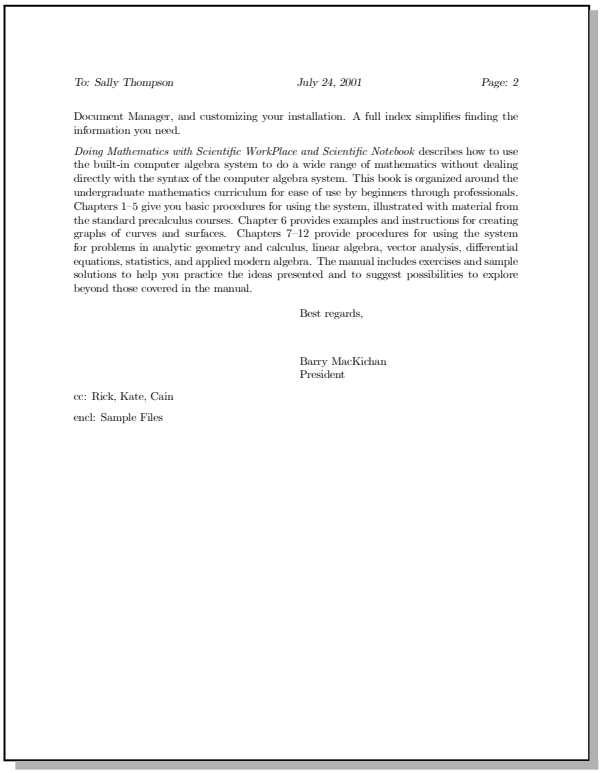

To: Sally Thompson *July 24, 2001* *Page: 2*

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Best regards,

Barry MacKichan
President

cc: Rick, Kate, Cain

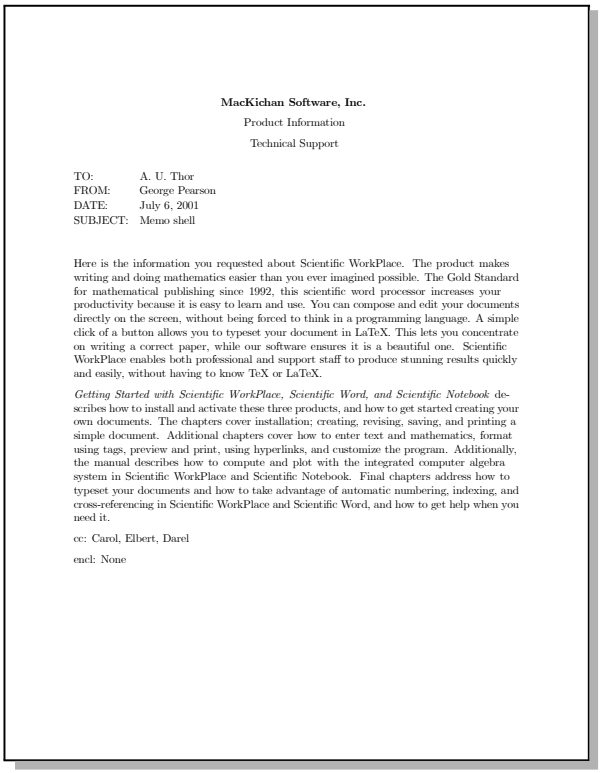
encl: Sample Files

Memo - SW Memo #1

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20mem1	None

The shell contains fields in the body of the document to fill with information about the company, department, title, and name of the sender; the recipient's name; the date; the subject; and any copies or enclosures for the memo. You can leave any of the fields blank, but you must not delete them. If you leave the date field blank, LaTeX uses the current date.



MacKichan Software, Inc.

Product Information

Technical Support

TO: A. U. Thor
FROM: George Pearson
DATE: July 6, 2001
SUBJECT: Memo shell

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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cc: Carol, Elbert, Darel

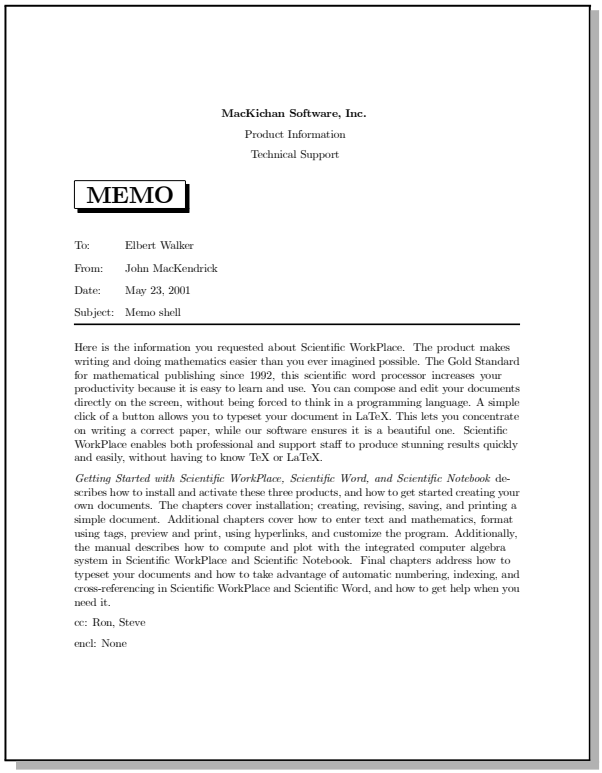
encl: None

Memo - SW Memo #2

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20mem2	None

The shell contains fields in the body of the document to fill with information about the company, department, title, and name of the sender; the recipient's name; the date; the subject; and any copies or enclosures for the memo. You can leave any of the fields blank, but you must not delete them. If you leave the date field blank, LaTeX uses the current date.



MacKichan Software, Inc.

Product Information

Technical Support

MEMO

To: Elbert Walker

From: John MacKendrick

Date: May 23, 2001

Subject: Memo shell

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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cc: Ron, Steve

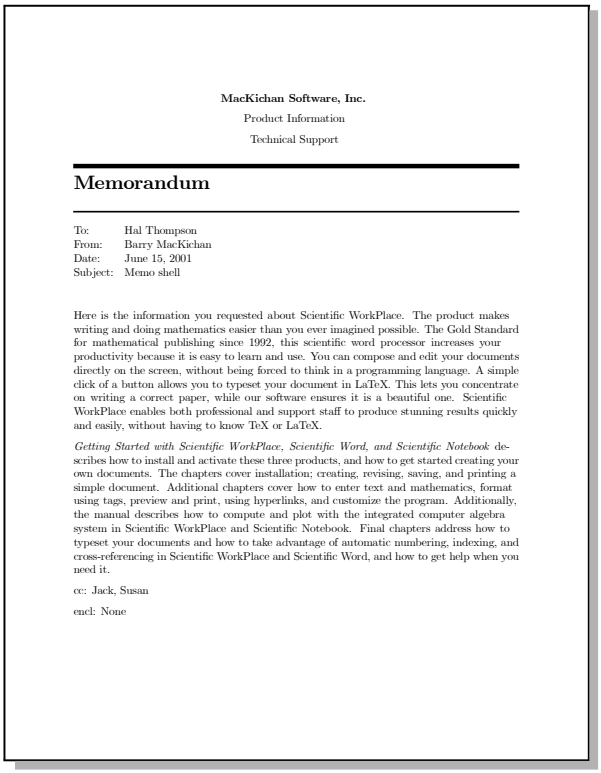
encl: None

Memo - SW Memo #3

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20mem3	None

The shell contains fields in the body of the document to fill with information about the company, department, title, and name of the sender; the recipient's name; the date; the subject; and any copies or enclosures for the memo. You can leave any of the fields blank, but you must not delete them. If you leave the date field blank, LaTeX uses the current date.



MacKichan Software, Inc.

Product Information

Technical Support

Memorandum

To: Hal Thompson
From: Barry MacKichan
Date: June 15, 2001
Subject: Memo shell

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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cc: Jack, Susan

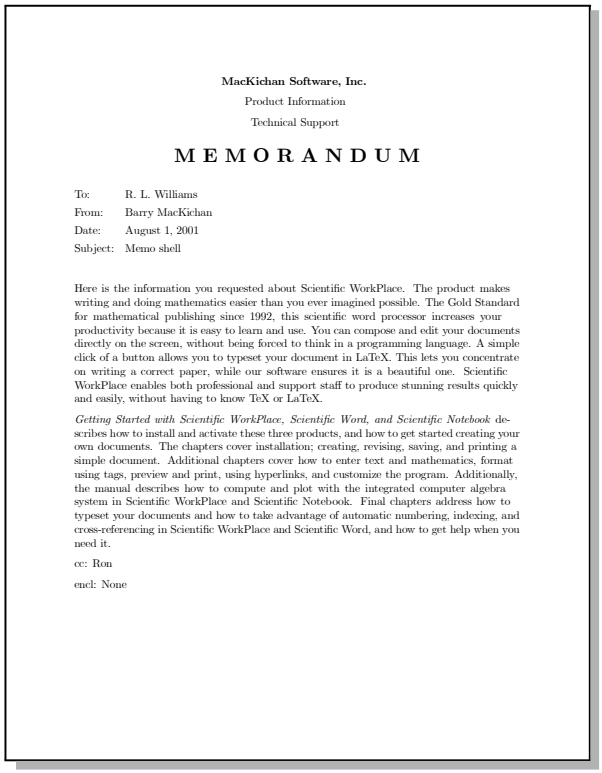
encl: None

Memo - SW Memo #4

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20mem4	None

The shell contains fields in the body of the document to fill with information about the company, department, title, and name of the sender; the recipient's name; the date; the subject; and any copies or enclosures for the memo. You can leave any of the fields blank, but you must not delete them. If you leave the date field blank, LaTeX uses the current date.



MacKichan Software, Inc.

Product Information

Technical Support

MEMORANDUM

To: R. L. Williams
From: Barry MacKichan
Date: August 1, 2001
Subject: Memo shell

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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cc: Ron

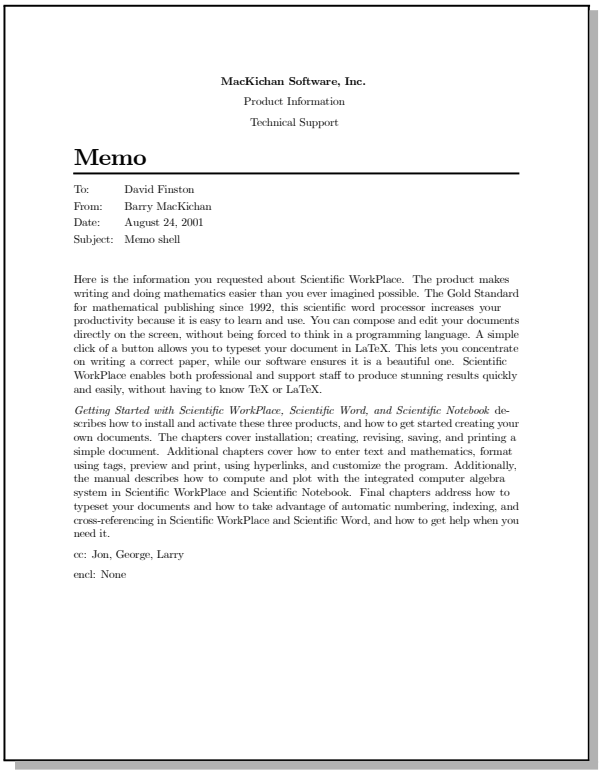
encl: None

Memo - SW Memo #5

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20mem5	None

The shell contains fields in the body of the document to fill with information about the company, department, title, and name of the sender; the recipient's name; the date; the subject; and any copies or enclosures for the memo. You can leave any of the fields blank, but you must not delete them. If you leave the date field blank, LaTeX uses the current date.



MacKichan Software, Inc.

Product Information

Technical Support

Memo

To: David Finston
From: Barry MacKichan
Date: August 24, 2001
Subject: Memo shell

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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cc: Jon, George, Larry

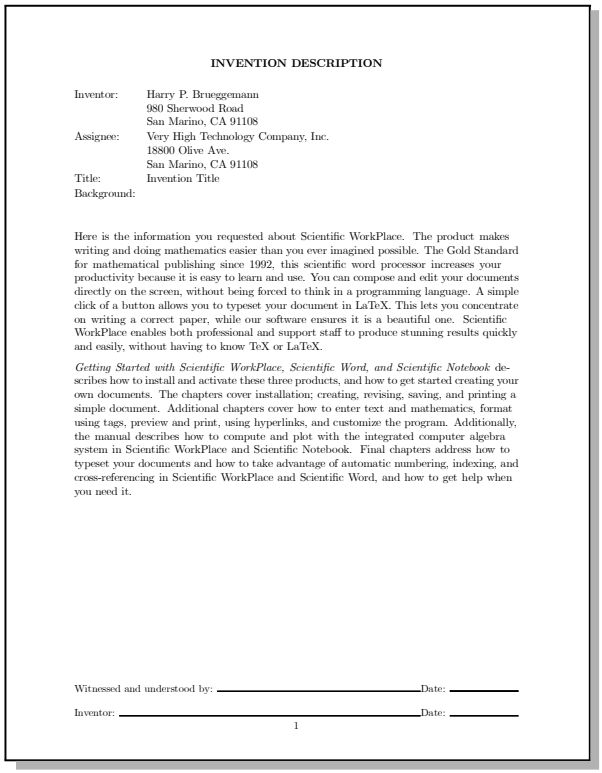
encl: None

Memo - SW Memo Special for Inventions

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcimemo	None
sw20imem	None

The shell contains fields in the body of the document to fill with information about the name and address of the recipient and the sender, and the subject of the memo.



INVENTION DESCRIPTION

Inventor: Harry P. Brueggemann
980 Sherwood Road
San Marino, CA 91108
Assignee: Very High Technology Company, Inc.
18800 Olive Ave.
San Marino, CA 91108
Title: Invention Title
Background:

Here is the information you requested about Scientific WorkPlace. The product makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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Witnessed and understood by: _____ Date: _____

Inventor: _____ Date: _____

1

Press Release - SW Press Release #1

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20prs1	None

The shell contains fields in the body of the document for the company, address, telephone, and fax number of the sender; the subject of the press release; the date of release; and copies and enclosures.

PRESS RELEASE

MacKichan Software, Inc.
600 Ericksen Avenue NE, Suite 300
Bainbridge Island, WA 98110

FOR IMMEDIATE RELEASE

Headline

Scientific WorkPlace makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Getting Started with Scientific WorkPlace, Scientific Word, and Scientific Notebook describes how to install and activate these three products, and how to get started creating your own documents. The chapters cover installation; creating, revising, saving, and printing a simple document. Additional chapters cover how to enter text and mathematics, format using tags, preview and print, using hyperlinks, and customize the program. Additionally, the manual describes how to compute and plot with the integrated computer algebra system in Scientific WorkPlace and Scientific Notebook. Final chapters address how to typeset your documents and how to take advantage of automatic numbering, indexing, and cross-referencing in Scientific WorkPlace and Scientific Word, and how to get help when you need it.

cc: Business Editor

encl: Brochure

Press Release - SW Press Release #2

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20prs2	None

The shell contains fields in the body of the document for the company, address, telephone, and fax number of the sender; the subject of the press release; the date of release; and copies and enclosures.

MacKichan Software, Inc.

NEWS RELEASE

600 Ericksen Avenue NE, Suite 300 Bainbridge Island, WA 98110

FOR IMMEDIATE RELEASE

Contact: Barry MacKichan
Phone: 1-206-780-2799
Fax: 1-206-780-2857

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cc: Business Editorv

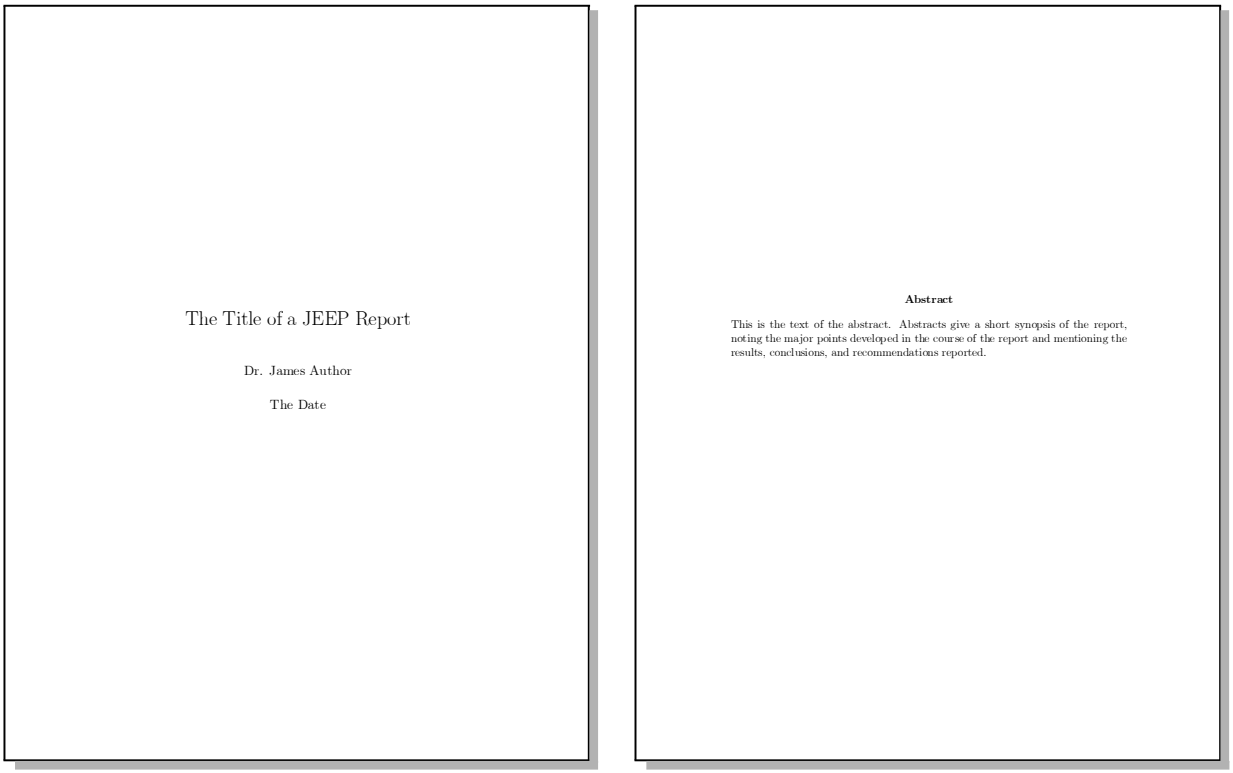
encl: Brochure

Report - JEEP Report

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
jeep	None

The shell produces general-purpose reports, using a 12-pt font. The abstract appears on a separate page from the title information. The shell includes a tag for report parts in addition to other section headings, which appear at the left side of the page. Page numbers are centered at the bottom. The shell supports theorem environments.



Contents

1 Sample Mathematics and Text **2**
1.1 In-line and Displayed Mathematics . . . 2
1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ . . . 2
1.3 Theorems, Lemmata, and Other Theorem-like Environments . . . 3

2 Features of this Shell **4**
2.1 Section . . . 4
2.1.1 Subsection . . . 4
2.2 Tags . . . 4
2.3 List Environments . . . 5

A The First Appendix **7**
A.1 About the Bibliography . . . 7

1. Sample Mathematics and Text

1.1. In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2. Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1.3. Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

2. Features of this Shell

2.1. Section

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1. Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2. Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3. List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   1. A list item under a list item.
      The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   2. Just another list item under a list item.
      1. Third level list item under a list item.
         1. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

A. The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

A.1. About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Bibliography

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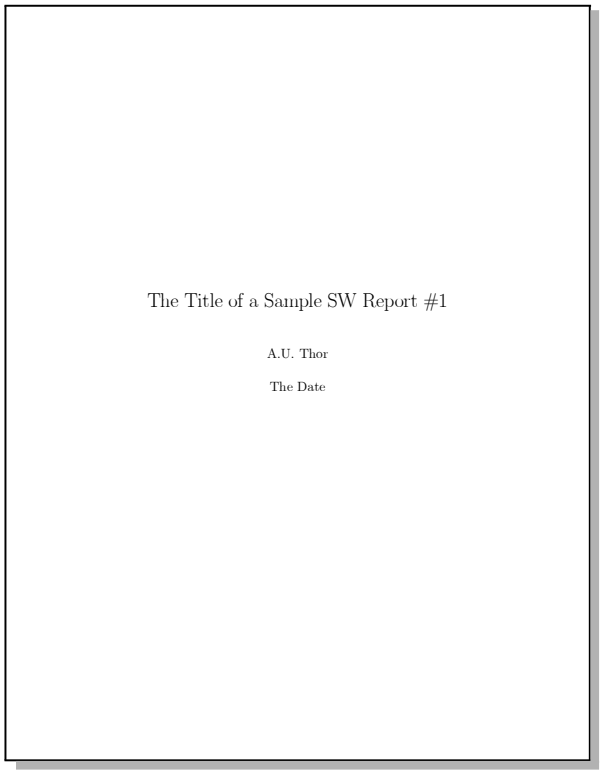
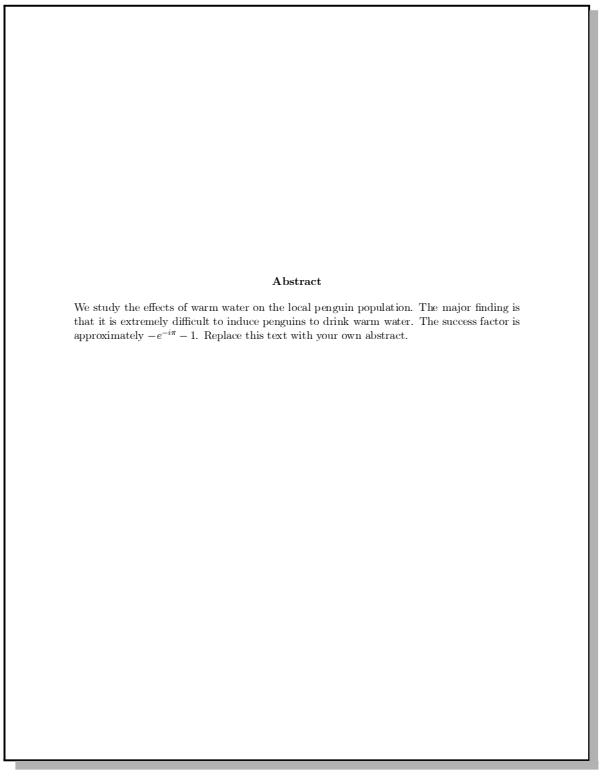
Report - SW Report #1

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk	None
sw20orp1	None

The shell produces reports, using a 12-pt font. The abstract appears on a separate page from the title information, and both are single-column pages. The remainder of the report is produced in two columns. The shell includes a tag for report parts in addition to other section headings. Chapter headings are centered across the whole page, but other headings appear at the left side of the column. Page numbers appear at the bottom right. The shell supports theorem environments.





Chapter 1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

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$$\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0.$$

Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

LaTeX parameters govern mathematical displays The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Headings

$\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone

$$\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$$

then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (1.3) that

$$\begin{aligned}\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} \\ = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z),\end{aligned} \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned}|R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).\end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\begin{aligned}&\frac{d}{dz} f(1/z) \\ &= a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},\end{aligned}$$

that implies (1.2) by substituting $1/z$ back for z. ■

1.4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

1.4.1 Subsection Heading

This text appears under a subsection heading.

1.4.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

1.4.1.1.1 Subsubsubsection Heading

This text appears under a subsubsubsection heading.

1.5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

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You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following are paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

1.6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level.

- Bullet item 1.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level.

Description List Each description list item has a lead-in followed by the item. Double click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

Appendix A The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

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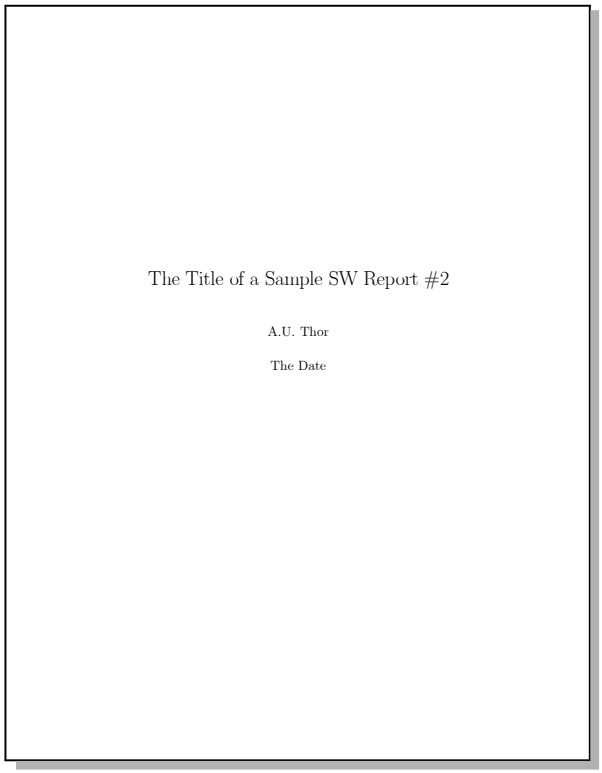
Report - SW Report #2

Document class base file: report.cls

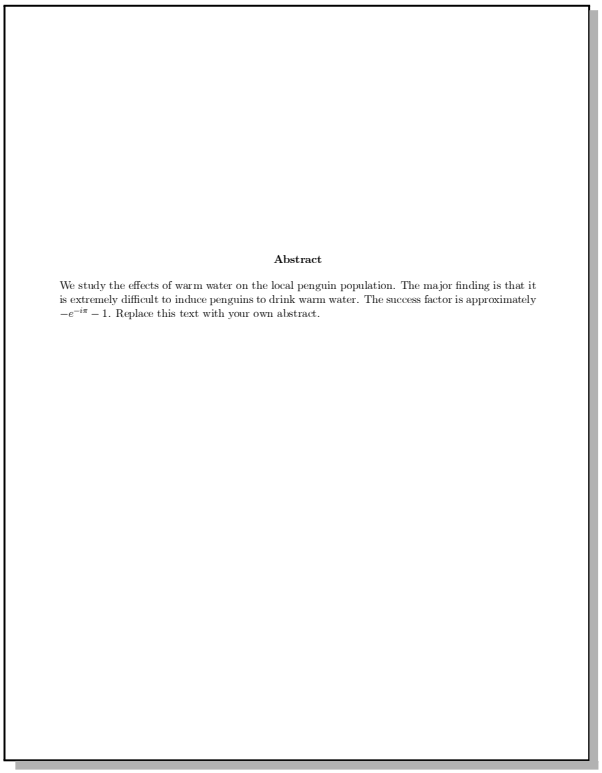
Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk	None
sw20orp2	None

The shell produces single-column reports in a 12-pt font. The abstract appears on a separate page from the title information. The shell includes a tag for report parts in addition to other section headings. Chapter headings use a sans serif font. Margins are narrow. Page numbers appear at the bottom right. The shell supports theorem environments.


The Title of a Sample SW Report #2

A.U. Thor

The Date


Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

Chapter 1 Sample Mathematics and Text

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Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{1.3}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

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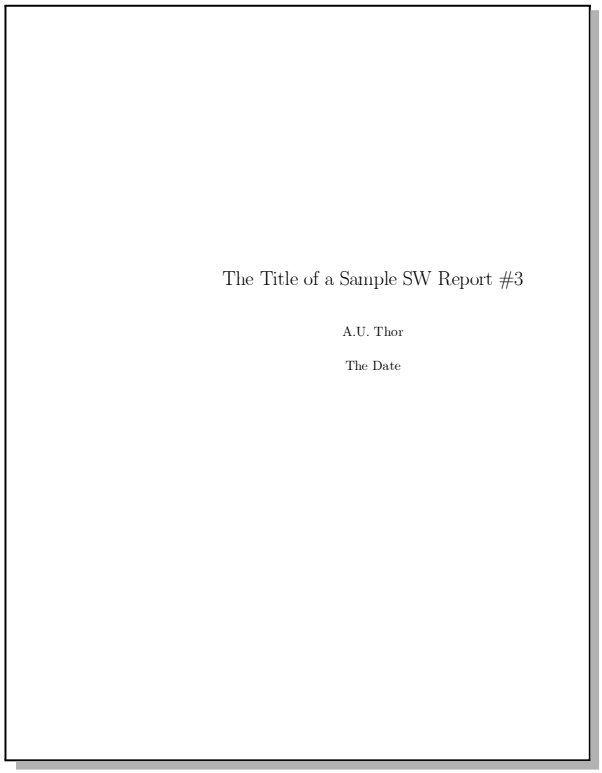
Report - SW Report #3

Document class base file: report.cls

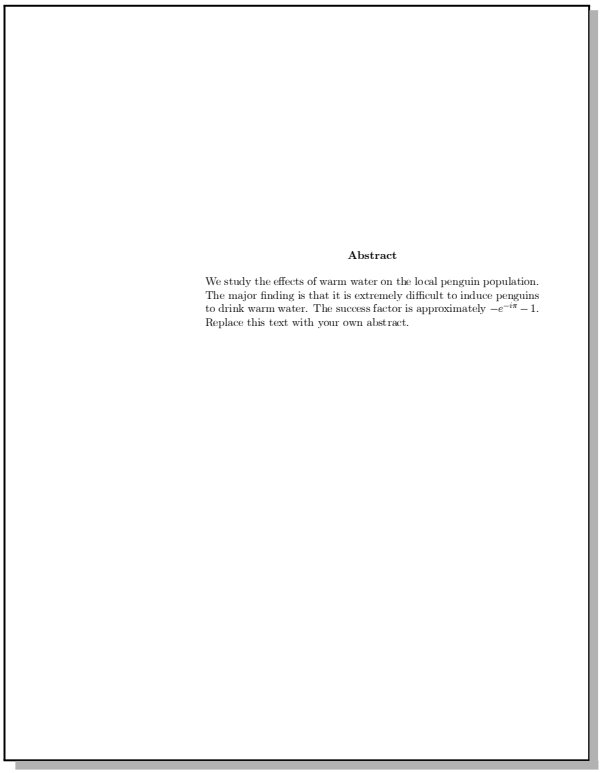
Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk	None
sw20orp3	None

The shell produces single-column reports offset to the right of the page. The abstract appears on a separate page from the title information. The shell includes a tag for report parts in addition to other section headings. Sections are separated by rules, and top and bottom margins are narrow. Page numbers appear at the bottom right, under a rule. The shell supports theorem environments.


The Title of a Sample SW Report #3

A.U. Thor

The Date


Abstract

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Chapter 1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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Appendix A The First Appendix

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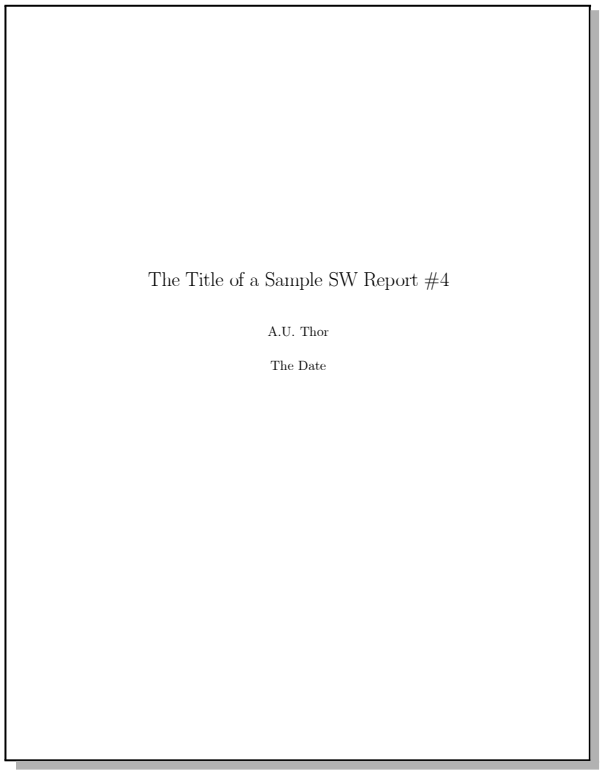
Report - SW Report #4

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
tcibkpk	None
sw20orp4	None

The shell produces single-column reports in a 12-pt font. The abstract appears on a separate page from the title information. The shell includes a tag for report parts in addition to other section headings. Chapter headings are italicized. Sections are separated by rules, and top and bottom margins are narrow. Page numbers appear at the bottom right. The shell supports theorem environments.


The Title of a Sample SW Report #4

A.U. Thor

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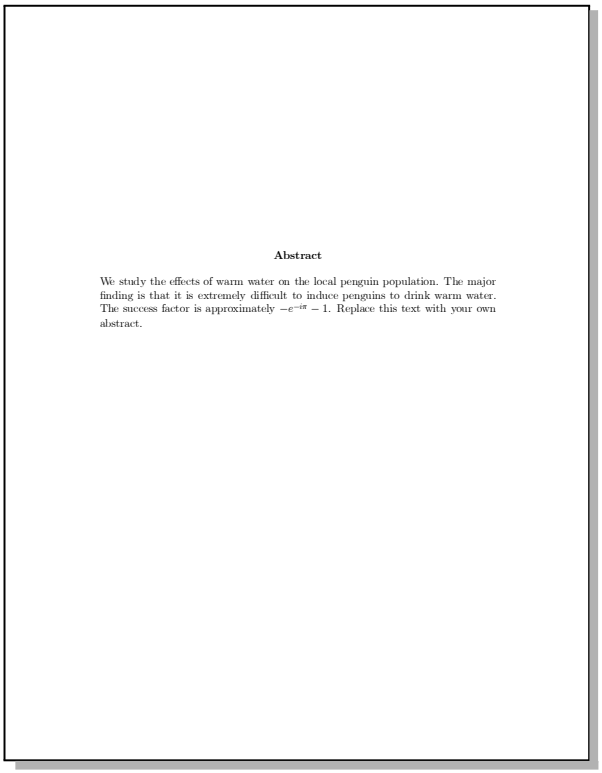
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Report - SW Report #5

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
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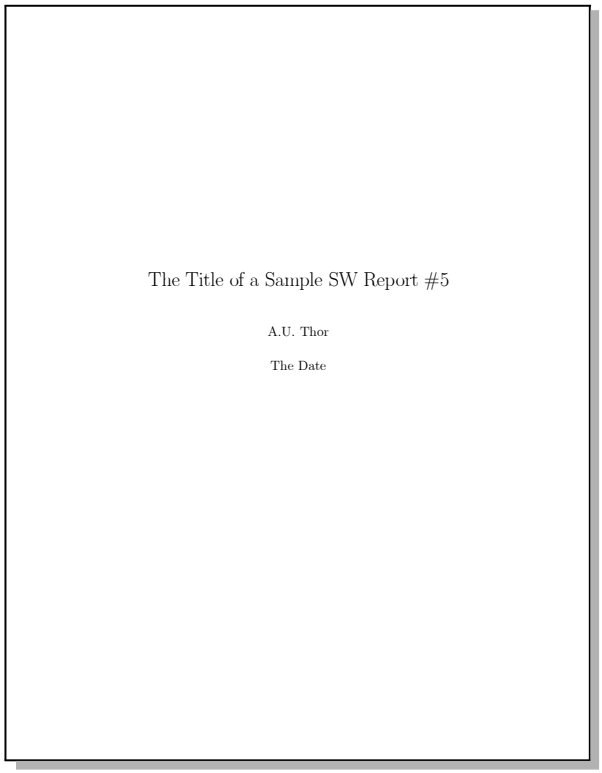
sw20orp5	None

Similar to Report - SW Report #4, except with the page numbers centered at the footer of each page.


The Title of a Sample SW Report #5

A.U. Thor

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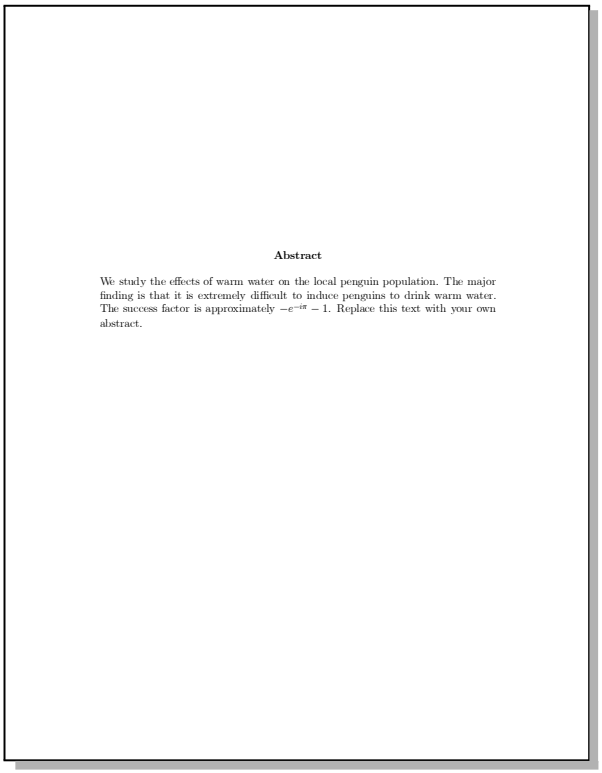
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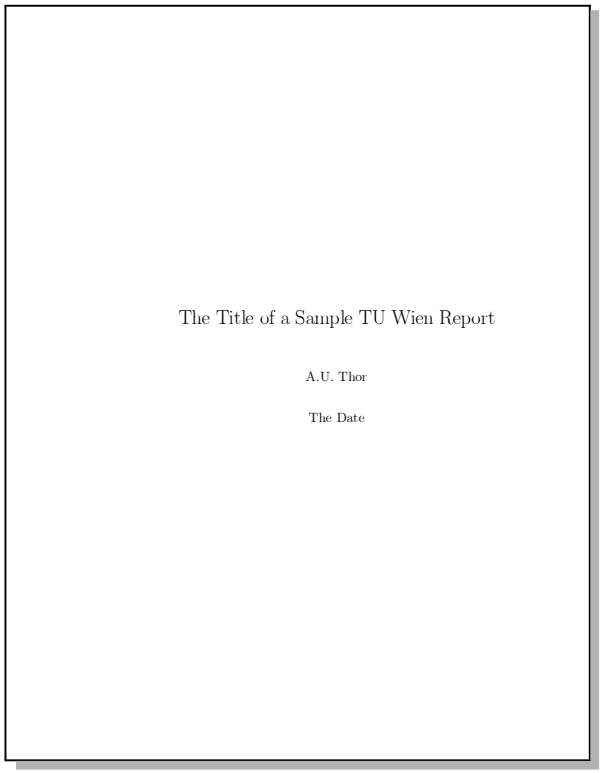
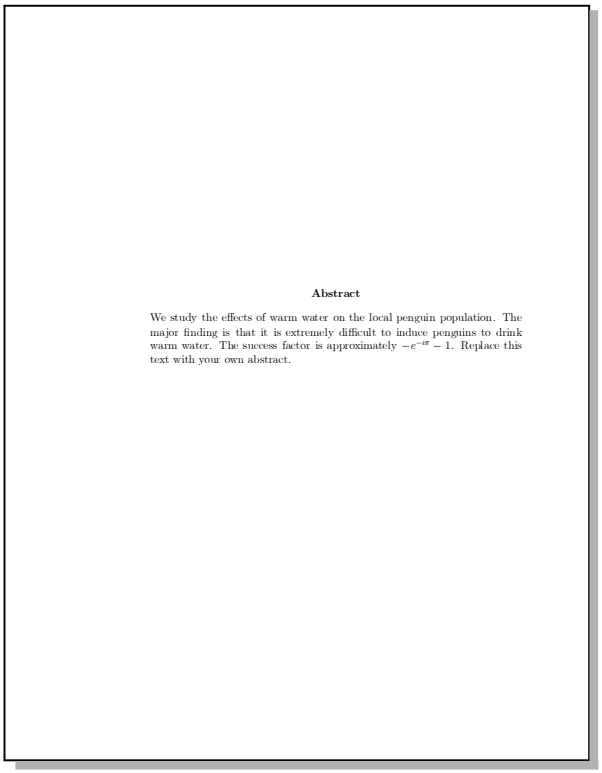
Report - TU Wien Report

Document class base file: report.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20vrep	None
refman	None

The shell produces single-column reports appropriate for Technische Universität Wien. The abstract appears on a separate page from the title information. The shell includes a tag for report parts in addition to other section headings. Chapter headings are separated from text by rules above and below. Other section headings are left-justified. Text is indented. The shell supports theorem environments.





Part I

The First Part

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2. Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.

   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.

   (b) Just another list item under a list item.

      i. Third level list item under a list item.

         A. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.

  * Third level bullet item.
    · Fourth (and final) level bullet item.

Description List: Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip: Mythical beast of Australian Aboriginal legends.

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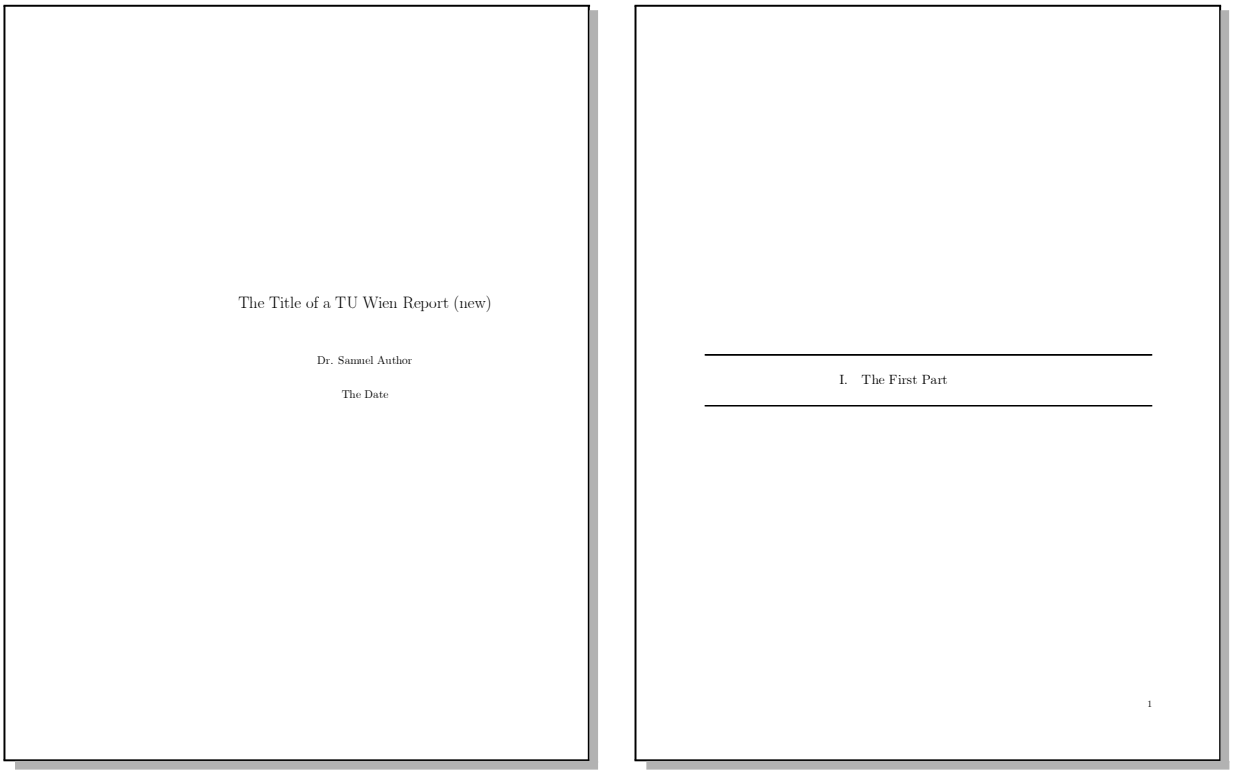
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Report - TU Wien Report (new)

Document class base file: refrep.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell produces single-column reports appropriate for Technische Universität Wien. The front matter doesn't include an abstract. The shell includes a tag for report parts in addition to other section headings. The titles of parts appear on a page by themselves, with rules above and below. Chapter headings are separated from text by rules above and below. Other section headings are left-justified. Text is indented. The shell supports theorem environments.



1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_k = \sum_{k=1}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

2 Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and `fraktur`. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.

   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.

   (b) Just another list item under a list item.
      i. Third level list item under a list item.
         A. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  – Second level bullet item.
    * Third level bullet item.
      · Fourth (and final) level bullet item.

Description List : Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip : Mythical beast of Australian Aboriginal legends.

Appendix A The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

A.1 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

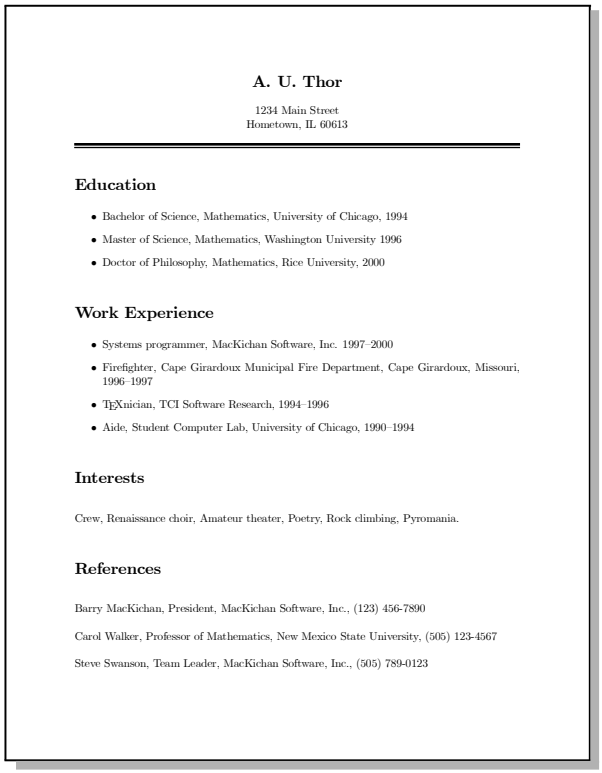
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Resume - SW Resume #1

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20res1	None

The front matter contains fields for the name and contact information of the author.



A. U. Thor

1234 Main Street
Hometown, IL 60613

Education

- Bachelor of Science, Mathematics, University of Chicago, 1994
- Master of Science, Mathematics, Washington University 1996
- Doctor of Philosophy, Mathematics, Rice University, 2000

Work Experience

- Systems programmer, MacKichan Software, Inc. 1997–2000
- Firefighter, Cape Girardoux Municipal Fire Department, Cape Girardoux, Missouri, 1996–1997
- TEXnician, TCI Software Research, 1994–1996
- Aide, Student Computer Lab, University of Chicago, 1990–1994

Interests

Crew, Renaissance choir, Amateur theater, Poetry, Rock climbing, Pyromania.

References

Barry MacKichan, President, MacKichan Software, Inc., (123) 456-7890

Carol Walker, Professor of Mathematics, New Mexico State University, (505) 123-4567

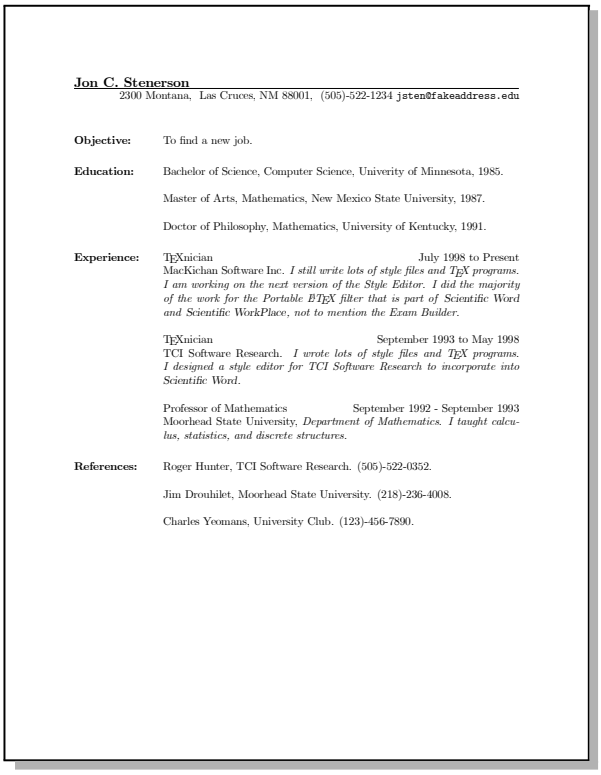
Steve Swanson, Team Leader, MacKichan Software, Inc., (505) 789-0123

Resume -SW Resume #2

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20res2	None

The front matter contains fields for the name and contact information of the author. Fields in the body of the document establish the job title, dates, and position for each period of employment.



Jon C. Stenerson
2300 Montana, Las Cruces, NM 88001, (505)-522-1234 jsten@fakeaddress.edu

Objective: To find a new job.

Education: Bachelor of Science, Computer Science, Univerity of Minnesota, 1985.

Master of Arts, Mathematics, New Mexico State University, 1987.

Doctor of Philosophy, Mathematics, University of Kentucky, 1991.

Experience: TEXnician July 1998 to Present
MacKichan Software Inc. *I still write lots of style files and TEX programs. I am working on the next version of the Style Editor. I did the majority of the work for the Portable ETEX filter that is part of Scientific Word and Scientific WorkPlace, not to mention the Exam Builder.*

TEXnician September 1993 to May 1998
TCI Software Research. *I wrote lots of style files and TEX programs. I designed a style editor for TCI Software Research to incorporate into Scientific Word.*

Professor of Mathematics September 1992 - September 1993
Moorhead State University, *Department of Mathematics. I taught calculus, statistics, and discrete structures.*

References: Roger Hunter, TCI Software Research. (505)-522-0352.

Jim Drouhilet, Moorhead State University. (218)-236-4008.

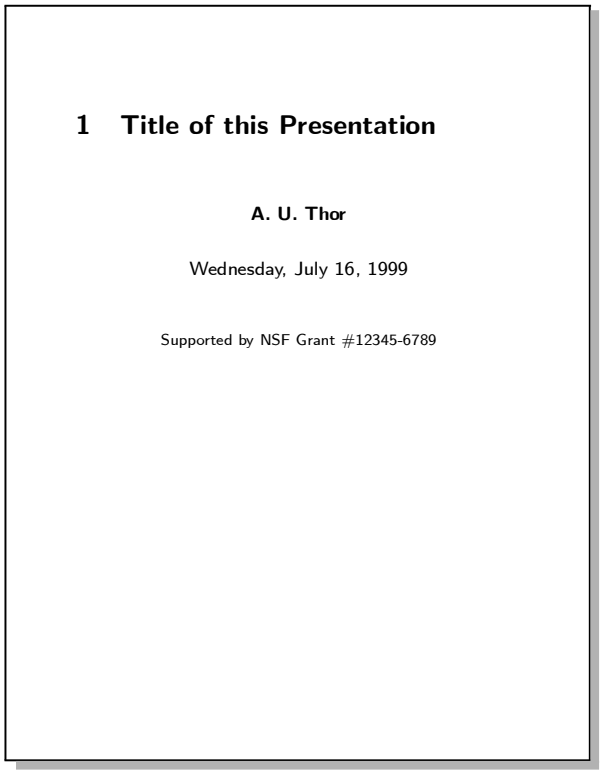
Charles Yeomans, University Club. (123)-456-7890.

Slides - SW Slides

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
None	

The formatting for this shell is done in the file `tcislid2.tex`, which is input from the document preamble.

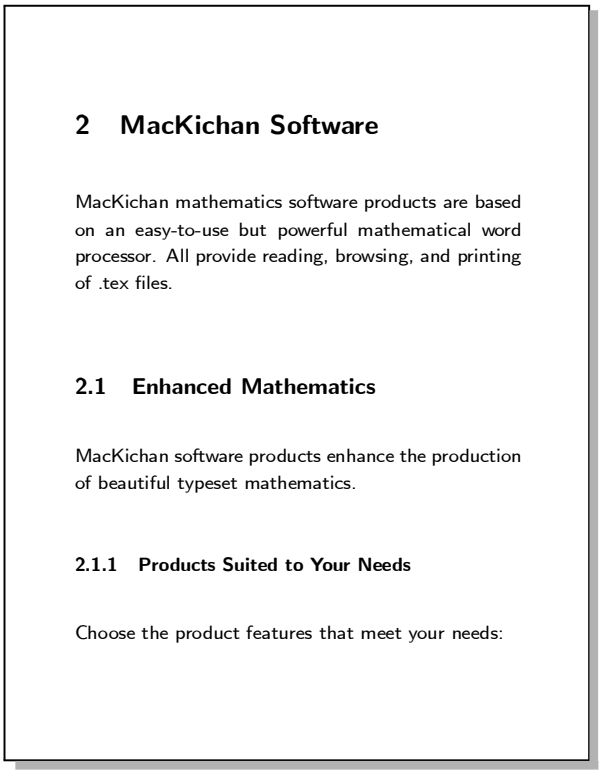


1 Title of this Presentation

A. U. Thor

Wednesday, July 16, 1999

Supported by NSF Grant #12345-6789



2 MacKichan Software

MacKichan mathematics software products are based on an easy-to-use but powerful mathematical word processor. All provide reading, browsing, and printing of .tex files.

2.1 Enhanced Mathematics

MacKichan software products enhance the production of beautiful typeset mathematics.

2.1.1 Products Suited to Your Needs

Choose the product features that meet your needs:

1. Typesetting
2. Computing
3. Internet access

3 Mathematics in This Shell

$$\sum_{n=1}^{\infty} \frac{1}{n^2} = 2$$

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T .

4 Tags

You can apply these tags:

- *Emphasized*
- *Strongly Emphasized*
- Keyboard Input
- Sample
- **Bold**
- *Italics*
- `Typed Code`

- Bigger
- smaller

7 Standard LaTeX Shells

The standard LaTeX shells provide the most general and portable set of document features. You can achieve almost any typesetting effect by beginning with a standard shell and adding LaTeX packages as necessary. We strongly recommend that you begin all new documents using one of the standard LaTeX shells, unless you have a compelling reason (such as publisher's instructions) to do otherwise.

With one exception, the standard shells are based on the typesetting specifications set in one of three LaTeX base document classes—`article.cls`, `book.cls`, or `report.cls`. See page 2 for information about base document class defaults and for page layout diagrams for the base document classes.

Standard LaTeX Article and Blank Standard LaTeX Article Shells

Document class base file: article.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

These two shells produce identical documents. The Standard LaTeX Article shell contains information about the shell that you can replace with the contents of your own document. The Blank Standard LaTeX Article shell contains no information or instructions. Both shells produce documents with centered title information, left-justified headings, theorem environments, and appendices.

The Title of an Article

Dr. Author Jones
At this Address

July 23, 2004

Abstract

This article illustrates many features of a mathematics article, but we do not explain the spurious appearance of the formula $(\nabla \times F) \cdot k = z+1$ in this abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in section heads $\int_0^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \; z \to \infty, \; z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, \; z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    * Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

A An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{5}$$

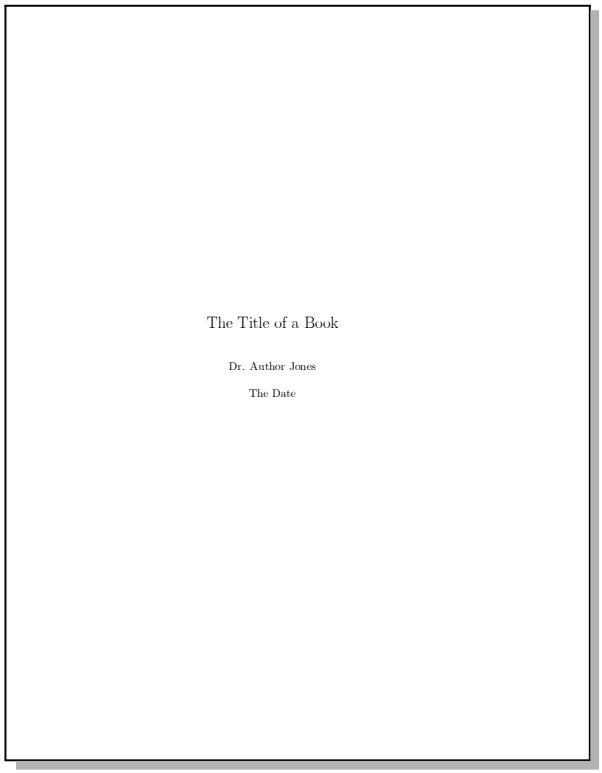
The quadratic equation shown as equation 5 is used to demonstrate how equations are numbered in the appendix.

Standard LaTeX Book

Document class base file: book.cls

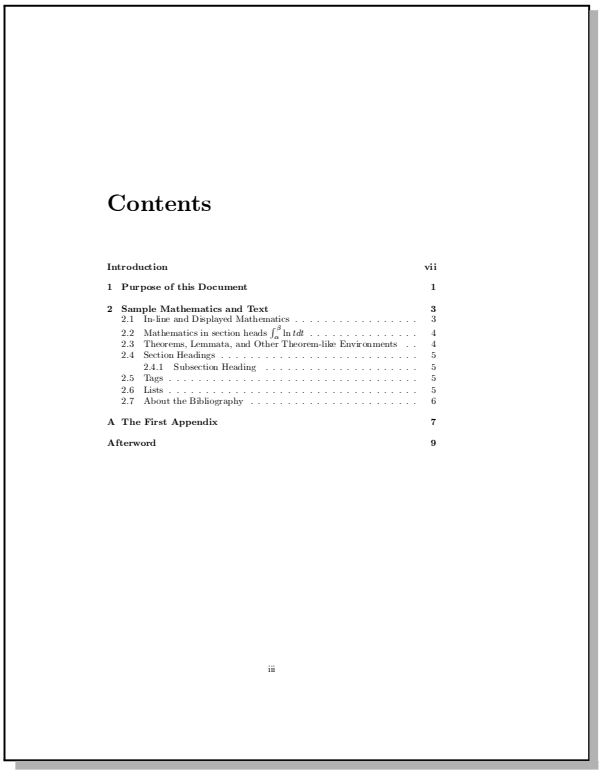
Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell automatically adds blank pages after the title page, the table of contents, the preface, and where necessary to ensure that new chapters begin on odd-numbered pages. The shell doesn't contain an abstract. Blank pages carry headers and page numbers. Blank pages in the sample document are not shown here.


The Title of a Book

Dr. Author Jones

The Date


Contents

Introduction vii

1 Purpose of this Document 1

2 Sample Mathematics and Text 3
2.1 In-line and Displayed Mathematics . . . 3
2.2 Mathematics in section heads $\int_a^3 \ln t dt$ . . . 4
2.3 Theorems, Lemmata, and Other Theorem-like Environments . . 4
2.4 Section Headings . . . 5
2.4.1 Subsection Heading . . . 5
2.5 Tags . . . 5
2.6 Lists . . . 5
2.7 About the Bibliography . . . 6

A The First Appendix 7

Afterword 9

iii

Preface

This is the preface and it is created using a TeX field in a paragraph by itself containing `\chapter*{Preface}`. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The `markboth` TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Introduction

The introduction is entered using the usual chapter tag. Since the introduction chapter appears before the `mainmatter` TeX field, it is an unnumbered chapter. The primary difference between the preface and the introduction in this shell document is that the introduction will appear in the table of contents and the page headings for the introduction are automatically handled without the need for the `markboth` TeX field. You may use either or both methods to create chapters at the beginning of your document. You may also delete these preliminary chapters.

Chapter 1

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Chapter 2

Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

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and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \; z \to \infty, \; z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, \; z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z. ■

2.4 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.4.1 Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

2.5 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{reffur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\text{tiny}}$, ^{scriptsize}, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.6 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

2.7 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Appendix A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.

Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

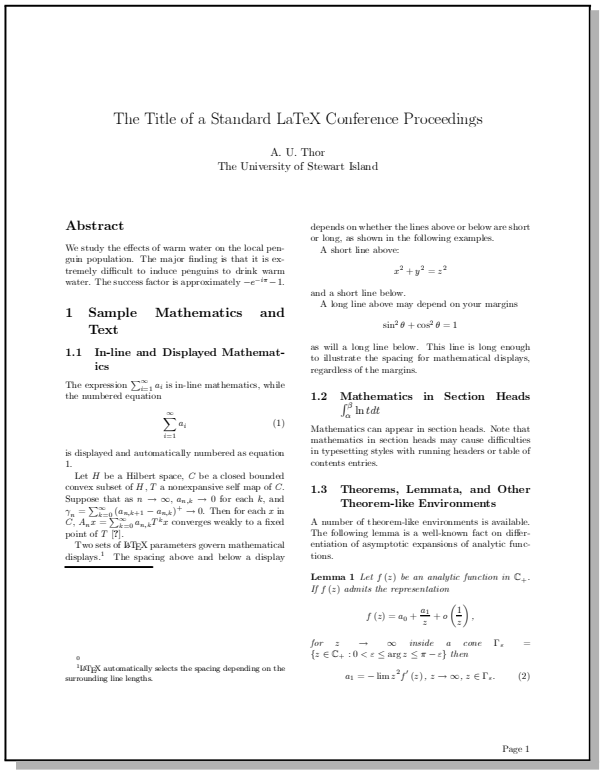
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Standard LaTeX Conference Proceedings

Document class base file: proc.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell adds a command used to produce a blank space in the first column where a copyright notice belongs, as shown below. To use the command, add a TeX field containing the command `\copyrightspace{}` to the beginning of the first paragraph of body text in the document.



The Title of a Standard LaTeX Conference Proceedings

A. U. Thor
The University of Stewart Island

Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$.

1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T. [?].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads

$\int_\alpha^\beta \ln t\,dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

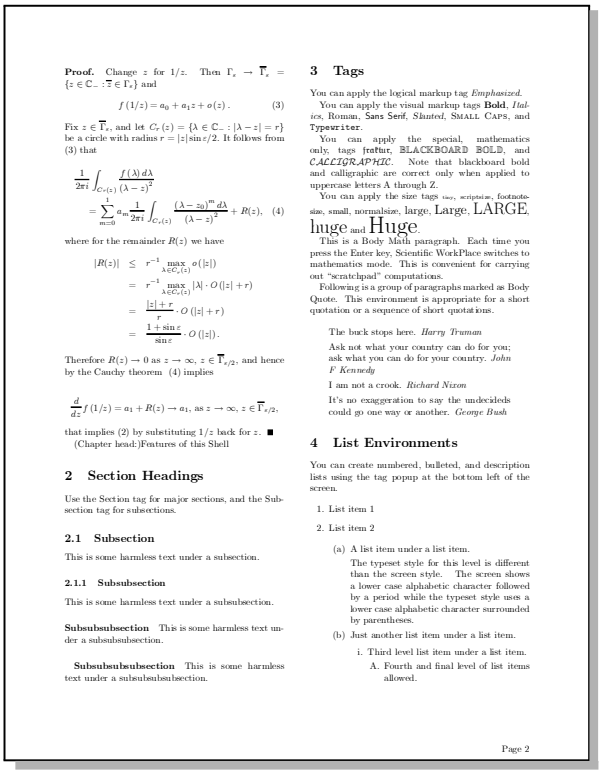
$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Page 1



Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\begin{aligned}\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} \\ = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \end{aligned} \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) \\ &= r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) \\ &= \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

(Chapter head:)Fentures of this Shell

2 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1 Subsection

This is some harmless text under a subsection.

2.1.1 Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

3 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and CALLIGRAPHIC. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

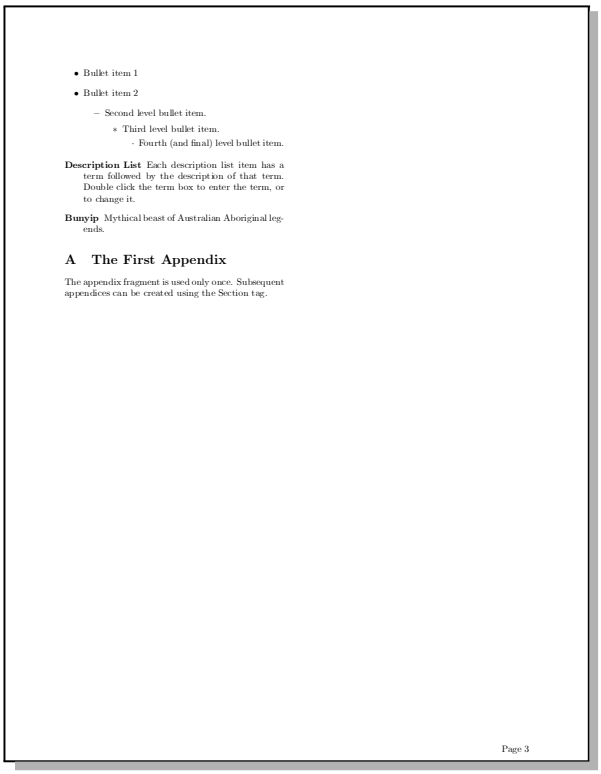
> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

4 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.
   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   (b) Just another list item under a list item.
      i. Third level list item under a list item.
         A. Fourth and final level of list items allowed.

Page 2



- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

A The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Section tag.

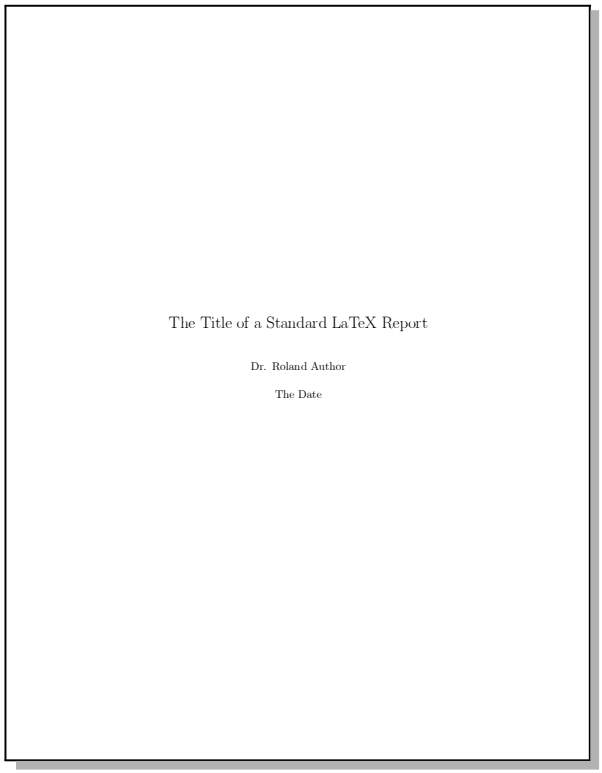
Page 3

Standard LaTeX Report

Document class base file: report.cls

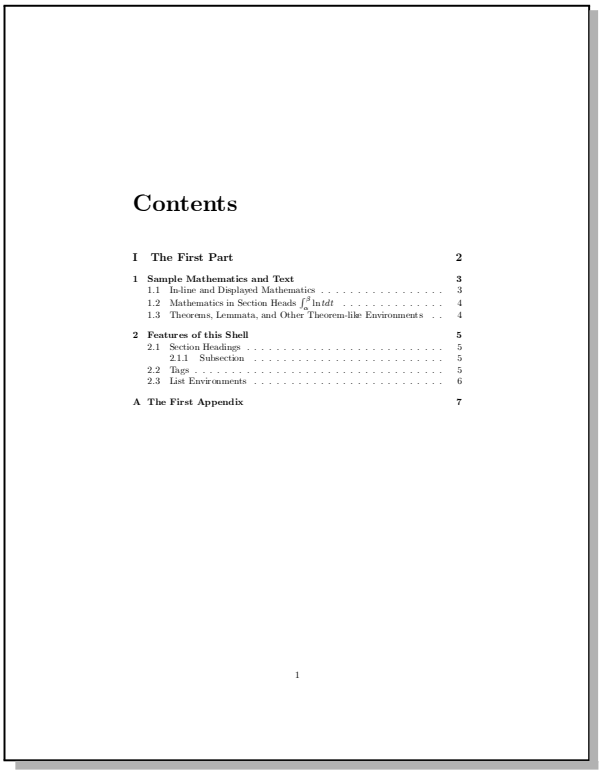
Options and Packages	Defaults
Document class options	Standard
Packages:	
amsmath	Standard

The shell contains an abstract.


The Title of a Standard LaTeX Report

Dr. Roland Author

The Date


Contents

I The First Part 2

1 Sample Mathematics and Text 3
1.1 In-line and Displayed Mathematics . . . 3
1.2 Mathematics in Section Heads $\int_a^b \ln t dt$ . . . 4
1.3 Theorems, Lemmata, and Other Theorem-like Environments . . 4

2 Features of this Shell 5
2.1 Section Headings . . . 5
2.1.1 Subsection . . . 5
2.2 Tags . . . 5
2.3 List Environments . . . 6

A The First Appendix 7

1

Chapter 1

Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [?].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

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[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$ and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

Chapter 2

Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and Typewriter.

You can apply the special, mathematics only, tags BLACKBOARD BOLD, CALLIGRAPHIC, and frattur. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Appendix A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

8 Style Editor Shells

The shells discussed in this chapter were developed with the Style Editor. Thus, you may find that modifying them by using the Style Editor is easier than by making changes within the program.

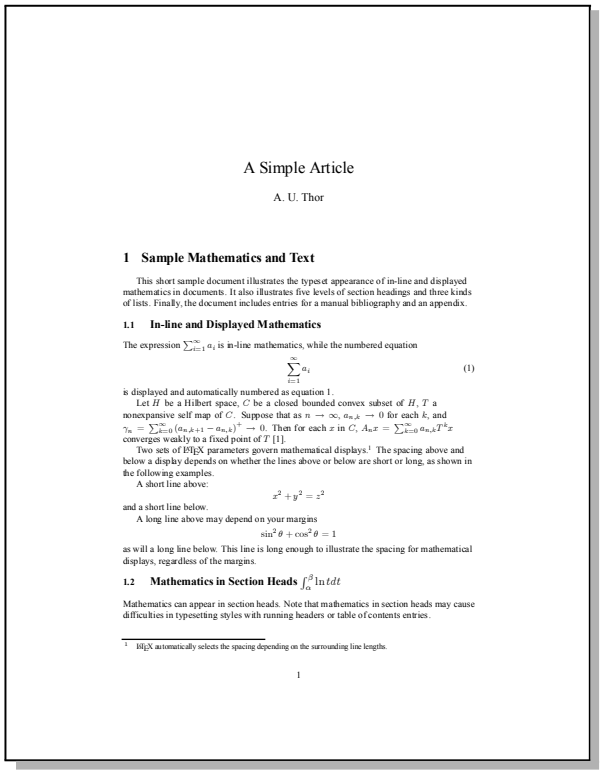
Style Editor shells produce a variety of documents: articles, books, exams, faxes, letters, memos, slides, resumes, and theses. The shells differ according to their purpose. All the shells are based on the typesetting specifications set in the base document class `sebase.cls`. You must use the Style Editor to modify the class options for `sebase.cls`.

Article

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seart	None

The shell features generous margins with page numbers centered at the bottom of the page. The title information is simple—no abstract is included—and centered at the top of the first page. The shell includes theorem environments.



A Simple Article

A. U. Thor

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

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and a short line below.

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$$\sin^2\theta + \cos^2\theta = 1$$

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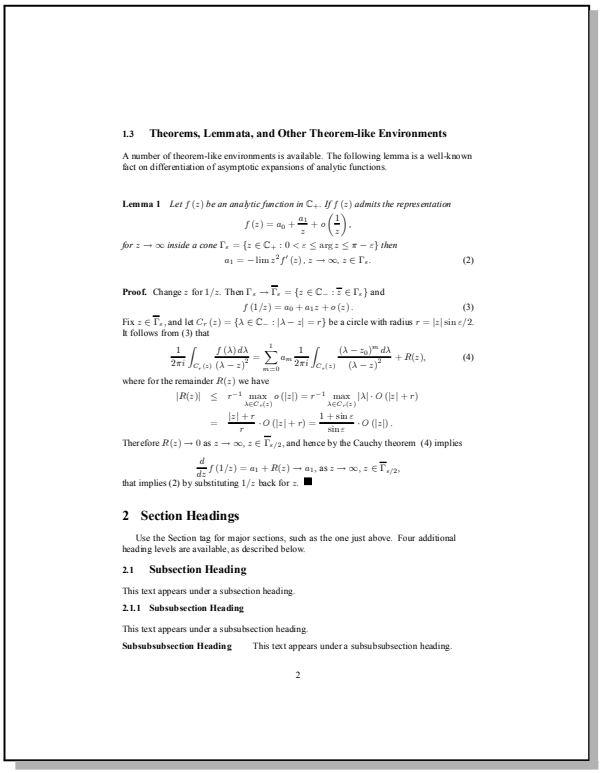
1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1



1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2.1.1 Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading This text appears under a subsubsubsection heading.

2

Subsubsubsubsection Heading This text appears under a subsubsubsubsection heading.

3 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\mathrm{tiny}}$, $_{\mathrm{scriptsize}}$, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

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> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

4 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   a. A numbered list item under a list item.

      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.

   b. Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         (a). Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

5 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

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Appendix A. An Appendix

Because appendices may contain material that is supplementary rather than integral to the main text , many styles use a different numbering system for equations that appear in the appendices.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{A-1}$$

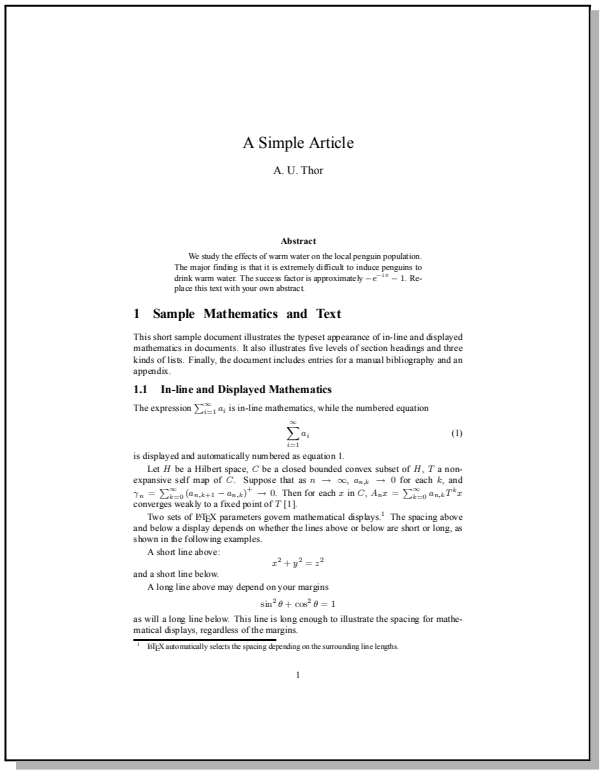
The quadratic equation shown as equation A-1 is used to demonstrate how equations are numbered in the appendix.

Article - LaTeX-like Article

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
selart	None

Documents created with this shell are similar in appearance to articles created with the Standard LaTeX Article and Blank Standard LaTeX Article shells.



A Simple Article

A. U. Thor

Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

1 Sample Mathematics and Text

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

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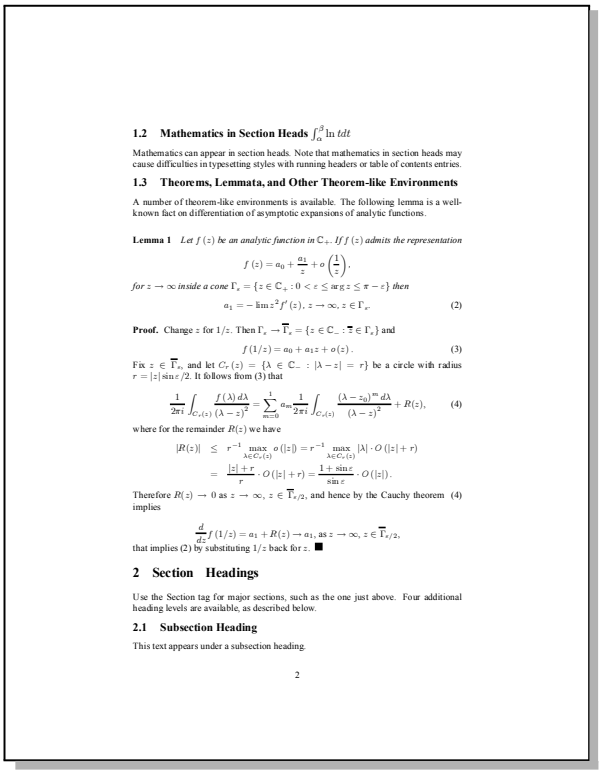
1



1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$ and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

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that implies (2) by substituting $1/z$ back for z. ■

2 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

2.1 Subsection Heading

This text appears under a subsection heading.

2

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This text appears under a subsubsection heading.

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3 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathfrak{fraktur}$, $\mathbb{BLACKBOARDBOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

4 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

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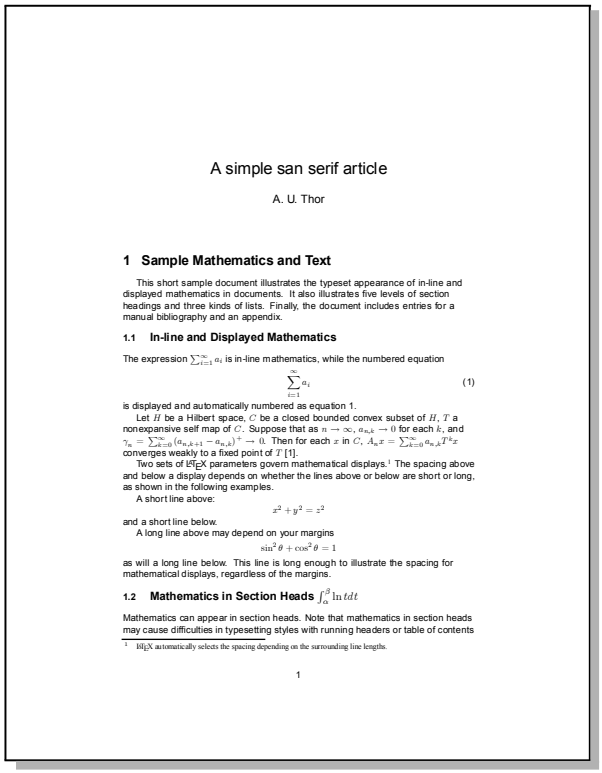
Article - Sans serif

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seartsans	None

Documents created with this shell are similar in appearance to articles created with the Style Editor Article shell, except sans serif fonts are used throught the document.



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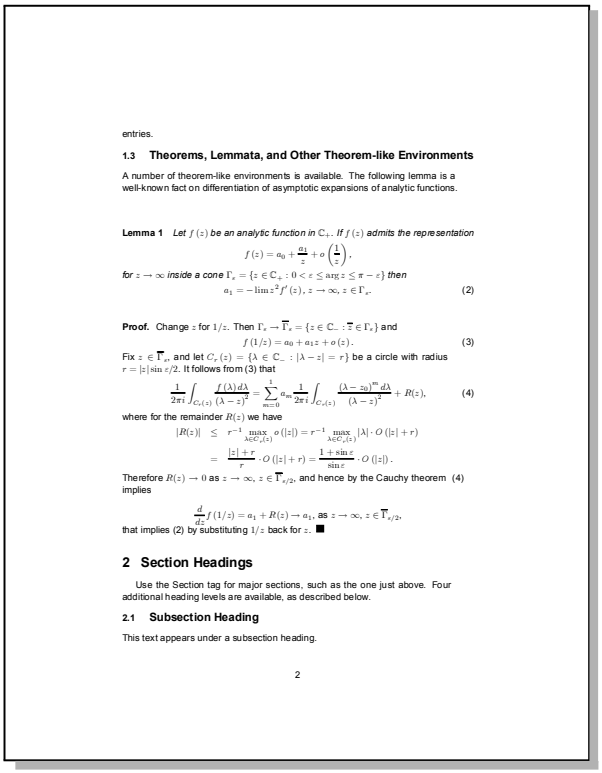

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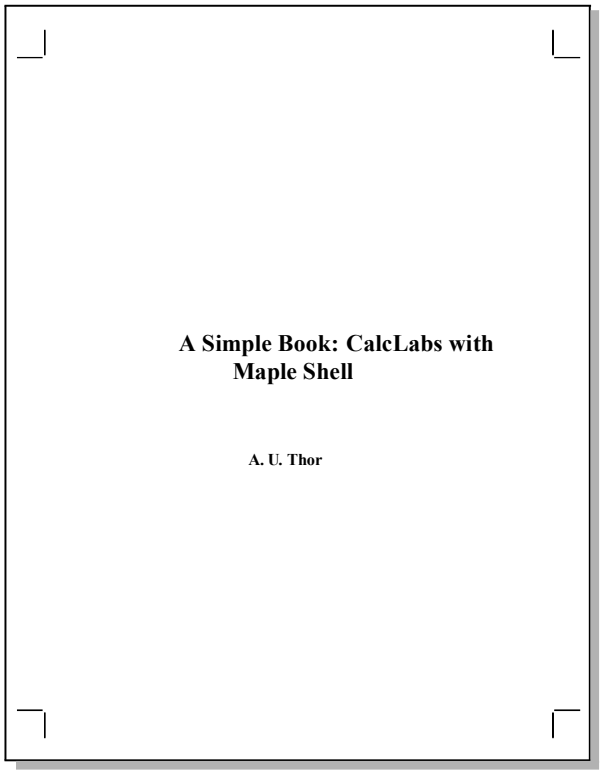
Book - CalcLabs Book

Document class base file: sebase.cls

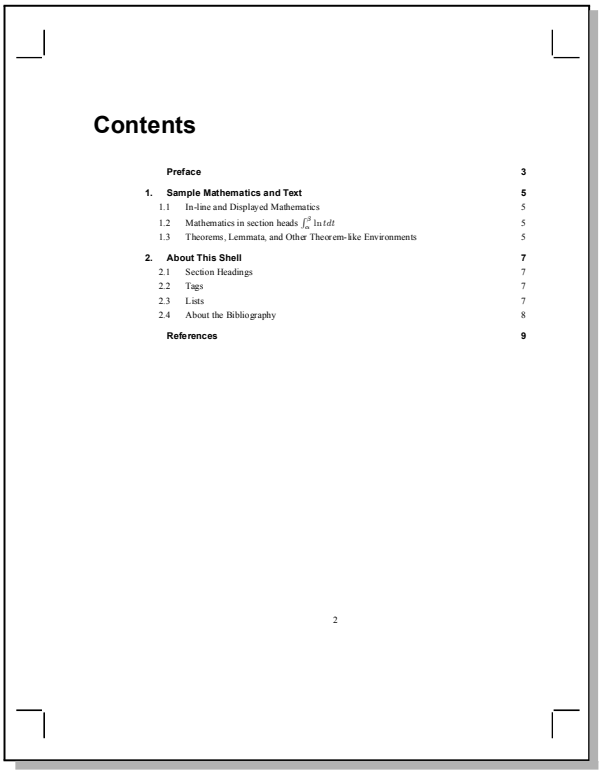
Options and Packages	Defaults
Document class options	Standard
Packages:	
calclabs	None

The shell prints crop marks on each page. It inserts blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages don't carry headers or footers and are not shown in the sample pages that follow.



A Simple Book: CalcLabs with Maple Shell

A. U. Thor



Contents

Preface 3

1. Sample Mathematics and Text 5

1.1 In-line and Displayed Mathematics 5

1.2 Mathematics in section heads $\int_a^3 \ln t dt$ 5

1.3 Theorems, Lemmata, and Other Theorem-like Environments 5

2. About This Shell 7

2.1 Section Headings 7

2.2 Tags 7

2.3 Lists 7

2.4 About the Bibliography 8

References 9

2

Preface

This is the preface and it is created using a paragraph tagged as IntroChapter. The TeX field following Contents above generates the table of contents. To ensure the correct page numbers are used, advance the number of LaTeX passes to three when compiling your document. The preface appears in the table of contents.

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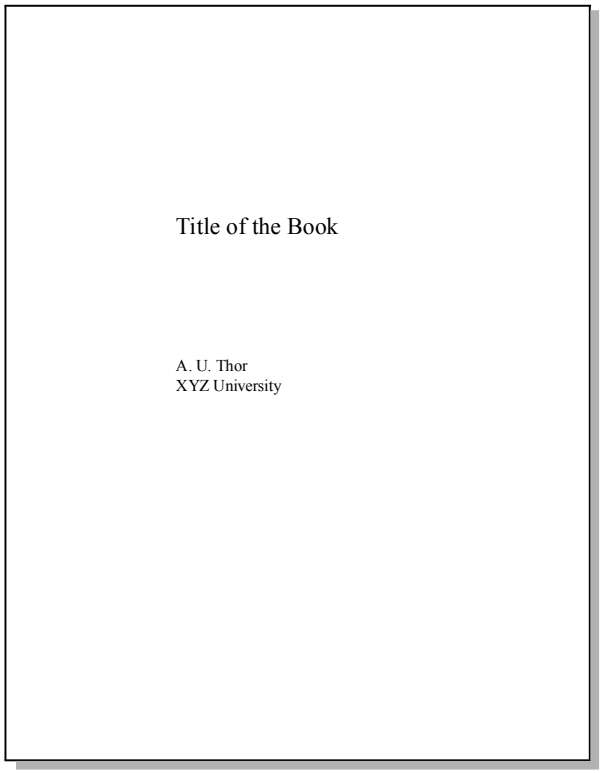
Book - Fred Szabo's Book

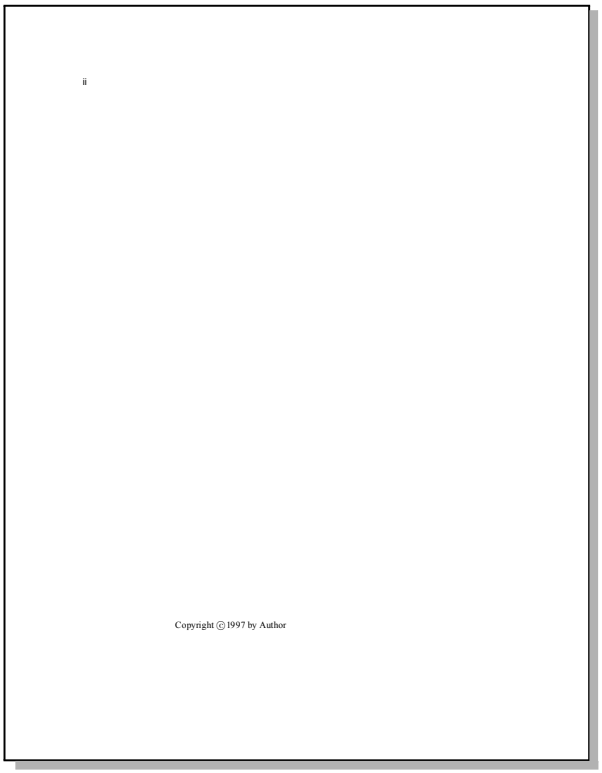
Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
amssymb	None
makeidx	None
fsbook	None

The shell inserts blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages don't carry headers or footers and are not shown in the sample pages that follow.


Title of the Book

A. U. Thor
XYZ University



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Preface

Preface Head

This is the preface and it is created using a TeX field in a paragraph by itself. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Acknowledgments

Scientific Notebook is the latest product conceived by Roger Hunter, President of *TCI Software Research*, and his staff, in a series of electronic tools developed for the teaching, learning, and applying of mathematics. *Scientific Notebook* is a natural electronic blackboard and a syntax-free interface to the *Maple* symbolic computation system. It is an extension of *Scientific WorkPlace*, a TEX-based document production system. *Scientific Notebook* is elegant, easy, and powerful. It is fun to work with and makes mathematics, both elementary and advanced, accessible to a wider audience than ever before. I feel privileged to be able to use *Scientific Notebook* to make linear algebra accessible, enjoyable, and rewarding. Thank you, Roger, for your genius, dedication, and persistence.

XYZ University *Author.*

Contents

Preface iii

Preface Head iii

Acknowledgments iii

1 Chapter Head 1

About the Shell 1

About the Preamble 1

2 Chapter Head 3

Mathematics Examples 3

More Examples 3

A Additional Material 5

Mathematical Induction 5

Sigma Notation 6

B References 9

C Index 11

1 Chapter Head

About the Shell

This style is based on the swugbk style. It involves the following modifications:

- The crop marks are turned off.
- The index prints in two columns instead of three.
- Definitions constitute an additional theorem-like environment.
- All definitions, theorems, etc. are numbered within chapters.
- A solution label is defined in the preamble.
- A Maple output environment is defined in the preamble.
- Additional white space is introduced between the rows of matrices for easier readability of fractional entries.
- Fonts and screen tags, in particular screen colors, are used to enhance readability.

About the Preamble

The preamble of this shell includes the following items:

```
"input–tcilatex"
"def"solution–"noindent–"bfseries Solution. ""–"
"newenvironment–MapleBox"–"STARTGRAYBOX"–"ENDGRAYBOX"
"renewcommand–"arraystretch"–1.25"
```

The first item loads tcilatex. The second one defines the solution label. The third one defines the environment used to display the result of an evaluation. It renders the result in yellow on screen and light grey in print. The last item inserts additional space between the rows of a matrix. It makes fractional entries more readable.

2 Chapter Head

Mathematics Examples

Relevant material

Example 2.1 ■ ***Example*** *A Suitable Problem*

Each example has a label, followed by a descriptive title. Examples are numbered within chapters.

Solution. Solutions are introduced by the solution label.

All definitions are preceded by the definition label. Definitions are numbered within chapters.

A linear equation in the variables $x_1, \ldots, x_n$ over the field $\mathbb{R}$ is an equation of the form

$$a_1x_1 + \cdots + a_nx_n = b,$$

where the coefficients $a_1, \ldots, a_n$ and the constant b are in $\mathbb{R}$.

More Examples

Example 2.2 ■ ***Example*** *A Linear System with a Unique Solution*

Use *Scientific Notebook* to find a solution for the system

$$\begin{cases} x + y - z - 4 = 0 \\ 2x - y - 3z + 6 = 0 \\ -x + y + 6z = 0 \end{cases}.$$

Solution. The following command produces a solution for the system.

This is a Maple Box showing the result of a Scientific Notebook computation.

$$\left\{ \begin{array}{l} x+y-z-4=0 \\ 2x-y-3z+6=0 \\ -x+y+6z=0 \end{array} \right. \text{, Solution is : } \left\{ x=-\tfrac{30}{13}, z=-\tfrac{16}{13}, y=\tfrac{66}{13} \right\}$$

Exercises

Note This is a note. Notes are unnumbered.

Lemma 2.1 *Here is a lemma. Lemmas are numbered within chapters.*

Corollary 2.2 *The matrix T has can be represented as a direct sum*

$$C_1 \oplus \cdots \oplus C_r,$$

of companion matrices for a unique r, with C_i being the companion matrix of the T-annihilator of $f(t)^{n_i}$. Corollaries are numbered within chapters.

Theorem 2.3 (Rational Form Theorem) *Suppose that $T : V \to V$ is a linear transformation whose minimum polynomial over the field $\Bbbk$ of the space V is the product of the distinct irreducible monic factors $p_1(t)^{n_1}, \ldots, p_1(t)^{n_{r1}}$. Then T can be represented as the direct sum*

$$(C_{11} \oplus \cdots \oplus C_{1n_1}) \oplus \cdots \oplus (C_{r1} \oplus \cdots \oplus C_{rn_r})$$

of companion matrices. Each matrix $C_{11} \oplus \cdots \oplus C_{in_i}$ is a direct sum of the form described in Lemma 2.1.

Proof. See Appendix A. ■

Theorems are numbered within chapters.

A Additional Material

Mathematical Induction

Mathematical induction is an accepted procedure for proving that certain statements concerning the natural numbers are true no matter which natural number is involved. For example, we might have a formula $\varphi(n)$ for computing the sum $1 + 2 + \cdots + n$, and we want to prove that the formula works for all n. If $n = 15$, then the formula $\varphi(15)$ computes the sum $1 + 2 + \cdots + 15$, if $n = 1001$, then $\varphi(1001)$ compute the sum $1 + 2 + \cdots + 1001$, and so on. We would *prove* the fact that we can use the formula $\varphi(n)$ in this way by using mathematical induction.

The reason behind mathematical induction is the fact that, as discussed above, the set $\mathbb{N}$ of natural numbers is characterized by Peano's axioms as the set each of whose elements is either 0 or of the form $n + 1 = (1 + 1 + \cdots + 1) + 1$. If we can prove that $\varphi(0)$ holds, and if we can deduce the validity of $\varphi(n + 1)$ from the validity of $\varphi(n)$, then the principle of mathematical induction asserts that the statement $\varphi(m)$ holds for all $m \in \mathbb{N}$.

It is clear from the given illustration, that a proof by mathematical induction consists of two parts:

1. The proof that $\varphi(0)$ holds. This part is called the *induction basis*. Depending on the specific claim expressed by the formula $\varphi(n)$, the statement may actually only make sense for $p > 0$. In that case, the induction basis is the proof that $\varphi(p)$ holds. We may also have to prove the validity of the first case or two by different means. This depends on the nature of the formula $\varphi(n)$. If the induction basis involves more than one initial proof, the induction involved is known as *complete induction*.
2. The proof that if $\varphi(q)$ holds for an arbitrary $q \in N$, then $\varphi(q+1)$ holds. This part is called the *induction step*.

Note The use of the word *basis* in mathematical induction has nothing to do with the use of the word *basis* in linear algebra. It will of course always be clear from the context which meaning of the word is intended.

The following example illustrates the two parts involved in a proof by mathematical induction. It is well-known (and proved by mathematical induction) that

$$1 + 2 + \cdots + n = \frac{n(n+1)}{2} = \varphi(n)$$

for all $n \in \mathbb{N}$. We would prove $\varphi(2)$ by observing that, indeed,

$$1 + 2 = 3 = \frac{2(2+1)}{2}.$$

We would then show how we can deduce the validity of $\varphi(q + 1)$ from the assumed validity of $\varphi(q)$:

Suppose that

$$1 + 2 + \cdots + q = \frac{q(q+1)}{2}.$$

Then

$$\begin{aligned} 1 + 2 + \cdots + q + (q+1) &= \frac{q(q+1)}{2} + (q+1) \\ &= \frac{q(q+1)}{2} + \frac{2(q+1)}{2} \\ &= \frac{(q+2)(q+1)}{2} \\ &= \frac{(q+1)(q+2)}{2}. \end{aligned}$$

The principle of mathematical induction therefore allows us to conclude that $\varphi(n)$ holds for all n. (In this case all $n \geq 2$, since the expression makes no sense for $n = 0$ or $n = 1$.)

In finite-dimensional linear algebra, statements of the form $\varphi(n)$ are usually statements asserting that a certain fact φ hold for spaces of all dimensions $n \in \mathbb{N}$. Since there is a space of dimension 0, we would have to prove that $\varphi(0)$ holds. We may also have to prove, in addition, that $\varphi(1)$ holds, if the validity of $\varphi(1)$ does not follow from that of $\varphi(0)$, given the triviality of the space $V = \{\mathbf{0}\}$. Other types of proofs in linear algebra using mathematical induction are proofs about linear combinations of arbitrary length, or polynomials of arbitrary degrees.

Sigma Notation

Another important application of mathematics induction is the definition of the "sigma notation." Arithmetical statements in linear algebra are often about sums made up of a fixed but "arbitrary" number of terms. There are two basic ways of dealing with this situation. We can either use an *ellipsis* (three dots) to represent missing elements as in $\mathbf{v}_1 + \cdots + \mathbf{v}_n$, or we can use variable subscripts and the capital sigma and write

$\sum_{i=1}^{n} \mathbf{v}_i$. Both expressions have the same meaning. The sigma notation is defined by mathematical induction.

Proposition 2.4 *If $n = 1$, then $\sum_{i=1}^{n} \mathbf{v}_i = \mathbf{v}_1$, and if $n = k + 1$, then $\sum_{i=1}^{n} \mathbf{v}_i = \left(\sum_{i=1}^{k} \mathbf{v}_i\right) + \mathbf{v}_n$.*

In this text, the expression $\sum_{i=1}^{n} \mathbf{v}_i$ is usually written less formally as "$v_1 + \cdots + v_n$" using the *ellipsis* "$\cdots$". Although the use of ellipses is avoidable in the case of $\sum_{i=1}^{n} \mathbf{v}_i$, there are many situations in linear algebra where ellipses are an essential part of the notation. For example, we frequently need to refer to *finite sequences* of vectors of unspecified length n, such as $\mathbf{v}_1, \ldots, \mathbf{v}_n$, and to *finite arrays* of elements of unspecified dimensions m and n, such as

$$\begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{m1} & \cdots & a_{mn} \end{bmatrix}.$$

In these situations, horizontal, vertical, and diagonal ellipses are used to indicate possibly missing terms.

B References

This appendix contains the references.

C Index

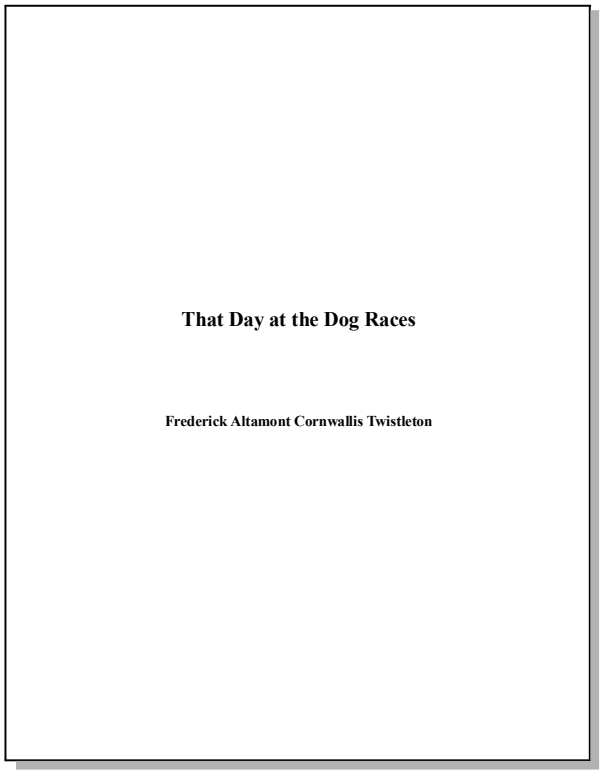
This appendix contains the index.

Book - Jonathan Lewin's Book

Document class base file: sebase.cls

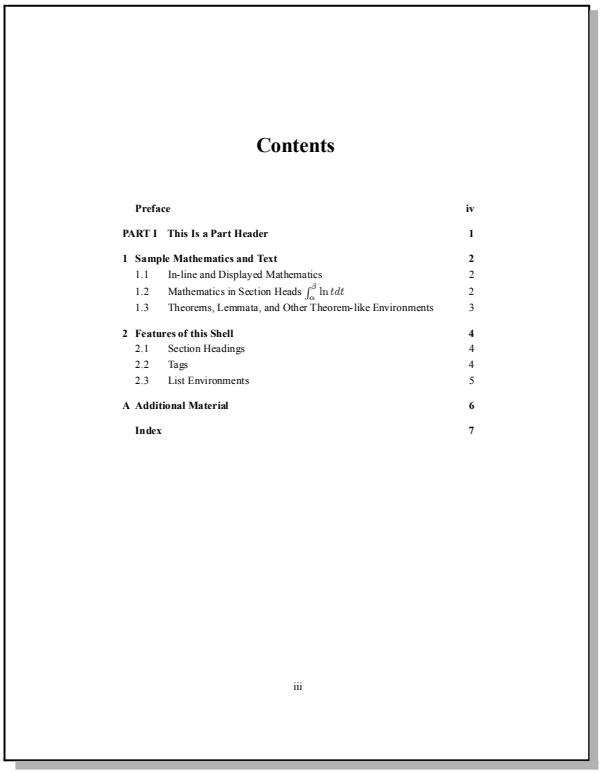
Options and Packages	Defaults
Document class options	Standard
Packages:	
makeidx	None
jlbook	None

The shell inserts blank pages to ensure that page numbering is correct. The pages are marked for removal by the publisher and are not shown in the sample pages that follow.



That Day at the Dog Races

Frederick Altamont Cornwallis Twistleton



Contents

Preface iv

PART I This Is a Part Header 1

1 Sample Mathematics and Text 2
1.1 In-line and Displayed Mathematics 2
1.2 Mathematics in Section Heads $\int_0^2 \ln t dt$ 2
1.3 Theorems, Lemmata, and Other Theorem-like Environments 3

2 Features of this Shell 4
2.1 Section Headings 4
2.2 Tags 4
2.3 List Environments 5

A Additional Material 6

Index 7

iii

Preface

This is the preface and it is created using a TeX field in a paragraph by itself. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Chapter 1
Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty, z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

1. The table of contents field at the top of this document is needed. The table of contents is called for differently in the style editor book styles.

Appendix A
Additional Material

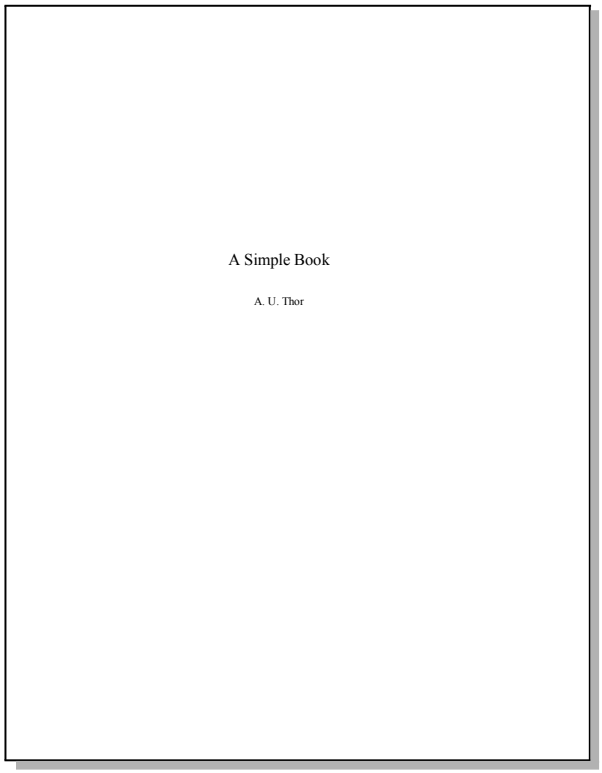
This is some additional material. The header is created using an appendix tag. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The appendix appears in the table of contents.

Book - LaTeX-like Book

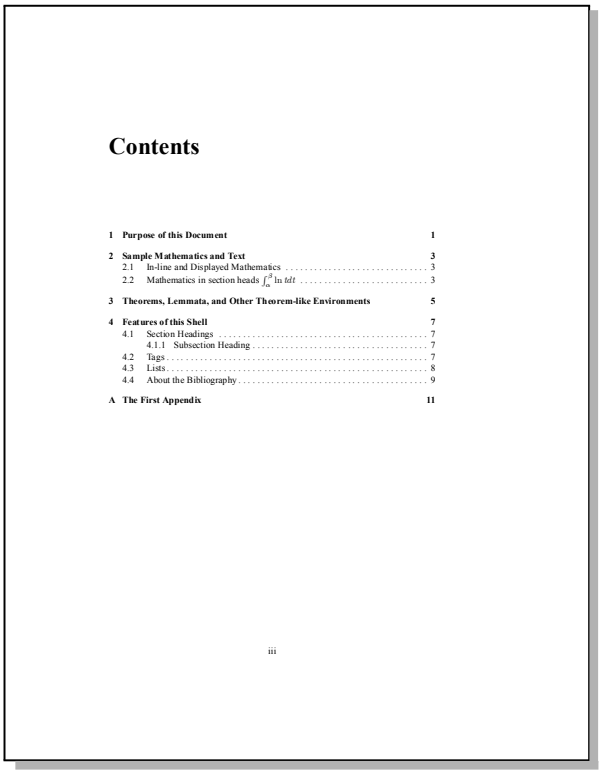
Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
selbk	None

The shell inserts blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages don't carry headers or footers and are not shown here.


A Simple Book

A. U. Thor


Contents

1 Purpose of this Document 1

2 Sample Mathematics and Text 3
2.1 In-line and Displayed Mathematics . . . 3
2.2 Mathematics in section heads $\int_a^3 \ln t dt$ . . . 3

3 Theorems, Lemmata, and Other Theorem-like Environments 5

4 Features of this Shell 7
4.1 Section Headings . . . 7
4.1.1 Subsection Heading . . . 7
4.2 Tags . . . 7
4.3 Lists . . . 8
4.4 About the Bibliography . . . 9

A The First Appendix 11

iii

Chapter 1

Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Chapter 2

Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2.2 Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Chapter 3

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{3.2}$$

Lemma 2 *Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and*

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{3.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (3.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1,\ as\ z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (3.2) by substituting $1/z$ back for z.

Lemma 3 *Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.*

Chapter 4

Features of this Shell

4.1 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

4.1.1 Subsection Heading

This text appears under a subsection heading. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page.

Subsubsection Heading This text appears under a subsubsection heading. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page.

(Subsubsubsection head:)Subsubsubsection Heading

This text appears under a subsubsubsection heading. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page.

(Subsubsubsubsection head:)Subsubsubsubsection Heading

This text appears under a subsubsubsubsection heading. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page. This is some text to fill out the page.

4.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and *CALLIGRAPHIC*. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

4.3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   (a) A numbered list item under a list item.
   The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   (b) Another numbered list item under a list item.
   i. Third level numbered list item under a list item.
   A. Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  - Second level bullet item.
    - Third level bullet item.
      - Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

4.4 About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Appendix A
The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Bibliography

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

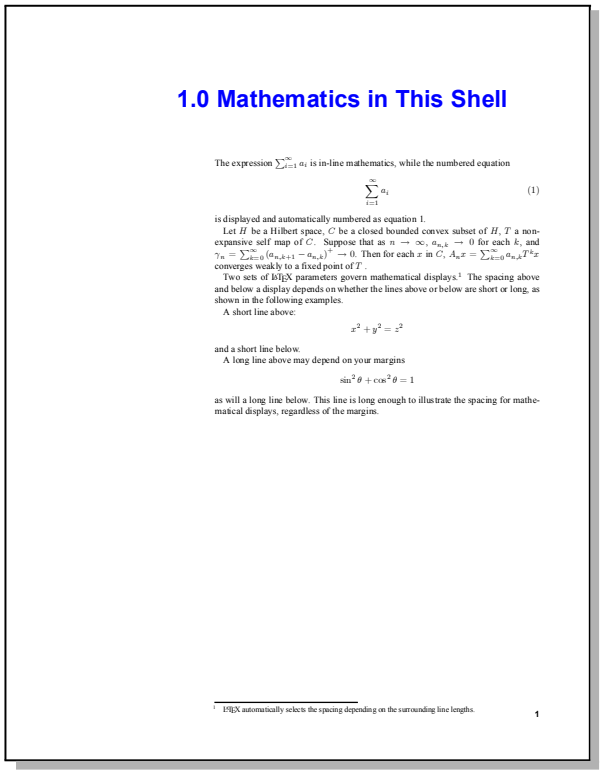
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Book - Stewart Calculus

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
float	None
SECALCUL	None

Because of production process requirements, the shell requires that all numbered elements (such as sections, equations, and list items) be numbered manually. Automatically generated numbers do not not typeset. The shell includes an extensive list of special tags, especially as related to textbook sections, exercises, instructions, and proofs.



1.0 Mathematics in This Shell

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty}(a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

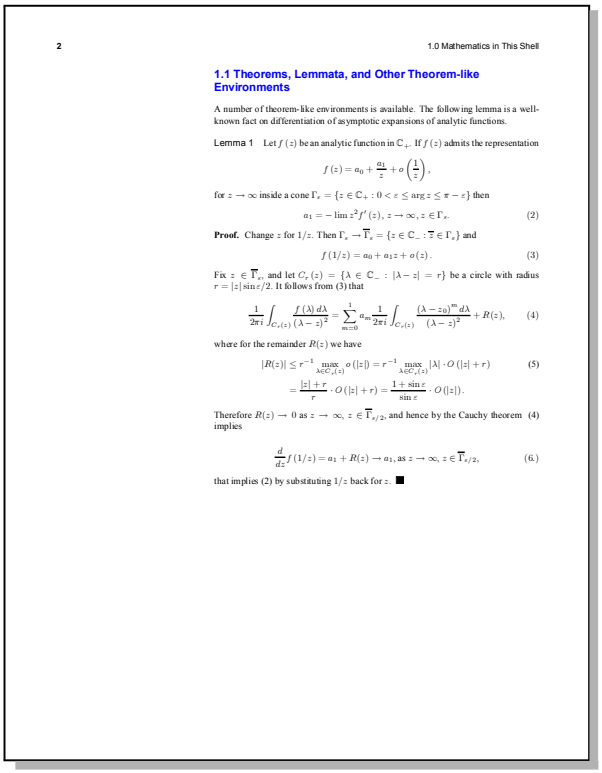
and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



1.1 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$|R(z)| \le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \tag{5}$$

$$= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|).$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2}, \tag{6.}$$

that implies (2) by substituting $1/z$ back for z. ■

2.0 Manual Numbering

In the book production process, automatic numbering causes problems because there is the chance that some editing change in the source file will change the number of a section, equation, list item, etc. This can lead to inaccuracies or missed corrections during copy-editing.

2.1 Graphing Calculator Section

Most graphing calculators and computer graphing programs can be used to graph curves defined by parametric equations. In fact, it is instructive to watch a parametric curve being drawn by a graphing calculator because the points are plotted in order as the corresponding parameter values increase.

Exercises 2.1

1–15 ■

(a) Sketch the curve represented by the parametric equations.
(b) Eliminate the parameter to find the Cartesian equation of the curve.

1. $x = 1 - t, \quad y = 2 + 3t$
2. $x = 2t - 1, \quad y = 2 - t, \quad -3 \le t \le 3$
3. $x = 3t^2, \quad y = 2 + 5t, \quad 0 \le t \le 2$
4. $x = 2t - 1, \quad y = t^2 - 1$
5. $x = \sqrt{t}, \quad y = 1 - t$
6. $x = t^2, \quad y = t^3$
7. $x = \sin\theta, \quad y = \cos\theta, \quad 0 \le \theta \le \pi$
8. $x = 3\cos\theta, \quad y = 2\sin\theta, \quad 0 \le \theta \le 2\pi$
9. $x = \sin^2\theta, \quad y = \cos^2\theta$
10. $x = \sec\theta, \quad y = \tan\theta, \quad -\pi/2 < \theta < \pi/2$
11. $x = 2t - 1, \quad y = t^2 - 1$
12. $x = \sqrt{t}, \quad y = 1 - t$
13. $x = t^2, \quad y = t^3$
14. $x = \sin\theta, \quad y = \cos\theta, \quad 0 \le \theta \le \pi$
15. $x = 3\cos\theta, \quad y = 2\sin\theta, \quad 0 \le \theta \le 2\pi$

3.0 Headings and Tags

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

3.1 Section About Tags

Use the Section tag for major sections like this one. These text tags are available. You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags fraktur, $\mathbb{BLACKBOARD\ BOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags$_{\text{tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE huge and Huge}}$.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations. Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

3.1.1 Subsection

This is some harmless text under a subsection.

3.1.1.1 Subsubsection

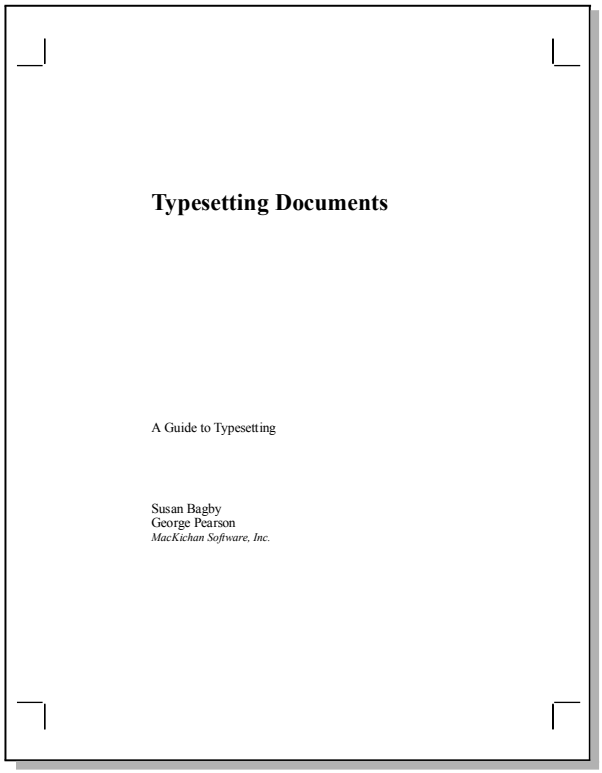
This is some harmless text under a subsubsection.

Book - User's Guide

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
swugbk	None

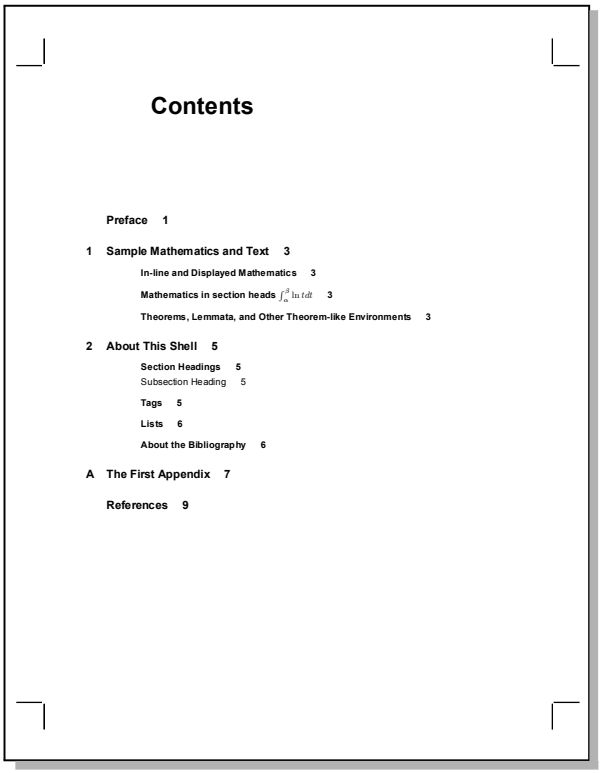
The shell prints crop marks on each page. It inserts blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages don't carry headers and are not shown in the sample pages that follow.



Typesetting Documents

A Guide to Typesetting

Susan Bagby
George Pearson
MacKichan Software, Inc.



Contents

Preface 1

1 Sample Mathematics and Text 3

In-line and Displayed Mathematics 3

Mathematics in section heads $\int_{\infty}^{3} \ln t\,dt$ 3

Theorems, Lemmata, and Other Theorem-like Environments 3

2 About This Shell 5

Section Headings 5

Subsection Heading 5

Tags 5

Lists 6

About the Bibliography 6

A The First Appendix 7

References 9

1 Sample Mathematics and Text

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x - \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a ?xed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in section heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause dif?culties in typesetting styles with running headers or table of contents entries.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$ and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from () that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem () implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies () by substituting $1/z$ back for z. ■

2 About This Shell

Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

Subsection Heading

This text appears under a subsection heading.

Subsubsection Heading

This text appears under a subsubsection heading.

Subsubsubsection Heading

This text appears under a subsubsubsection heading.
(Subsubsubsubsection head)Subsubsubsubsection Heading
This text appears under a subsubsubsubsection heading.

Tags

You can apply the logical markup tag *Emphasized*.
You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.
You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and CALLIGRAPHIC. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.
You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge
Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

References

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents.

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated ?uid oxygen drop behavior in ?uid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for ?uid-phase equilibrium, Prentice -Hall, Inc., 1986

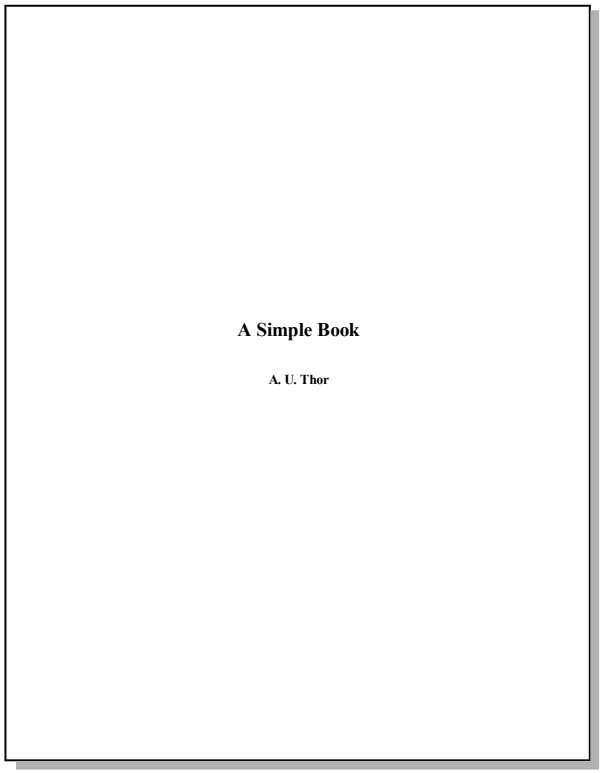
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Book #1

Document class base file: sebase.cls

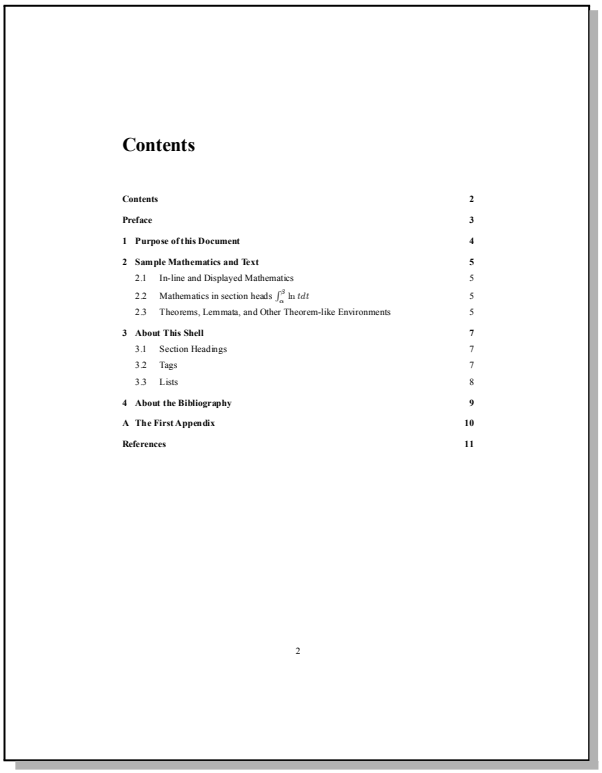
Options and Packages	Defaults
Document class options	Standard
Packages:	
sebook1	None

The shell produces documents with simple formatting appropriate for books. New chapters begin on the next consecutive page. Section headings appear at the left margin. Running headers and page numbers are centered at the top and bottom of the page, respectively. The shell has theorem environments.



A Simple Book

A. U. Thor



Contents

Contents 2

Preface 3

1 Purpose of this Document 4

2 Sample Mathematics and Text 5

2.1 In-line and Displayed Mathematics 5

2.2 Mathematics in section heads $\int_a^3 \ln t dt$ 5

2.3 Theorems, Lemmata, and Other Theorem-like Environments 5

3 About This Shell 7

3.1 Section Headings 7

3.2 Tags 7

3.3 Lists 8

4 About the Bibliography 9

A The First Appendix 10

References 11

2

Preface

This is the preface and it is created using a TeX field in a paragraph by itself. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Chapter 1
Purpose of this Document

This short sample document illustrates the typeset appearance of in-line and displayed mathematics in documents. It also illustrates five levels of section headings and three kinds of lists. Finally, the document includes entries for a manual bibliography and an appendix.

Chapter 2
Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2.2 Mathematics in section heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

2.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Lemma 2 *Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and*

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (2.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2.2) by substituting $1/z$ back for z.

Chapter 3
About This Shell

3.1 Section Headings

Use the Section tag for major sections, such as the one just above. Four additional heading levels are available, as described below.

3.1.1 Subsection Heading

This text appears under a subsection heading.

3.1.1.1 Subsubsection Heading This text appears under a subsubsection heading.

(Subsubsubsection head:)Subsubsubsection Heading
This text appears under a subsubsubsection heading.
(Subsubsubsubsection head:)Subsubsubsubsection Heading
This text appears under a subsubsubsubsection heading.

3.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and Typewriter.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and *CALLIGRAPHIC*. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\text{tiny}}$, $_{\text{scriptsize}}$, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

3.3 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

1. Numbered list item 1.
2. Numbered list item 2.
   a. A numbered list item under a list item.
      The typeset appearance for this level is often different from the screen appearance. The typeset appearance often uses parentheses around the level indicator.
   b. Another numbered list item under a list item.
      i. Third level numbered list item under a list item.
         (a). Fourth and final level of numbered list items allowed.

- Bullet item 1.
- Bullet item 2.
  – Second level bullet item.
    ∗ Third level bullet item.
      · Fourth and final level bullet item.

Description List Each description list item has a lead-in followed by the item. Double-click the lead-in box to enter or customize the text of the lead-in.

Bunyip Mythical beast of Australian Aboriginal legends.

Chapter 4
About the Bibliography

Following the text of this article is a short manual bibliography. This sample bibliography has no relationship to the previous text, but it shows sample citations such as [4], [5] and [6]. You can also have multiple citations appear together. Here is an example: [2, 3, 4].

Appendix A
The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

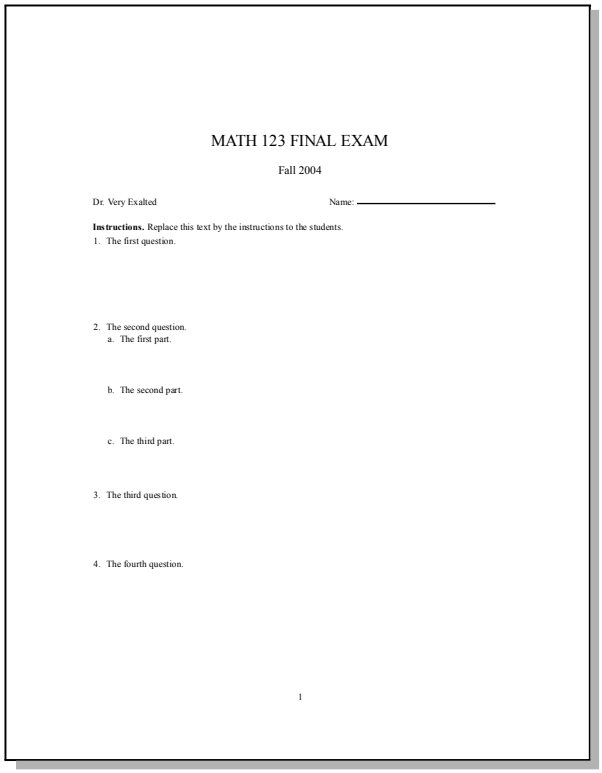
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Exam #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seexm1	None

The shell produces simple exam documents.



MATH 123 FINAL EXAM

Fall 2004

Dr. Very Exalted Name: _____

Instructions. Replace this text by the instructions to the students.

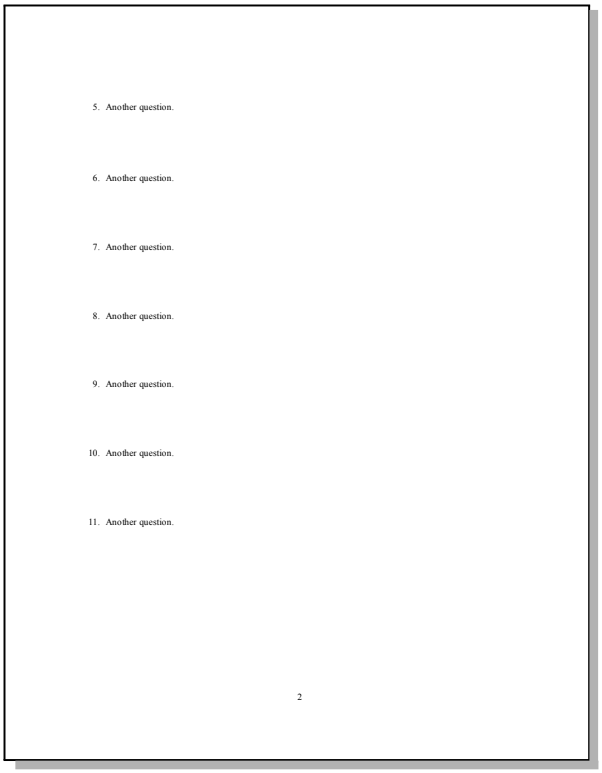
1. The first question.

2. The second question.
   a. The first part.
   b. The second part.
   c. The third part.

3. The third question.

4. The fourth question.

1



5. Another question.

6. Another question.

7. Another question.

8. Another question.

9. Another question.

10. Another question.

11. Another question.

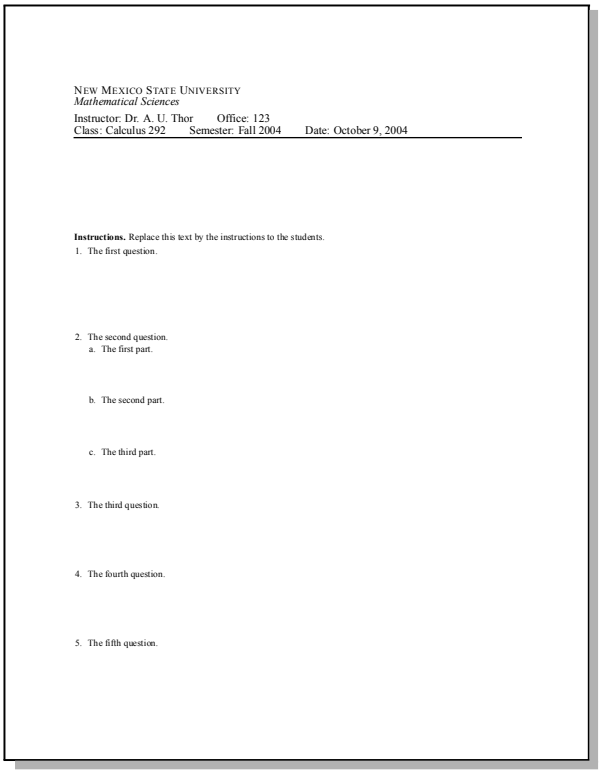
2

Exam Builder Shell

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
exmbldr2	None

Unlike most Style Editor shells, this shell includes front matter. The fields include institution, department, instructor, office number, class, semester, date of exam, title, and number of pages. When you insert the TitlePage tag on a blank line as the first thing in the body of the document, the information is printed at the top of the first page of the exam.



NEW MEXICO STATE UNIVERSITY
Mathematical Sciences
Instructor: Dr. A. U. Thor Office: 123
Class: Calculus 292 Semester: Fall 2004 Date: October 9, 2004

Instructions. Replace this text by the instructions to the students.
1. The first question.

2. The second question.
   a. The first part.

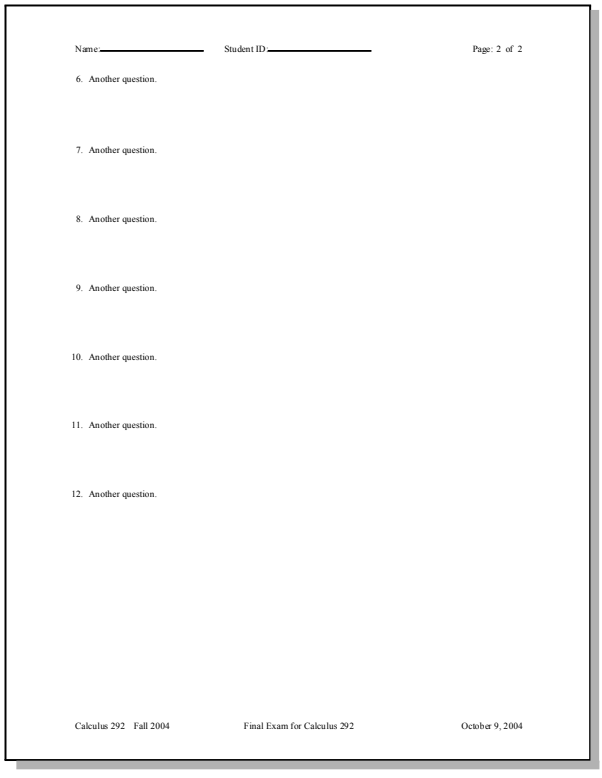
   b. The second part.

   c. The third part.

3. The third question.

4. The fourth question.

5. The fifth question.



Name: _____ Student ID: _____ Page: 2 of 2

6. Another question.

7. Another question.

8. Another question.

9. Another question.

10. Another question.

11. Another question.

12. Another question.

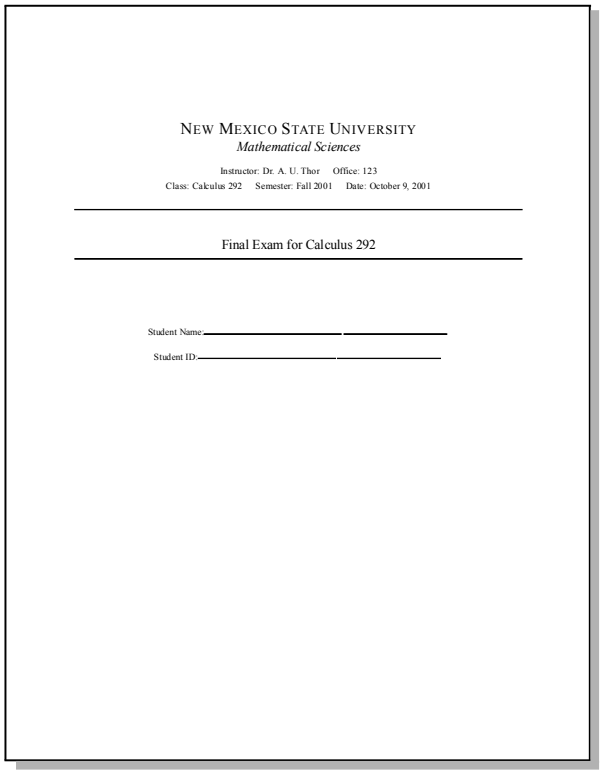
Calculus 292 Fall 2004 Final Exam for Calculus 292 October 9, 2004

Exam Builder with Title Page

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
exmbldr1	None

Unlike most Style Editor shells, this shell includes front matter. The fields include institution, department, instructor, office number, class, semester, date of exam, title, and number of pages. When you insert the TitlePage tag as the first thing in the body of the document, the front matter is printed on a separate title page.



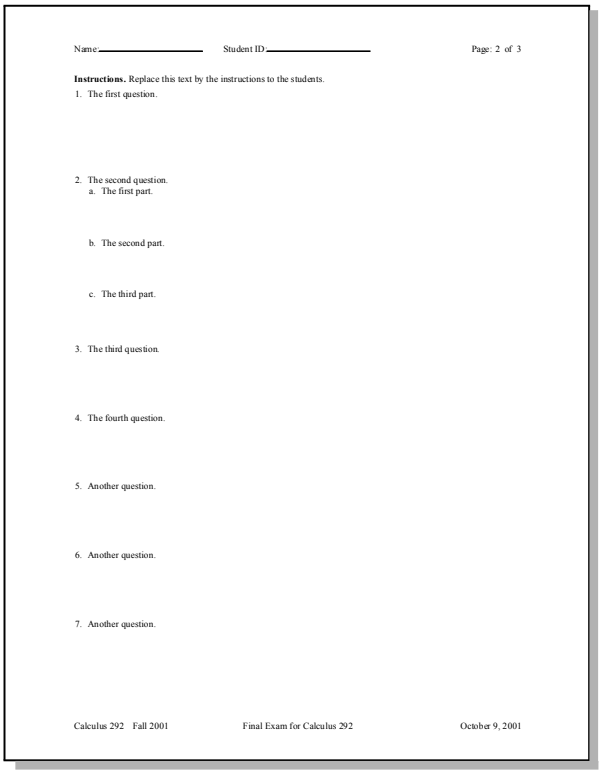
NEW MEXICO STATE UNIVERSITY
Mathematical Sciences

Instructor: Dr. A. U. Thor Office: 123
Class: Calculus 292 Semester: Fall 2001 Date: October 9, 2001

Final Exam for Calculus 292

Student Name:

Student ID:



Name: Student ID: Page: 2 of 3

Instructions. Replace this text by the instructions to the students.

1. The first question.

2. The second question.
   a. The first part.
   b. The second part.
   c. The third part.

3. The third question.

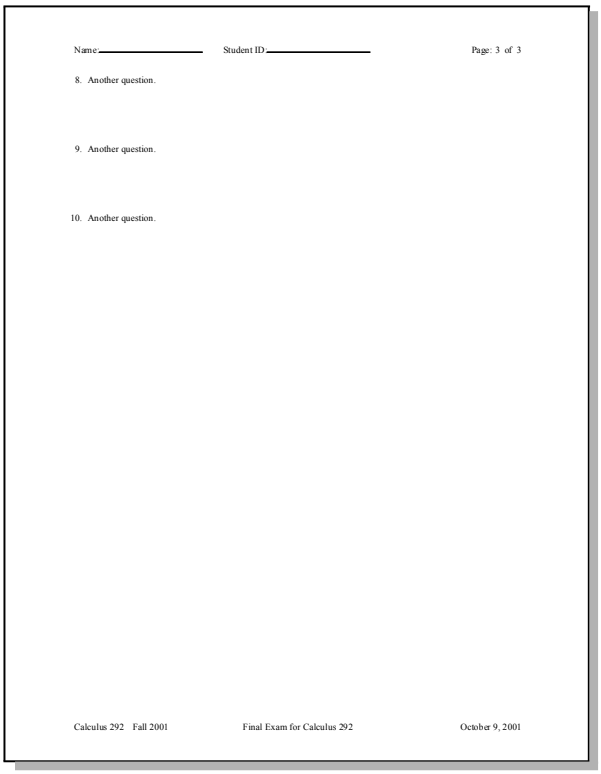
4. The fourth question.

5. Another question.

6. Another question.

7. Another question.

Calculus 292 Fall 2001 Final Exam for Calculus 292 October 9, 2001



Name:_____ Student ID:_____ Page: 3 of 3

8. Another question.

9. Another question.

10. Another question.

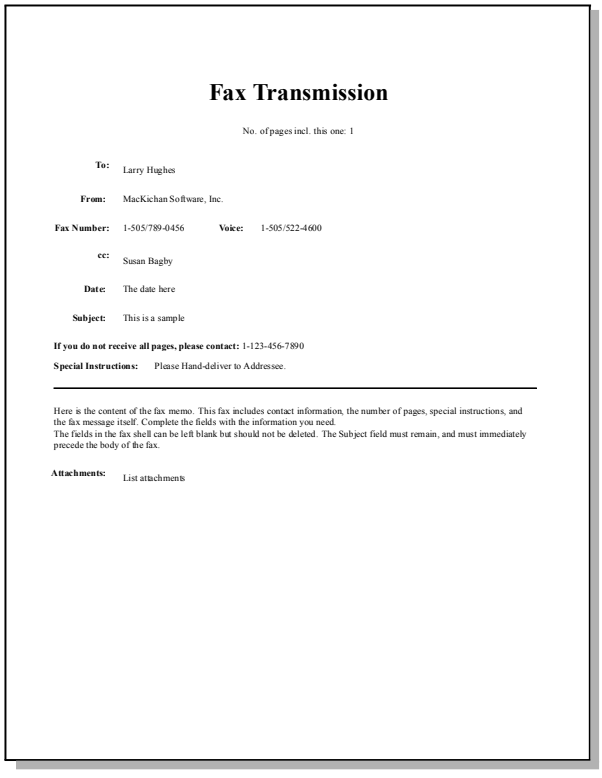
Calculus 292 Fall 2001 Final Exam for Calculus 292 October 9, 2001

Fax #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sefax1	None

The shell includes front matter fields in the body of the document for entering the number of pages; name, address, and telephone of the sender; copies and attachments; name of recipient; date; and subject.



Fax Transmission

No. of pages incl. this one: 1

To: Larry Hughes

From: MacKichan Software, Inc.

Fax Number: 1-505/789-0456 **Voice:** 1-505/522-4600

cc: Susan Bagby

Date: The date here

Subject: This is a sample

If you do not receive all pages, please contact: 1-123-456-7890

Special Instructions: Please Hand-deliver to Addressee.

Here is the content of the fax memo. This fax includes contact information, the number of pages, special instructions, and the fax message itself. Complete the fields with the information you need.
The fields in the fax shell can be left blank but should not be deleted. The Subject field must remain, and must immediately precede the body of the fax.

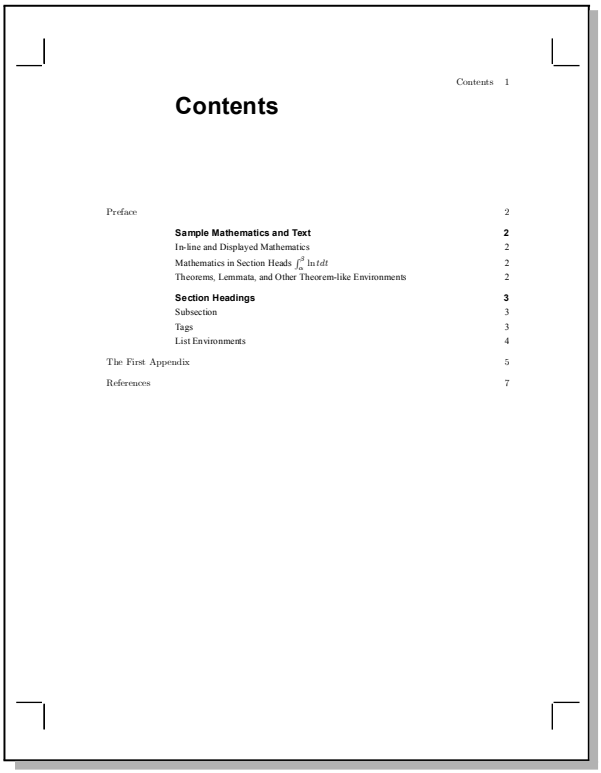
Attachments: List attachments

General - Scientific Word Readme

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
readme	None

The shell prints crop marks on each page. It inserts blank pages where necessary to ensure that new chapters begin on odd-numbered pages. Blank pages don't carry headers or footers and are not shown in the sample pages that follow.



Contents 1

Contents

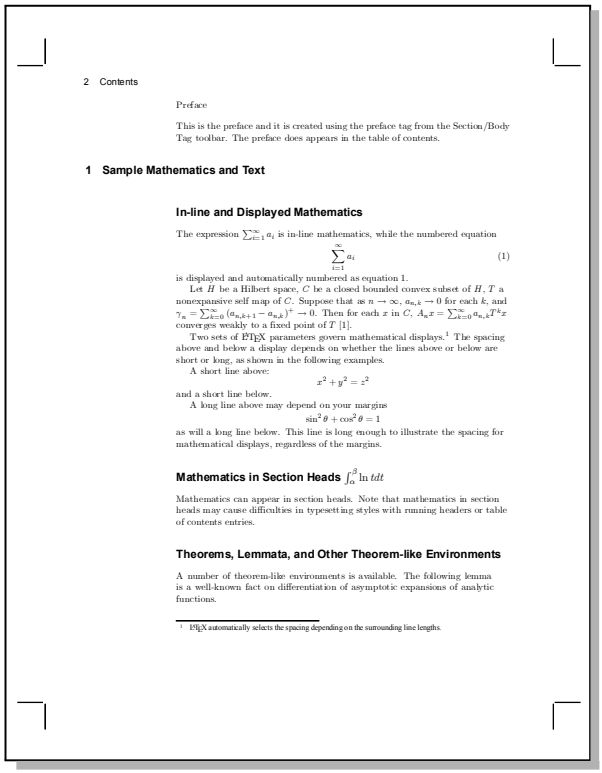
Preface 2

Sample Mathematics and Text **2**
In-line and Displayed Mathematics 2
Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ 2
Theorems, Lemmata, and Other Theorem-like Environments 2

Section Headings **3**
Subsection 3
Tags 3
List Environments 4

The First Appendix 5

References 7



Preface

This is the preface and it is created using the preface tag from the Section/Body Tag toolbar. The preface does appears in the table of contents.

1 Sample Mathematics and Text

In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \qquad (2)$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \qquad (3)$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \qquad (4)$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty;\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

(Chapter head:)Features of this Shell

2 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

(Subsubsubsubsubsection head:)Subsubsubsubsubsection

This is some harmless text under a subsubsubsubsubsection.

Tags

You can apply the logical markup tag Emphasized.

You can apply the visual markup tags Bold, Italics, Roman, Sans Serif, Slanted, Small Caps, and Typewriter.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and CALLIGRAPHIC. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations. Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

The buck stops here. Harry Truman

Ask not what your country can do for you; ask what you can do for your country. John F Kennedy

I am not a crook. Richard Nixon

It's no exaggeration to say the undecideds could go one way or another. George Bush

List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   a. A list item under a list item.
      The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   b. Just another list item under a list item.
      i Third level list item under a list item.
      (1) Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to

change it.

Bunyip Mythical beast of Australian Aboriginal legends.

Solutions to Some Problems

Here are the solutions to the problems in this chapter.

1. $x = 1 - t,\quad y = 2 + 3t$
2. $x = 2t - 1,\quad y = 2 - t,\quad -3 \le t \le 3$
3. $x = 3t^2,\quad y = 2 + 5t,\quad 0 \le t \le 2$
4. $x = 2t - 1,\quad y = t^2 - 1$
5. $x = \sqrt{t},\quad y = 1 - t$
6. $x = t^2,\quad y = t^3$
7. $x = \sin\theta,\quad y = \cos\theta,\quad 0 \le \theta \le \pi$
8. $x = 3\cos\theta,\quad y = 2\sin\theta,\quad 0 \le \theta \le 2\pi$
9. $x = \sin^2\theta,\quad y = \cos^2\theta$
10. $x = \sec\theta,\quad y = \tan\theta,\quad -\pi/2 < \theta < \pi/2$

The First Appendix

Subsequent appendices can be created using the Section tag.

References

[1] N. Dunford and J. Schwartz, Functional Analysis, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", Int. J. Heat Mass Transfer, 1998a, 41, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", Int. J. Heat Mass Transfer, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., Molecular Theory of Gases and Liquids, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

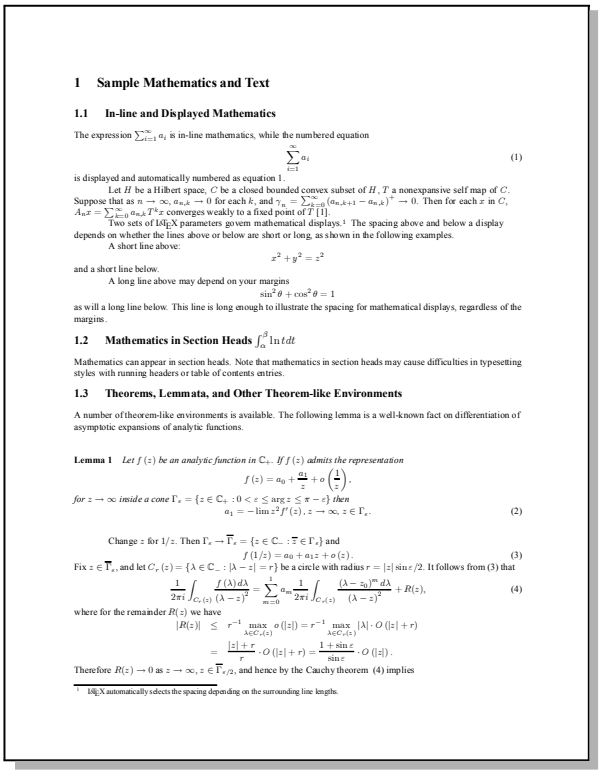
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

General - Simple WYSIWYG

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
wysiwyg	None

Documents produced by this shell have no front matter. They have a simple format with somewhat narrow margins and no page numbers. Headings are left-justified. The shell contains theorem environments.



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$$\sin^2\theta + \cos^2\theta = 1$$

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1.3 Theorems, Lemmata, and Other Theorem-like Environments

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

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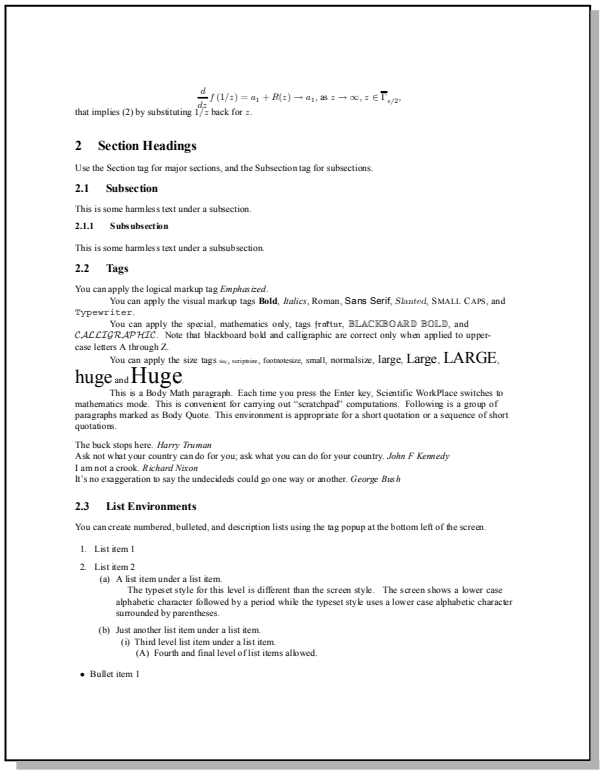
where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty, z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.



$$\frac{d}{d\frac{1}{z}} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z.

2 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1 Subsection

This is some harmless text under a subsection.

2.1.1 Subsubsection

This is some harmless text under a subsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and CALLIGRAPHIC. Note that blackboard bold and calligraphic are correct only when applied to upper-case letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge

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The buck stops here. *Harry Truman*
Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
I am not a crook. *Richard Nixon*
It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3 List Environments

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1. List item 1
2. List item 2
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   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   (b) Just another list item under a list item.
      (i) Third level list item under a list item.
         (A) Fourth and final level of list items allowed.

- Bullet item 1

- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Descrip. List
: Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip
: Mythical beast of Australian Aboriginal legends.

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer,* in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Letter #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
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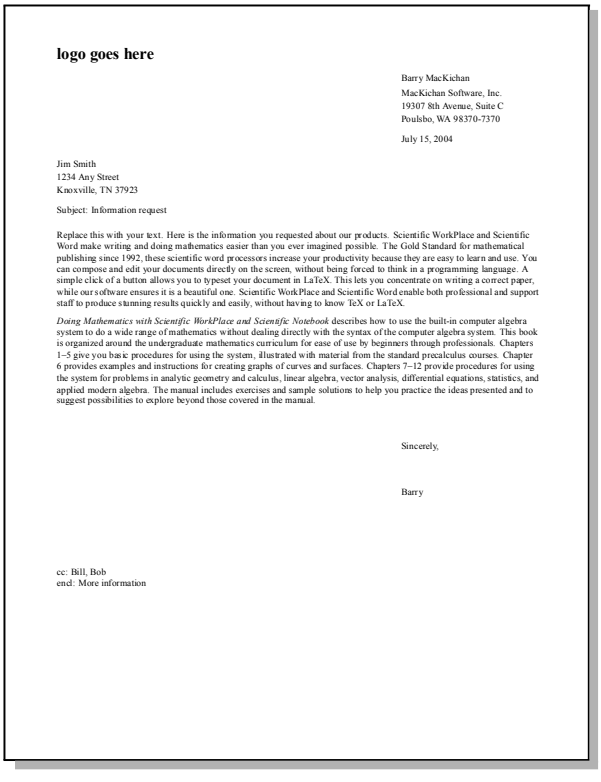
selet1	None

The shell includes front matter fields in the body of the document for entering a logo, the address of the sender and the recipient, the closing and name of the sender, the date, the subject, and copy and enclosure information.



logo goes here

Barry MacKichan
MacKichan Software, Inc.
19307 8th Avenue, Suite C
Poulsbo, WA 98370-7370

July 15, 2004

Jim Smith
1234 Any Street
Knoxville, TN 37923

Subject: Information request

Replace this with your text. Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Sincerely,

Barry

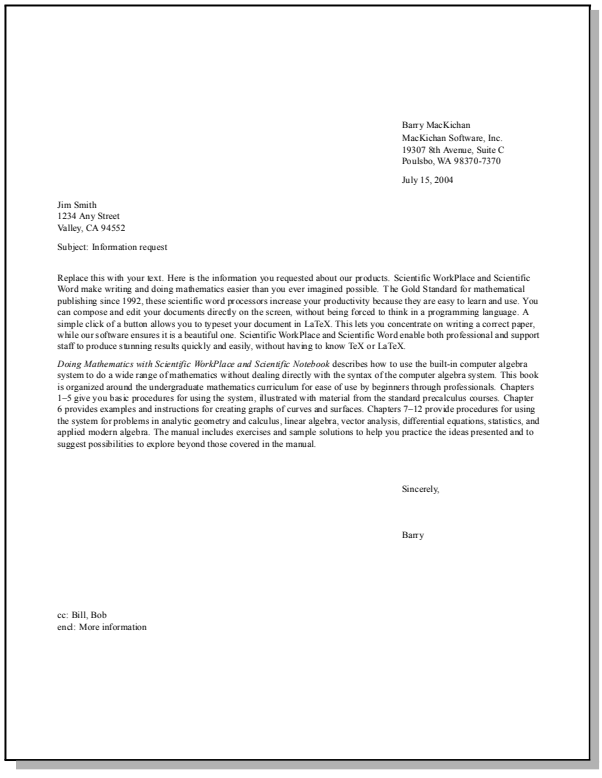
cc: Bill, Bob
encl: More information

Letter #2

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
selet2	None

The shell includes front matter fields in the body of the document for entering the address of the sender and the recipient, the closing and name of the sender, the date, the subject, and copy and enclosure information.



Barry MacKichan
MacKichan Software, Inc.
19307 8th Avenue, Suite C
Poulsbo, WA 98370-7370

July 15, 2004

Jim Smith
1234 Any Street
Valley, CA 94552

Subject: Information request

Replace this with your text. Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

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Sincerely,

Barry

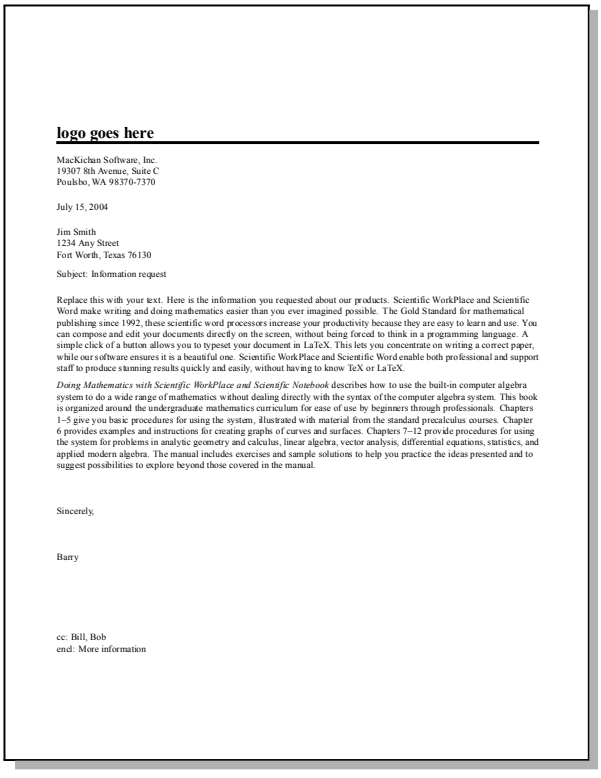
cc: Bill, Bob
encl: More information

Letter #3

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
selet3	None

The shell includes front matter fields in the body of the document for entering a logo, the address of the sender and the recipient, the closing and name of the sender, the date, the subject, and copy and enclosure information.



logo goes here

MacKichan Software, Inc.
19307 8th Avenue, Suite C
Poulsbo, WA 98370-7370

July 15, 2004

Jim Smith
1234 Any Street
Fort Worth, Texas 76130

Subject: Information request

Replace this with your text. Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Sincerely,

Barry

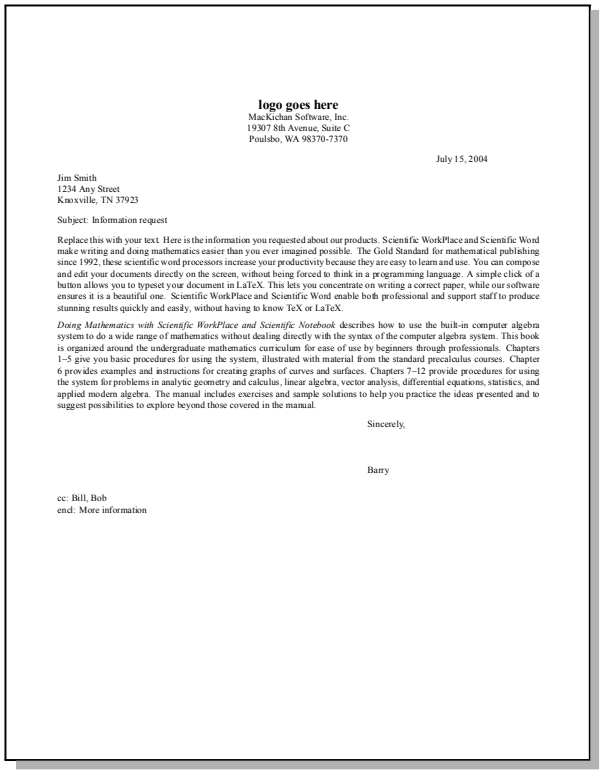
cc: Bill, Bob
encl: More information

Letter #4

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
selet4	None

The shell includes front matter fields in the body of the document for entering a logo, the address of the sender and the recipient, the closing and name of the sender, the date, the subject, and copy and enclosure information.



logo goes here
MacKichan Software, Inc.
19307 8th Avenue, Suite C
Poulsbo, WA 98370-7370

July 15, 2004

Jim Smith
1234 Any Street
Knoxville, TN 37923

Subject: Information request

Replace this with your text. Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Doing Mathematics with Scientific WorkPlace and Scientific Notebook describes how to use the built-in computer algebra system to do a wide range of mathematics without dealing directly with the syntax of the computer algebra system. This book is organized around the undergraduate mathematics curriculum for ease of use by beginners through professionals. Chapters 1–5 give you basic procedures for using the system, illustrated with material from the standard precalculus courses. Chapter 6 provides examples and instructions for creating graphs of curves and surfaces. Chapters 7–12 provide procedures for using the system for problems in analytic geometry and calculus, linear algebra, vector analysis, differential equations, statistics, and applied modern algebra. The manual includes exercises and sample solutions to help you practice the ideas presented and to suggest possibilities to explore beyond those covered in the manual.

Sincerely,

Barry

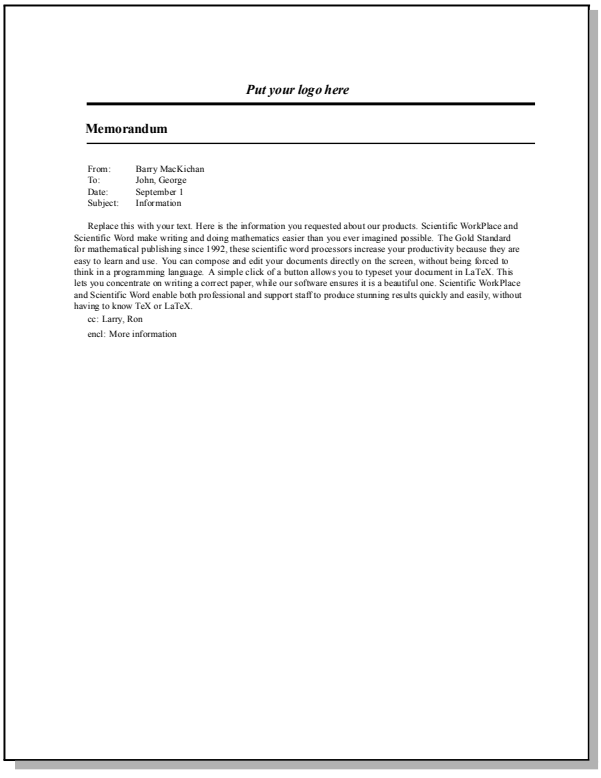
cc: Bill, Bob
encl: More information

Memo #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
semem1	None

The shell includes front matter fields in the body of the document for entering a logo and standard memo fields: the name of the sender and the recipient, the date, the subject, and copy and enclosure information.



Put your logo here

Memorandum

From: Barry MacKichan
To: John, George
Date: September 1
Subject: Information

Replace this with your text. Here is the information you requested about our products. Scientific WorkPlace and Scientific Word make writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, these scientific word processors increase your productivity because they are easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace and Scientific Word enable both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

cc: Larry, Ron

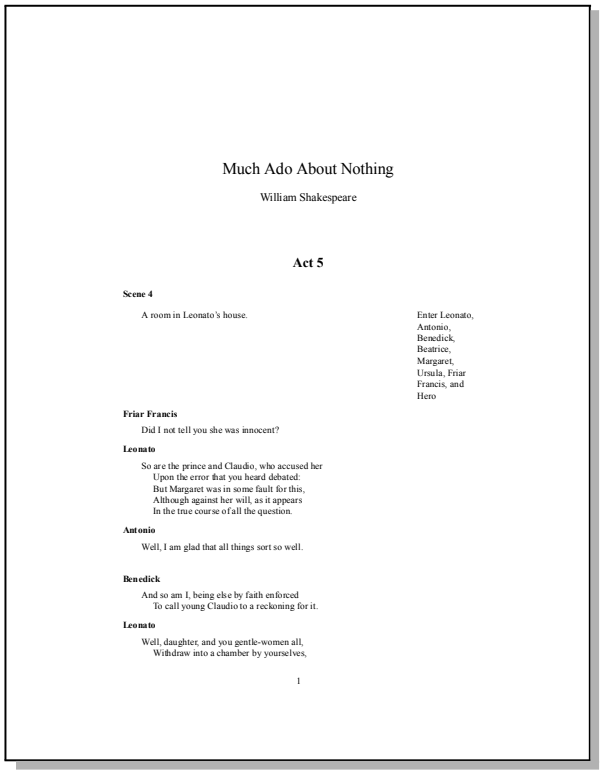
encl: More information

Play

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seplay	None

Unlike most Style Editor shells, the Play shell includes front matter fields for the title, author, and date of the play. Tags in the body of the document designate stage directions, entrances, and lines in verse. Additional tags indicate act and scene numbers and character dialog box.



Much Ado About Nothing

William Shakespeare

Act 5

Scene 4

A room in Leonato's house. Enter Leonato, Antonio, Benedick, Beatrice, Margaret, Ursula, Friar Francis, and Hero

Friar Francis

Did I not tell you she was innocent?

Leonato

So are the prince and Claudio, who accused her
Upon the error that you heard debated:
But Margaret was in some fault for this,
Although against her will, as it appears
In the true course of all the question.

Antonio

Well, I am glad that all things sort so well.

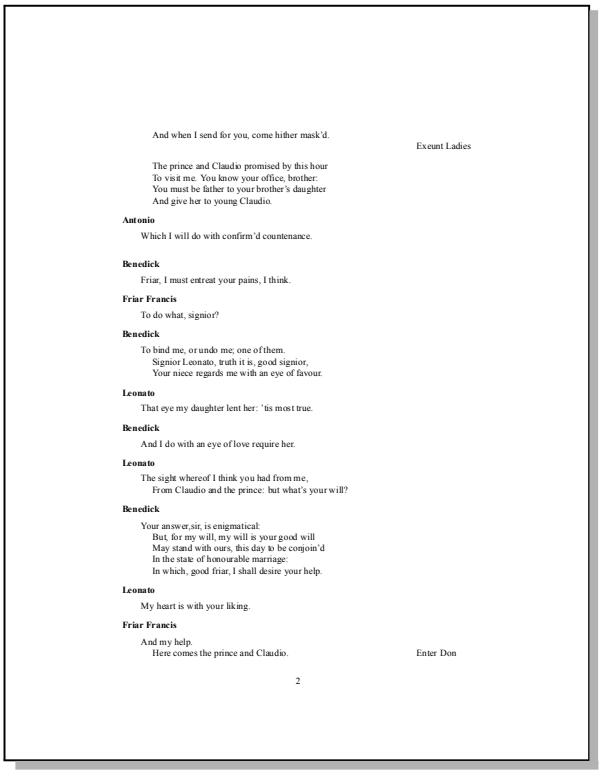
Benedick

And so am I, being else by faith enforced
To call young Claudio to a reckoning for it.

Leonato

Well, daughter, and you gentle-women all,
Withdraw into a chamber by yourselves,

1



And when I send for you, come hither mask'd.
Exeunt Ladies

The prince and Claudio promised by this hour
To visit me. You know your office, brother:
You must be father to your brother's daughter
And give her to young Claudio.

Antonio

Which I will do with confirm'd countenance.

Benedick

Friar, I must entreat your pains, I think.

Friar Francis

To do what, signior?

Benedick

To bind me, or undo me; one of them.
Signior Leonato, truth it is, good signior,
Your niece regards me with an eye of favour.

Leonato

That eye my daughter lent her: 'tis most true.

Benedick

And I do with an eye of love require her.

Leonato

The sight whereof I think you had from me,
From Claudio and the prince: but what's your will?

Benedick

Your answer, sir, is enigmatical:
But, for my will, my will is your good will
May stand with ours, this day to be conjoin'd
In the state of honourable marriage:
In which, good friar, I shall desire your help.

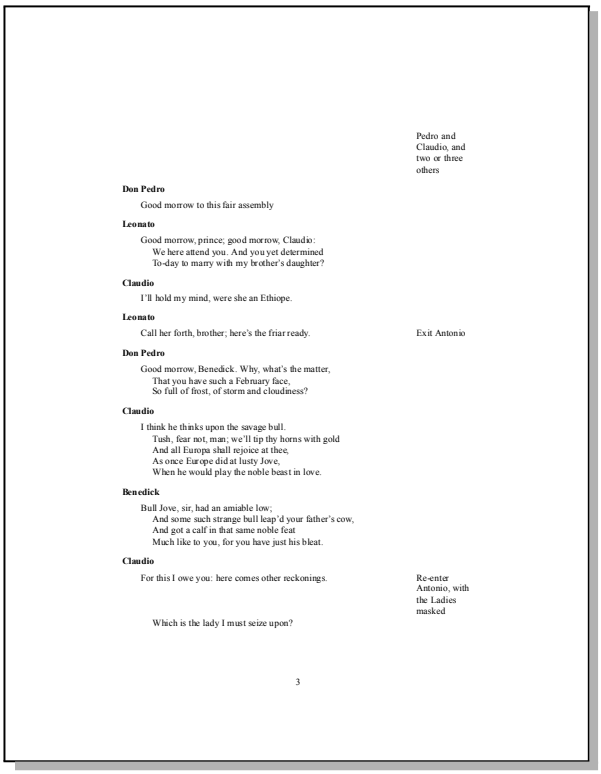
Leonato

My heart is with your liking.

Friar Francis

And my help.
Here comes the prince and Claudio. Enter Don

2



Pedro and Claudio, and two or three others

Don Pedro

Good morrow to this fair assembly

Leonato

Good morrow, prince; good morrow, Claudio:
We here attend you. And you yet determined
To-day to marry with my brother's daughter?

Claudio

I'll hold my mind, were she an Ethiope.

Leonato

Call her forth, brother; here's the friar ready. Exit Antonio

Don Pedro

Good morrow, Benedick. Why, what's the matter,
That you have such a February face,
So full of frost, of storm and cloudiness?

Claudio

I think he thinks upon the savage bull.
Tush, fear not, man; we'll tip thy horns with gold
And all Europa shall rejoice at thee,
As once Europe did at lusty Jove,
When he would play the noble beast in love.

Benedick

Bull Jove, sir, had an amiable low;
And some such strange bull leap'd your father's cow,
And got a calf in that same noble feat
Much like to you, for you have just his bleat.

Claudio

For this I owe you: here comes other reckonings. Re-enter Antonio, with the Ladies masked

Which is the lady I must seize upon?

Press Release

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sepress	None

The shell includes front matter fields in the body of the document for entering the name and address of the sender, the title of the press release, and copy and enclosure information.

PRESS RELEASE

MacKichan Software, Inc.
19307 8th Avenue, Suite C
Poulsbo, WA 98370-7370

FOR IMMEDIATE RELEASE

Title of the Press Release

Scientific WorkPlace makes writing and doing mathematics easier than you ever imagined possible. The Gold Standard for mathematical publishing since 1992, this scientific word processor increases your productivity because it is easy to learn and use. You can compose and edit your documents directly on the screen, without being forced to think in a programming language. A simple click of a button allows you to typeset your document in LaTeX. This lets you concentrate on writing a correct paper, while our software ensures it is a beautiful one. Scientific WorkPlace enables both professional and support staff to produce stunning results quickly and easily, without having to know TeX or LaTeX.

Getting Started with Scientific WorkPlace, Scientific Word, and Scientific Notebook describes how to install and activate these three products, and how to get started creating your own documents. The chapters cover installation; creating, revising, saving, and printing a simple document. Additional chapters cover how to enter text and mathematics, format using tags, preview and print, using hyperlinks, and customize the program. Additionally, the manual describes how to compute and plot with the integrated computer algebra system in Scientific WorkPlace and Scientific Notebook. Final chapters address how to typeset your documents and how to take advantage of automatic numbering, indexing, and cross-referencing in Scientific WorkPlace and Scientific Word, and how to get help when you need it.

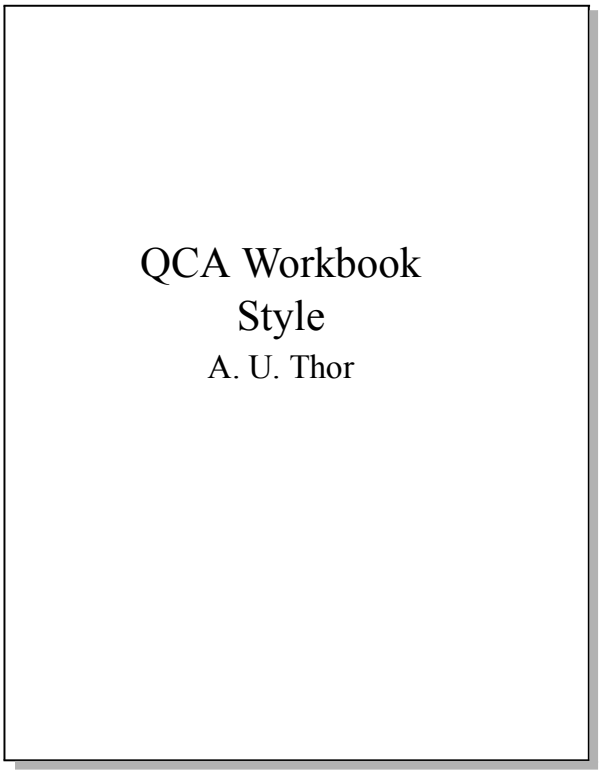
cc: Carbon Copy
encl: Enclosures

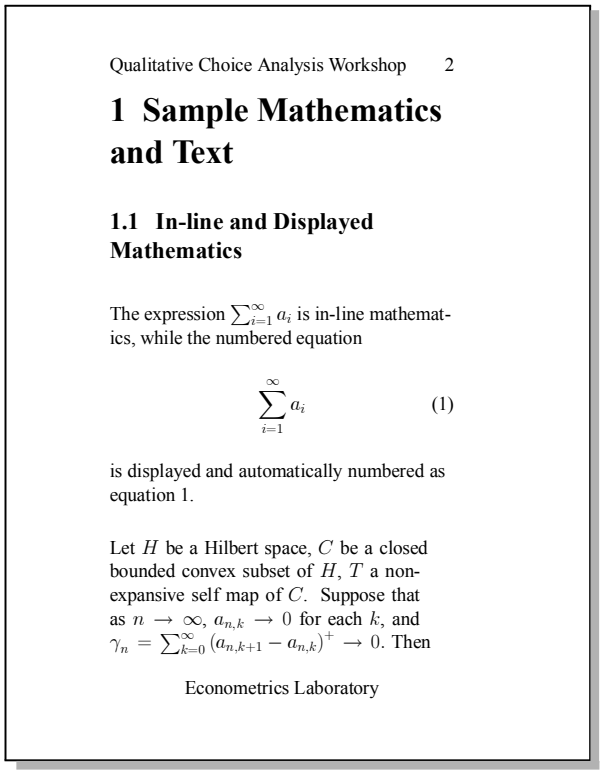
QCA Workbook

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
qcawork	None

The shell produces documents suitable for the Qualitative Choice Analysis Workshop at the University of California. The front matter includes fields for the department, institution, and course.


QCA Workbook
Style
A. U. Thor


Qualitative Choice Analysis Workshop 2

1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \qquad (1)$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then

Econometrics Laboratory

for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to T .

2 Section Headings

This is some text.

2.1 Subsection Heading

This is some text.

2.1.1 Subsubsection Heading

This is some text.

3 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**,

Italics, Roman, Sans Serif, Slanted, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

4 Lists

Bullet, numbered and description list environments are available. Lists, which can extend four levels deep, look like this:

(1) Numbered list item 1
   (a) Second level list item.
      (i) Third level list item.

(A) Fourth level list item.

- Bullet item 1
  - Second level bullet item.
    - Third level bullet item.
      - Fourth level bullet item.

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

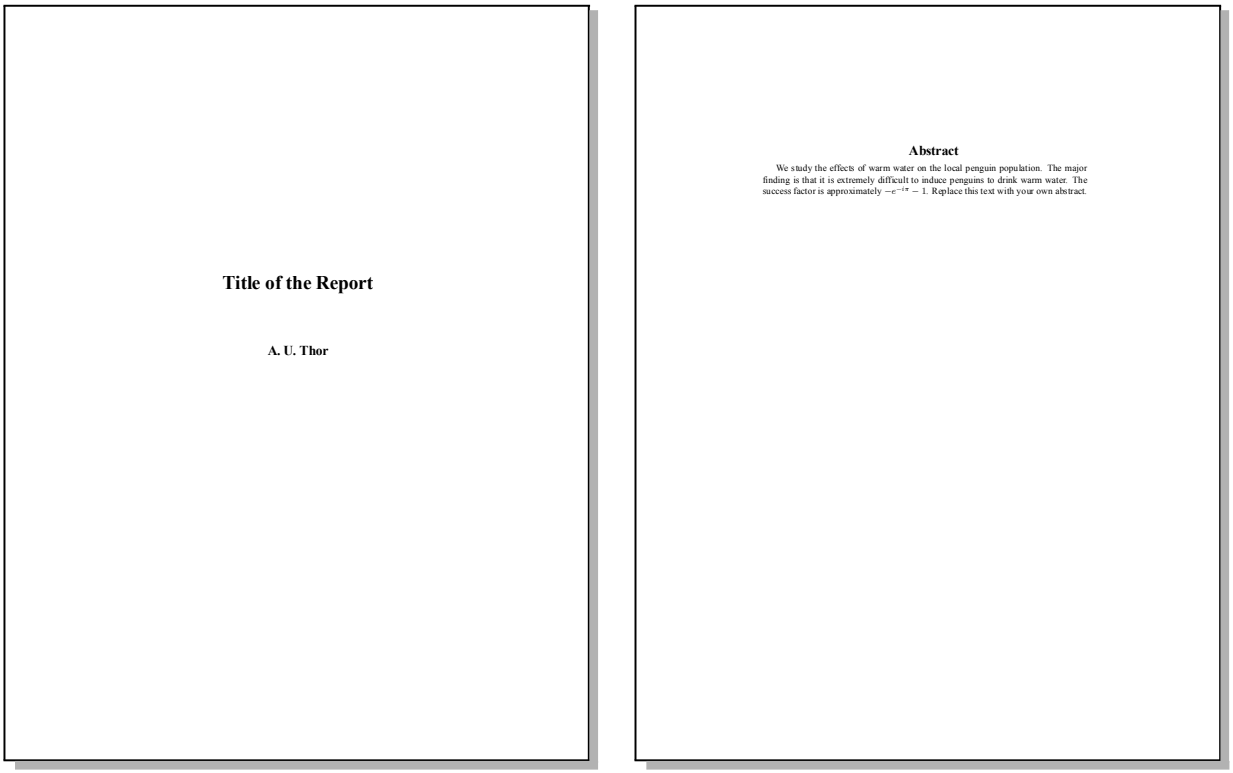
[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer,* in print

Report #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
serep1	None

The shell produces a report document with the title page separate from the abstract. New chapters begin on the next consecutive page. Running headers and page numbers are centered on the top and bottom of the page, respectively.



Contents

1 Sample Mathematics and Text 4

1.1 In-line and Displayed Mathematics 4

1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ 4

1.3 Theorems, Lemmata, and Other Theorem-like Environments 4

2 Features of this Shell 6

2.1 Section Headings 6

2.1.1 Subsection 6

2.2 Tags 6

3 List Environments 7

References 8

A The First Appendix 9

Chapter 1
Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.Here is a figure:

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), z \to \infty, z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin \varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

Chapter 2
Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

2.1.1.1 Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.
(Subsubsubsubsection head:)Subsubsubsubsection
This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags $_{\text{tiny}}$, $_{\text{scriptsize}}$, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations. Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
>
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
>
> I am not a crook. *Richard Nixon*
>
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

Chapter 3
List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   a. A list item under a list item.
      The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   b. Just another list item under a list item.
      i. Third level list item under a list item.
         (a). Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  – Second level bullet item.
    * Third level bullet item.
      · Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

References

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer,* in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Appendix A
The First Appendix

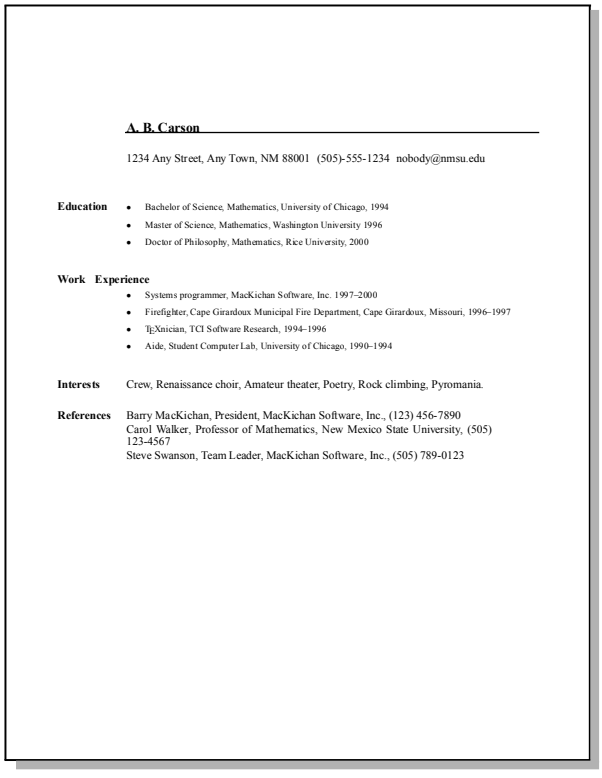
The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Resume #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seres1	None

This simple shell includes front matter fields in the body of the document for entering the name, address, telephone, and email address of the resume writer.



A. B. Carson

1234 Any Street, Any Town, NM 88001 (505)-555-1234 nobody@nmsu.edu

Education
- Bachelor of Science, Mathematics, University of Chicago, 1994
- Master of Science, Mathematics, Washington University 1996
- Doctor of Philosophy, Mathematics, Rice University, 2000

Work Experience
- Systems programmer, MacKichan Software, Inc. 1997–2000
- Firefighter, Cape Girardoux Municipal Fire Department, Cape Girardoux, Missouri, 1996–1997
- TEXnician, TCI Software Research, 1994–1996
- Aide, Student Computer Lab, University of Chicago, 1990–1994

Interests Crew, Renaissance choir, Amateur theater, Poetry, Rock climbing, Pyromania.

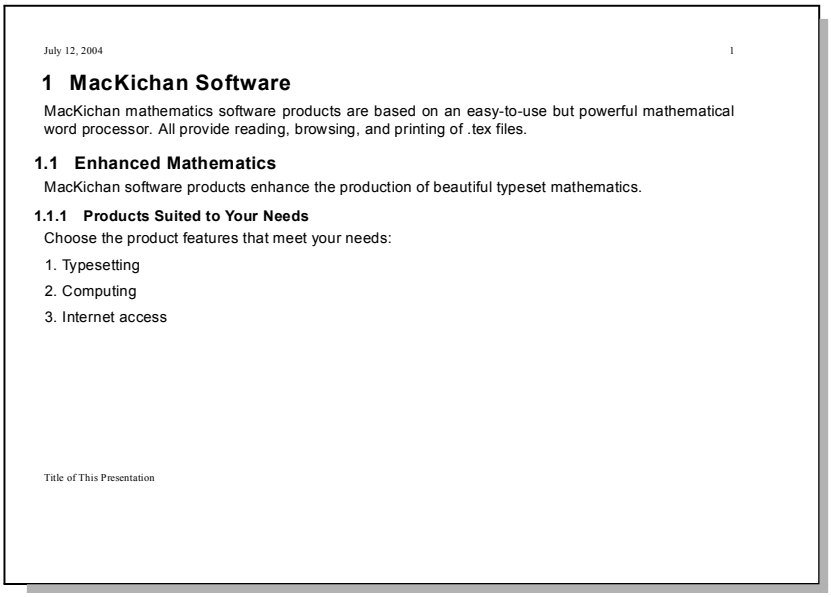
References Barry MacKichan, President, MacKichan Software, Inc., (123) 456-7890
Carol Walker, Professor of Mathematics, New Mexico State University, (505) 123-4567
Steve Swanson, Team Leader, MacKichan Software, Inc., (505) 789-0123

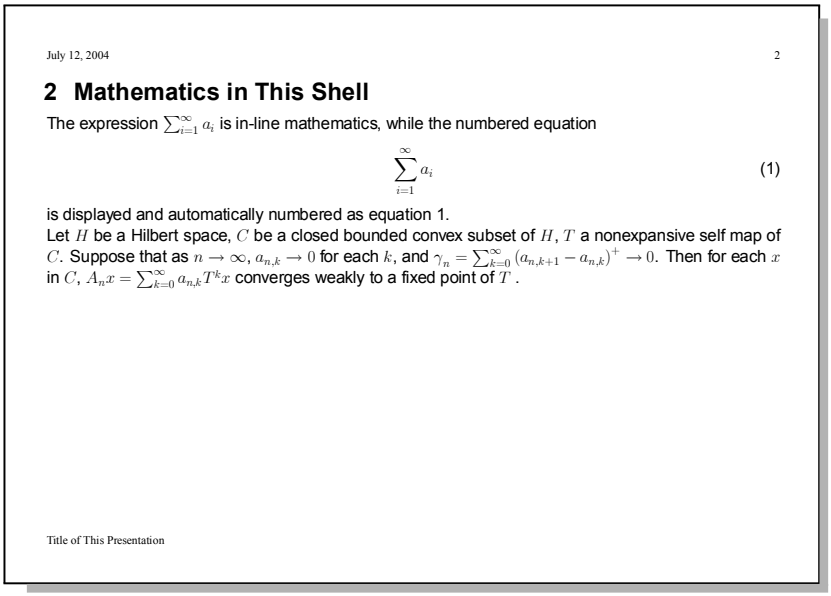
Slides - Jim's Landscape

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
SESlideJimsLandscape	None

The pages produced by this shell use wide margins and an oversized font in a landscape layout for A4 paper. New sections cause page breaks. Pages are numbered.



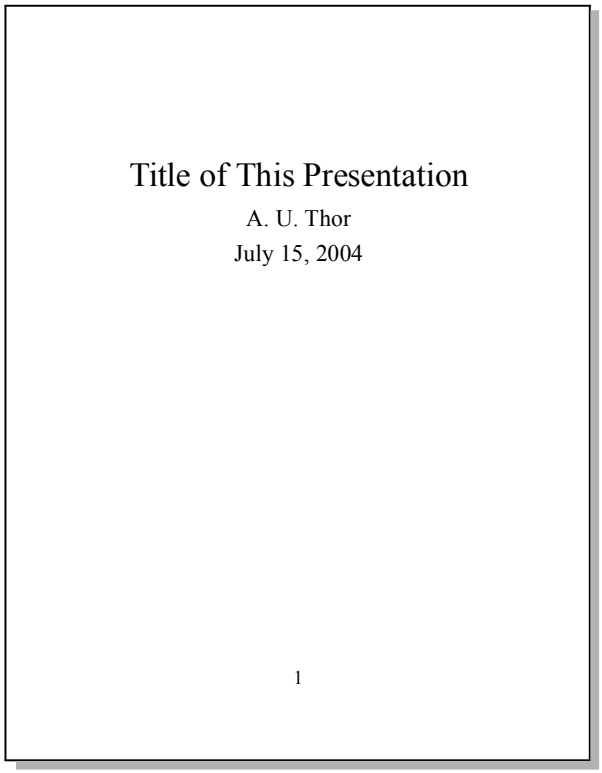


Slides A

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seslidea	None

The pages produced by this shell use wide margins and an oversized font in a portrait layout. New sections cause page breaks. Pages are numbered.

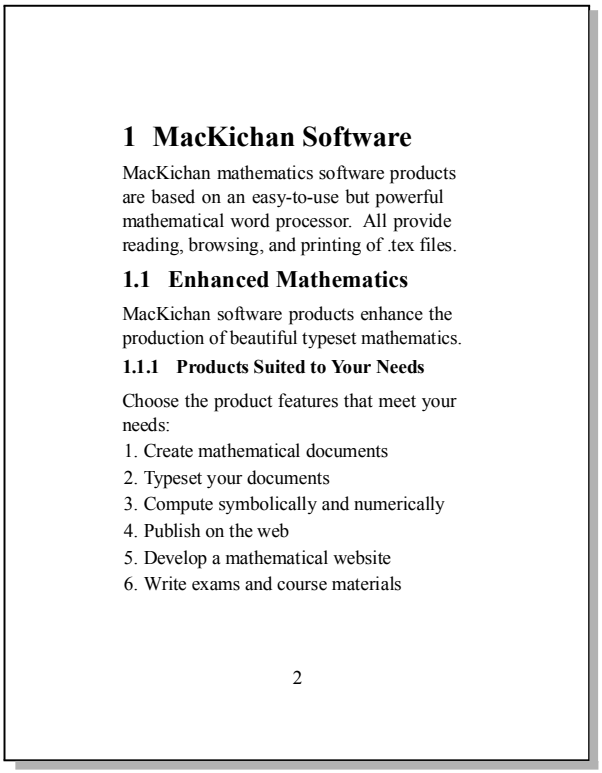


Title of This Presentation

A. U. Thor

July 15, 2004

1



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6. Write exams and course materials

2

2 Mathematics in This Shell

$$\sum_{n=1}^{\infty} \frac{1}{n^2} = 2$$

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T .

3 Tags

You can apply these tags:

- *Emphasized*
- **Bold**
- *Italics*
- Roman
- Sans Serif
- `Typewriter`

  You can apply the special, mathematics only, tags
- $\mathbb{BLACKBOARD\ BOLD}$
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  Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

Slides B

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seslideb	None

The pages produced by this shell use wide margins and a larger font that the Slides A shell. New sections cause page breaks. Pages are numbered.

Title of Presentation

A. U. Thor

July 15, 2004

1

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4

Slides C

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
seslidec	None

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- Roman
- Sans Serif
- `Typewriter`

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- $\mathcal{CALLIGRAPHIC}$
- $\mathfrak{fraktur}$.

5

Slides D

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
hslid1	None

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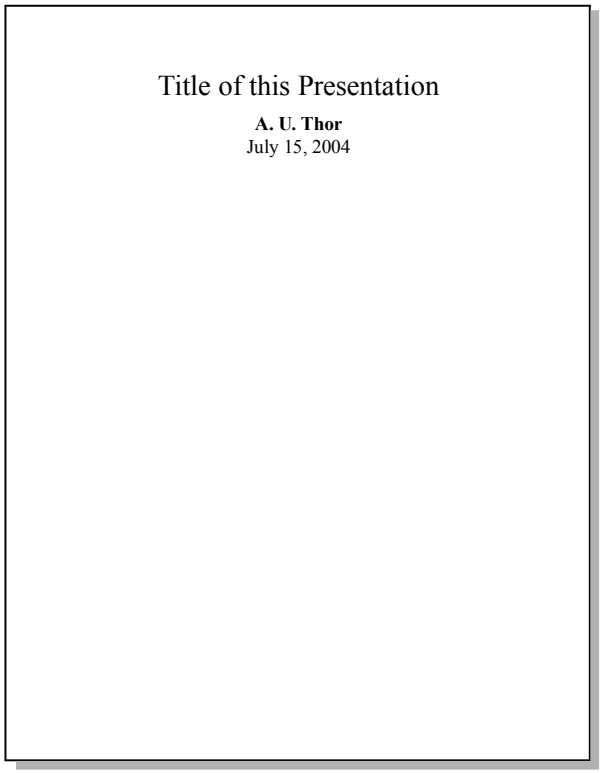

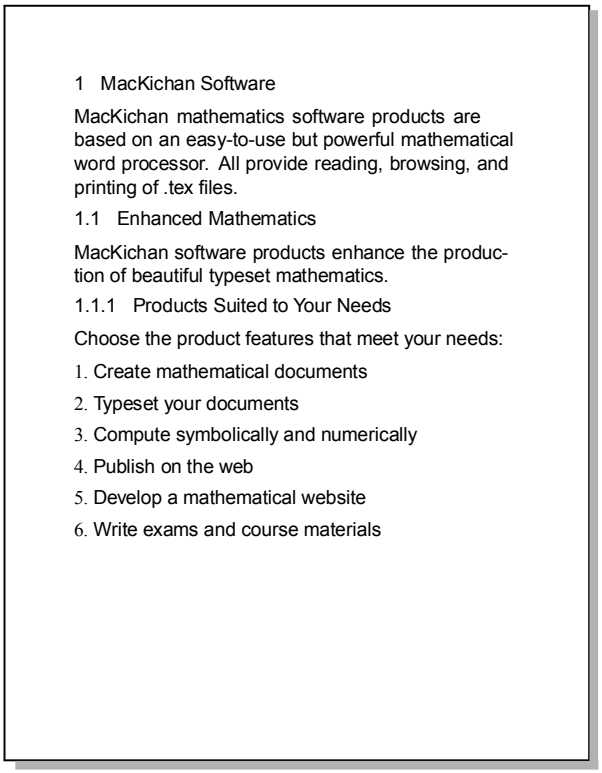

2 Mathematics in This Shell

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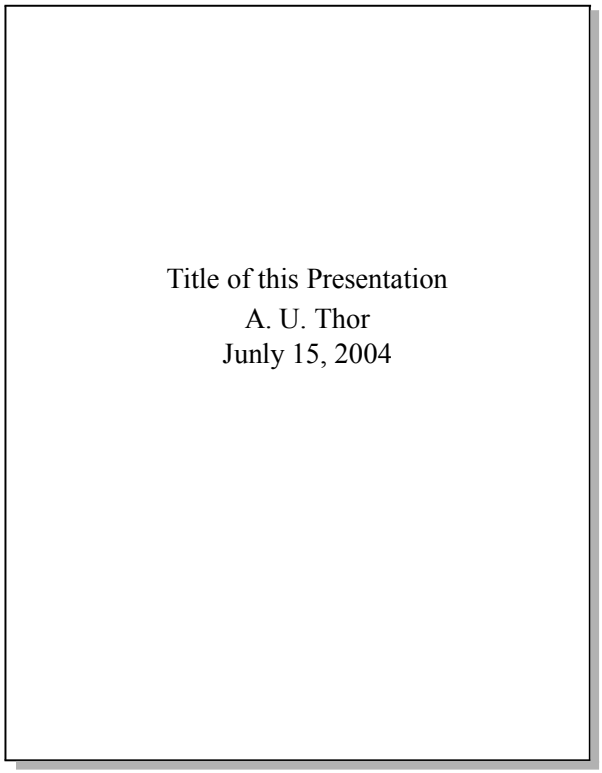
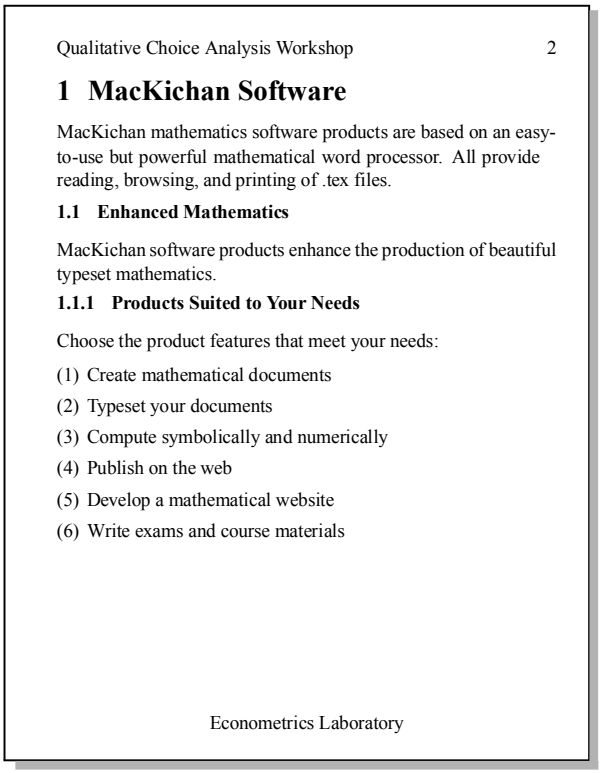
Slides QCA

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
qcaslide	None

The shell produces documents suitable for slides used in the Qualitative Choice Analysis Workshop at the University of California. The front matter includes fields for the department, institution, and course.





2 Mathematics in This Shell

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Thesis - Harvard Thesis

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Options and Packages	Defaults
Document class options	Standard
Packages:	
float	None
makeidx	None
seharv	None

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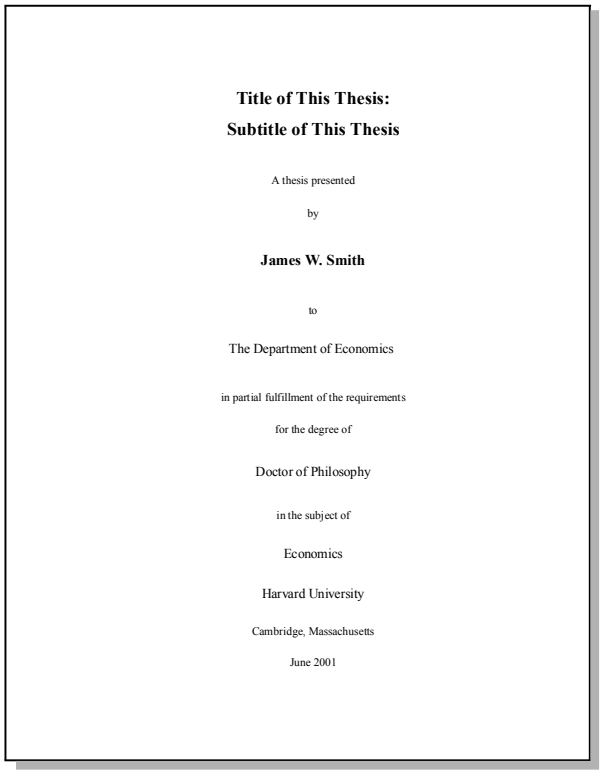


Title of This Thesis:
Subtitle of This Thesis

A thesis presented

by

James W. Smith

to

The Department of Economics

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

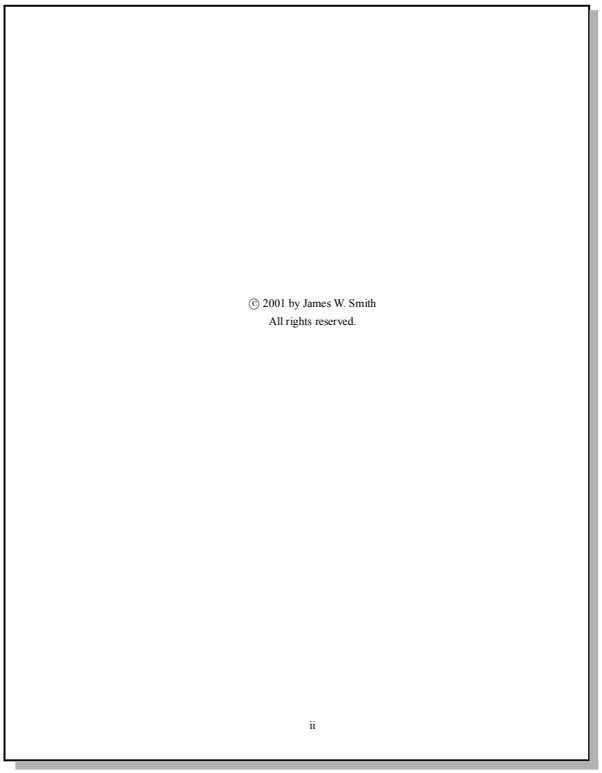
in the subject of

Economics

Harvard University

Cambridge, Massachusetts

June 2001



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Abstract

Put the abstract here. The abstract must have a (1) statement of the problem, (2) an exposition of methods and procedures, and (3) a summary of the findings. The length may not exceed 350 words.

Acknowledgments

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any support or special research materials given you.

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(Note: The Acknowledgments section is optional.)

Contents

Contents v

Preface 1

1 Sample Mathematics and Text 2

1.1 In-line and Displayed Mathematics 2

1.2 Mathematics in Section Heads $\int_a^2 \ln t dt$ 3

1.3 Theorems, Lemmata, and Other Theorem-like Environments 3

1.A Appendix to Chapter 1 4

2 Features of this Shell 5

2.1 Section Headings 5

2.1.1 Subsection 5

2.2 Tags 5

2.3 List Environments 6

2.A Appendix to Chapter 2 7

A The First Appendix 8

References 9

Preface

This is the preface and it is created using a TeX field in a paragraph by itself. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents..

Chapter 1
Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} \left(a_{n,k+1} - a_{n,k}\right)^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T .

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right), \tag{1.2}$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z)\,,\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.3}$$

Proof Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z)\,. \tag{1.4}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.4) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.5}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

Corollary 1 Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.5) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.3) by substituting $1/z$ back for z.

1.A Appendix to Chapter 1

This is some additional information for the chapter.

Chapter 2
Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and `Typewriter`.

You can apply the special, mathematics only, tags fraktur, BLACKBOARD BOLD, and *CALLIGRAPHIC*. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scienti?c WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations. Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.

   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.

   (b) Just another list item under a list item.

      i. Third level list item under a list item.

         (A) Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

2.A Appendix to Chapter 2

This is some additional information for the chapter.

Appendix A
The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Section tag.

References

Beeton, Barbara, Typesetting articles for the DECUS Proceedings with TEX, *Proceedings of the Digital Equipment Computer Users Society*, USA Spring 1985, 349–356.

Knuth, Donald E., *The Art of Computer Programming*, Addison-Wesley, Vol. 2, second edition, 1981.

Knuth, Donald E., *The TEXbook*, Addison-Wesley and American Mathematical Society, 1984.

Lamport, Leslie, *BTEX, A document preparation system*, Addison-Wesley, 1985.

Southall, Richard, First principles of typographic design for document production, *TUGboat* Vol. 5 (1984), No. 2, 79–90; Corrigenda, Vol. 6 (1985), No. 1, p. 6.

TUGboat, the Newsletter of the TEX Users Group, TEX Users Group, c/o American Mathematical Society, P. O. Box 9506, Providence, RI, 02940.

Thesis - Harvard Thesis Modified by Philippe Laval

Document class base file: sebase.cls

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Document class options	Standard
Packages:	
laval	None

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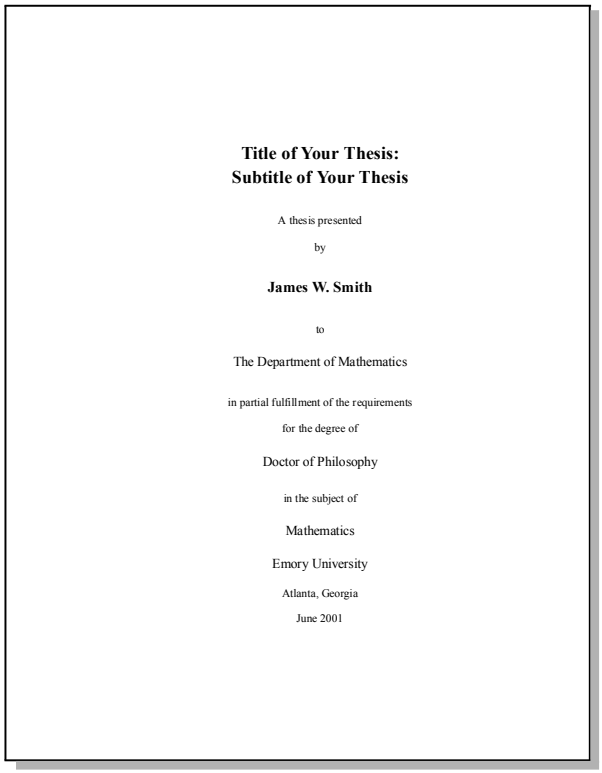

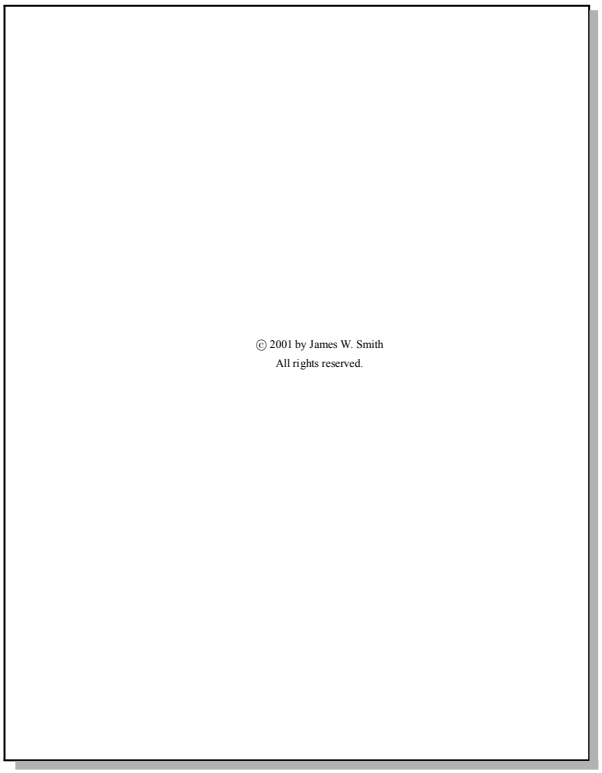

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Preface **1**

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1.A Appendix to Chapter 1 4

2 Features of this Shell **5**

2.1 Section Headings 5

2.1.1 Subsection 5

2.2 Tags 5

2.3 List Environments 6

2.A Appendix to Chapter 2 7

References **8**

A Name of First Appendix **9**

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Proof Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|)\,. \end{aligned}$$

■

Corollary 1.1 Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.5) implies

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You can apply the special, mathematics only, tags $\mathfrak{fraktur}$, $\mathbb{BLACKBOARD\ BOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scienti?c WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations. Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. *Harry Truman*
> Ask not what your country can do for you; ask what you can do for your country. *John F Kennedy*
> I am not a crook. *Richard Nixon*
> It's no exaggeration to say the undecideds could go one way or another. *George Bush*

2.3 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

1. List item 1
2. List item 2
   (a) A list item under a list item.
   The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.
   (b) Just another list item under a list item.
      i. Third level list item under a list item.
         (A) Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2
  - Second level bullet item.
    - Third level bullet item.
      - Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

2.A Appendix to Chapter 2

This is some additional information for the chapter.

References

[1] Beeton, Barbara, Typesetting articles for the DECUS Proceedings with TEX, *Proceedings of the Digital Equipment Computer Users Society*, USA Spring 1985, 349–356.

[2] Knuth, Donald E., *The Art of Computer Programming*, Addison-Wesley, Vol. 2, second edition, 1981.

[3] Knuth, Donald E., *The TEXbook*, Addison-Wesley and American Mathematical Society, 1984.

[4] Lamport, Leslie, *LATEX, A document preparation system*, Addison-Wesley, 1985.

[5] Southall, Richard, First principles of typographic design for document production, *TUGboat* Vol. 5 (1984), No. 2, 79–90; Corrigenda, Vol. 6 (1985), No. 1, p. 6.

[6] *TUGboat, the Newsletter of the TEX Users Group*, TEX Users Group, c/o American Mathematical Society, P.O. Box 9506, Providence, RI, 02940.

Appendix A
Name of First Appendix

Precede the first appendix with the indent latex fragment included here. Use regular sections and subsections (or subsectionNoContents) in appendices.

Thesis - LSU Thesis

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
authordate1-4	None
lsuthesis	None

The front matter is blank, but the body of the document contains title page fields to be completed with the title, name of author, department, degree name, field, university, and thesis date.

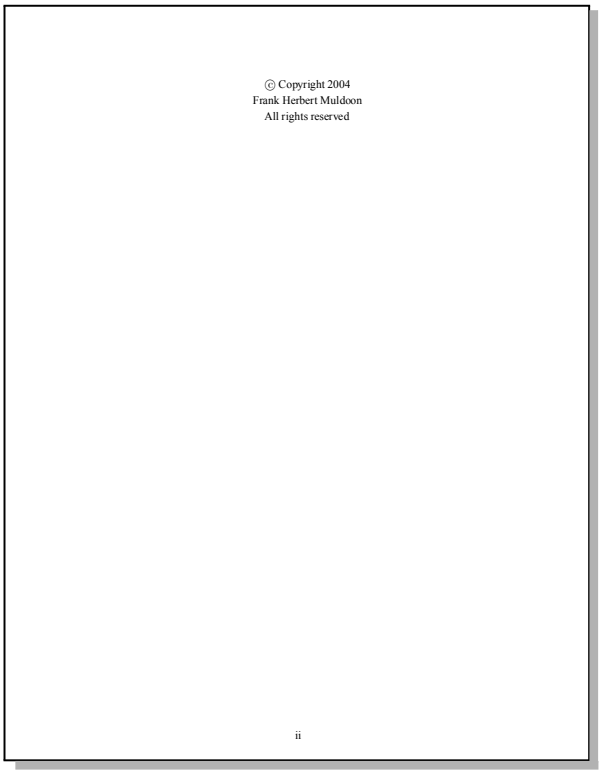
TITLE OF YOUR THESIS

A Dissertation

submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in
The Department of Mechanical Engineering

by
Frank Herbert Muldoon
B.S., Mechanical Engineering, Louisiana State University, 1996
May, 2004



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Acknowledgements

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any support or special research materials given you.

MacKichan Software, Inc. would like to thank Frank Muldoon for providing the Louisiana State University typesetting specification he created using the Style Editor.

Table of Contents

Acknowledgements iii

Abstract v

Chapter 1 Sample Mathematics and Text 1
1.1 In-line and Displayed Mathematics 1
1.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 1
1.3 Theorems, Lemmata, and Other Theorem-like Environments 2

Chapter 2 Features of this Shell 3
2.1 Section Headings 3
2.1.1 Subsection 3
2.2 Tags 3
2.3 List Environments 4

Appendix: A The First Appendix 5

References 6

Vita 7

Abstract

This shell document was created from a doctoral dissertation that was successfully submitted to the Department of Mechanical Engineering at Louisiana State University. Replace this text with the text for your abstract.

Chapter 1 Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T (?).

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_a^3 \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right), \tag{1.2}$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z), \; z \to \infty, \; z \in \Gamma_\varepsilon. \tag{1.3}$$

Proof Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.4}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.4) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.5}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Corollary Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.5) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty, \; z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.3) by substituting $1/z$ back for z.

Chapter 2 Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

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This is some harmless text under a subsubsection.

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You can apply the logical markup tag *Emphasized*.

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Bunyip Mythical beast of Australian Aboriginal legends.

Appendix A The First Appendix

The appendix can contain technical proofs and derivations that can be separated from the main text..Generally, avoid using appendices; however sometimes they serve a useful purpose for data that cannot be presented easily as a table or a figure.

References

Beeton, Barbara, Typesetting articles for the DECUS Proceedings with TEX, *Proceedings of the Digital Equipment Computer Users Society*, USA Spring 1985, 349–356.

Knuth, Donald E., *The Art of Computer Programming*, Addison-Wesley, Vol. 2, second edition, 1981.

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TUGboat, the Newsletter of the TEX Users Group, TEX Users Group, c/o American Mathematical Society, P.O. Box 9506, Providence, RI, 02940.

Vita

Replace this text with a short pertinent autobiography.

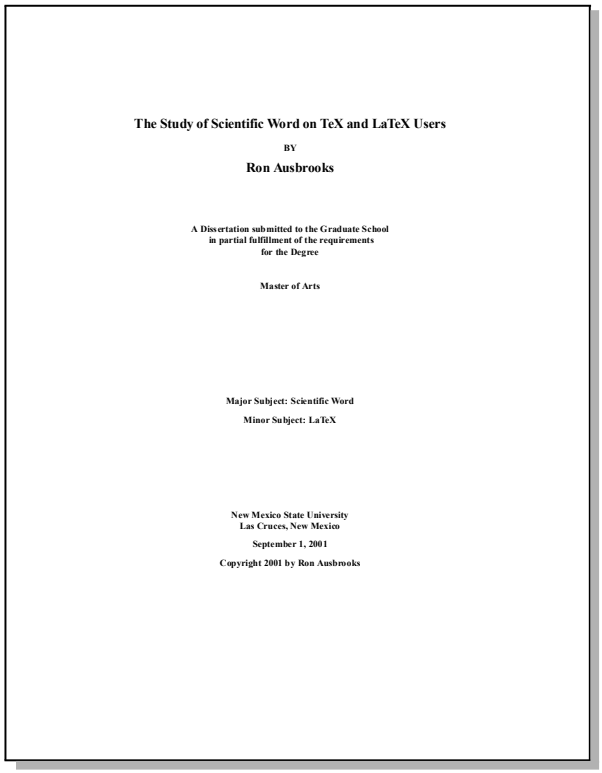
Thesis #1

Document class base file: sebase.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sethes1	None

The front matter is blank, but the body of the document contains title page fields to be completed with the title, name of author, dissertation requirements, degree name, major and minor subjects, university, location, thesis date, and copyright information. Additional fields include the names of the committee chair and members, a dedication, acknowledgments, vita, date, and abstract.

The shell adds blank pages where necessary to ensure that new chapters begin on an odd-numbered page. Blank pages carry headers with page numbers, but are not shown here.



The Study of Scientific Word on TeX and LaTeX Users

BY

Ron Ausbrooks

A Dissertation submitted to the Graduate School in partial fulfillment of the requirements for the Degree

Master of Arts

Major Subject: Scientific Word

Minor Subject: LaTeX

New Mexico State University
Las Cruces, New Mexico

September 1, 2001

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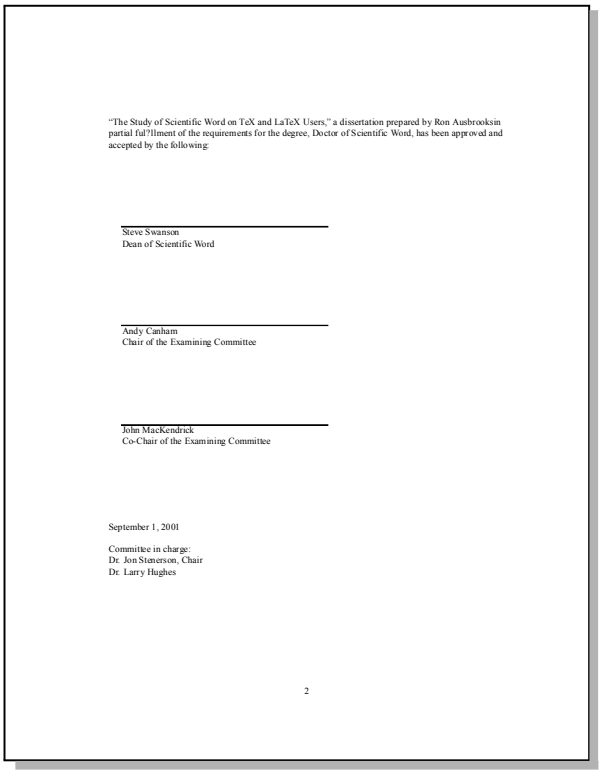

"The Study of Scientific Word on TeX and LaTeX Users," a dissertation prepared by Ron Ausbrooksin partial ful?llment of the requirements for the degree, Doctor of Scientific Word, has been approved and accepted by the following:

Steve Swanson
Dean of Scientific Word

Andy Canham
Chair of the Examining Committee

John MacKendrick
Co-Chair of the Examining Committee

September 1, 2001

Committee in charge:
Dr. Jon Stenerson, Chair
Dr. Larry Hughes

2

ABSTRACT

The Study of Scientific Word on TeX and LaTeX Users

BY

Ron Ausbrooks

Master of Arts

New Mexico State University
Las Cruces, New Mexico

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

Chapter 1
Opening the Document Shell

The shell for this document opens showing front matter information in fields in the body of the document. These fields include thesis title, author, requirements, degree name, major and minor subjects, university, thesis date, and copyright information. Additional fields include the dissertation name and the names of the committee chair and committee members.

Chapter 2
In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [1].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

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and a short line below.

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$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2.1 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Chapter 3
Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$ and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{as } z \to \infty, z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z.

Chapter 4
Features of this Shell

4.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

4.1.1 Subsection

This is some harmless text under a subsection.

4.1.1.1 Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.
(Subsubsubsubsection head:)Subsubsubsubsection
This is some harmless text under a subsubsubsubsection.

4.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and Typewriter.

You can apply the special, mathematics only, tags fraktur, $\mathbb{BLACKBOARD\ BOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

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Bunyip Mythical beast of Australian Aboriginal legends.

References

[1] N. Dunford and J. Schwartz, *Functional Analysis*, v. 2, John Wiley and Sons, New York, 1963.
[2] Hærstad, K. and Bellan, J., "Isolated ? uid oxygen drop behavior in ? uid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550
[3] Hærstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print
[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964
[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for ?uid-phase equilibrium, Prentice -Hall, Inc., 1986
[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

AppendixA
The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Section tag.

9 Thesis Shells

Thesis formatting requirements differ from university to university. The thesis shells included with the program reflect the requirements in effect at the time the shell was designed. Please review the requirements at your university to ensure that the shell you choose is appropriate for your thesis.

The thesis shells are based on the typesetting specifications set in one of two base document classes—`book.cls` or `report.cls`. The program uses several other `.cls` files for customized shells.

See page 2 for information about base document class defaults and for page layout diagrams for the base document classes.

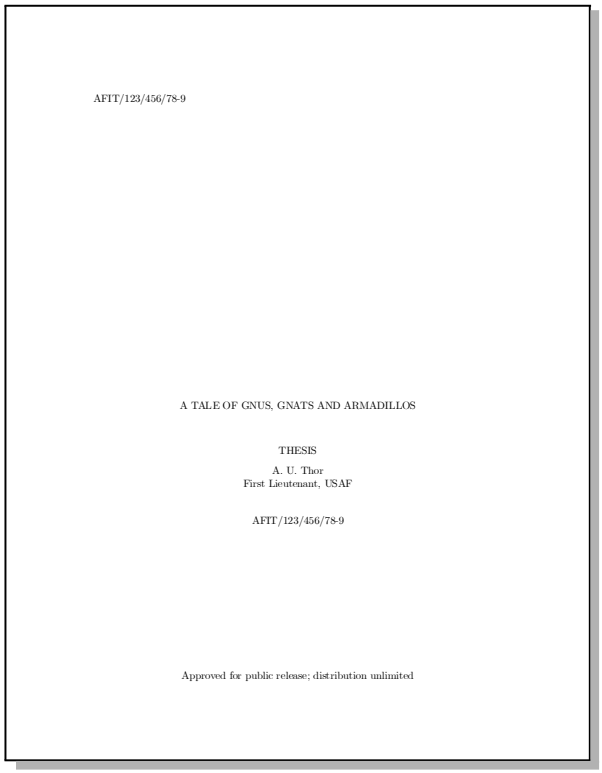
Air Force Institute of Technology

Document class base file: afthesis.cls

Options and Packages	Defaults
Document class options	Body text 11 pt
Packages:	
None	

The extensive front matter includes fields for title, author, address, rank, military designator, previous degrees, current degree, school, committee members, number by chapter, flyleaf, disclaimer page, title page, approval page, and abstract. The front matter also includes two fields which should be removed if not used: list of symbols and list of abbreviations. The shell document describes the use of these two fields.

The shell provides the option to number pages, figures, tables, and equations by chapter. It doesn't number sections. The shell also provides the option to underline in place of italics, and it adds a vita page at the end of the thesis.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A TALE OF GNUS, GNATS AND ARMADILLOS

THESIS

A. U. Thor
First Lieutenant, USAF

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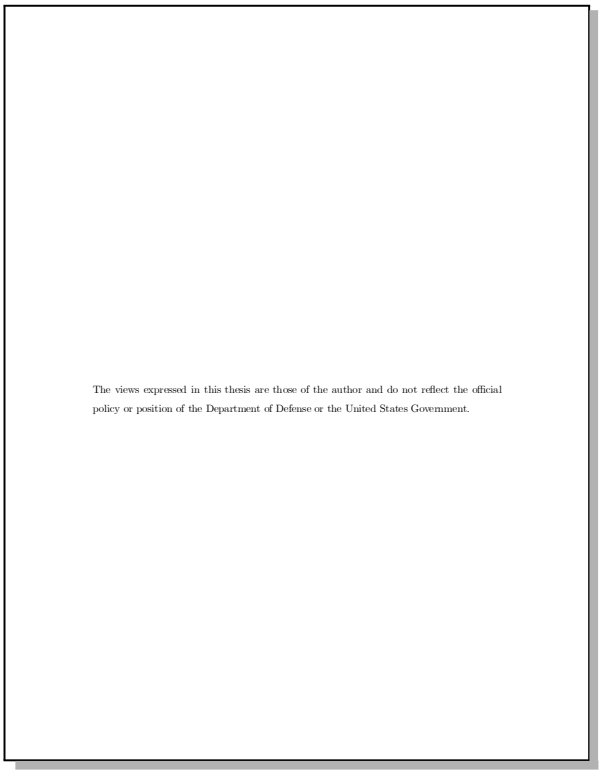
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A TALE OF GNUS, GNATS AND ARMADILLOS

THESIS

Presented to the Faculty of the School of Science
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science

A. U. Thor, B.S.
First Lieutenant, USAF

September 2004

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A TALE OF GNUS, GNATS AND ARMADILLOS

A. U. Thor, B.S.

First Lieutenant, USAF

Approved:

Dr. Advisor Thesis Advisor	Date
Dr. Member Committee Member	Date
Maj. Member Committee Member	Date

Table of Contents

		Page
List of Figures		v
List of Tables		vi
List of Symbols		vii
List of Abbreviations		viii
Abstract		ix
Preface		x
I.	Sample Mathematics and Text	1-1
1.1	In-line and Displayed Mathematics	1-1
1.2	Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$	1-2
1.3	Theorems, Lemmata, and Other Theorem-like Environments	1-2
II.	Features Unique to This Shell	2-1
2.1	Typesetting Features	2-1
2.1.1	Number by Chapter	2-1
2.1.2	No Section Numbers	2-1
2.1.3	Underline Option	2-1
2.1.4	List of Symbols	2-1
2.1.5	List of Abbreviations	2-1
2.1.6	A Subsection	2-2
Appendix A.	First appendix title	A-1
A.1	In an appendix	A-1
A.2	Sample Citations and Bibliography	A-1

List of Symbols

Symbol	Page
He Helium	2-1
Au	2-1

List of Abbreviations

Abbreviation Page
Win2k Windows 2000 2-1

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Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

Preface

This is the preface. Your name appears automatically at the end of this section when the document is typeset. You can use Acknowledgments here instead.

A. U. Thor

A TALE OF GNUS, GNATS AND ARMADILLOS

I. Sample Mathematics and Text

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Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \leq \arg z \leq \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\leq r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

II. Features Unique to This Shell

2.1 Typesetting Features

2.1.1 Number by Chapter. If `\numberbychapter` is added to the document preamble, then pages, figures, tables and equations will all be numbered by chapter.

2.1.2 No Section Numbers. If `\nosectionnumbers` is added to the document preamble, then section numbers are not used in the text and in the table of contents.

2.1.3 Underline Option. If `\underlineoption` is added to the document preamble, then underlining is used instead of italics for emphasized text, including chapter, section, etc. headings

2.1.4 List of Symbols. Remove the List of Symbols tag from the front matter if you are not using this document feature. To place symbols in the list use the command `\symbol[#1]{#2}` inside of an encapsulated TeX field where #2 is the symbol and #1 is the definition to be put in the list of symbols. The symbol is also automatically put in your text. Leave out [#1] if you don't want a definition. For example, He is the symbol for Helium and Au inserts another symbol in the body of the document, without adding a definition to the List of Symbols. **NOTE:** The `\symbol` macro must be encapsulated since the typesetting style used by this document defines this macro as a replacement for the `\symbol` macro already defined by LaTeX.

2.1.5 List of Abbreviations. Remove the List of Abbreviations tag from the front matter if you are not using this document feature. To place abbreviations in the list use the command `\abbreviation[#1]{#2}` inside a TeX field where #2 is the abbreviation and #1 is the definition to be put in the list of abbreviations. The abbreviation is also automatically put in your text. Leave out [#1] if you don't want a definition. For example, Win2k is sometimes used as an abbreviation for Windows 2000.

Appendix A. First appendix title

A.1 In an appendix

This is appendix section A.1. The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

A.2 Sample Citations and Bibliography

BibTeX has been selected for the bibliography choice in this shell document. The BibTeX bibliography style was designed to accompany the typesetting style used by this document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the TeXBook (?), the LaTeX reference book (?), and to a well known grammar book (?). The bibliography section for these citations comes next.

Vita

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Permanent address: My Home, Anytown, USA

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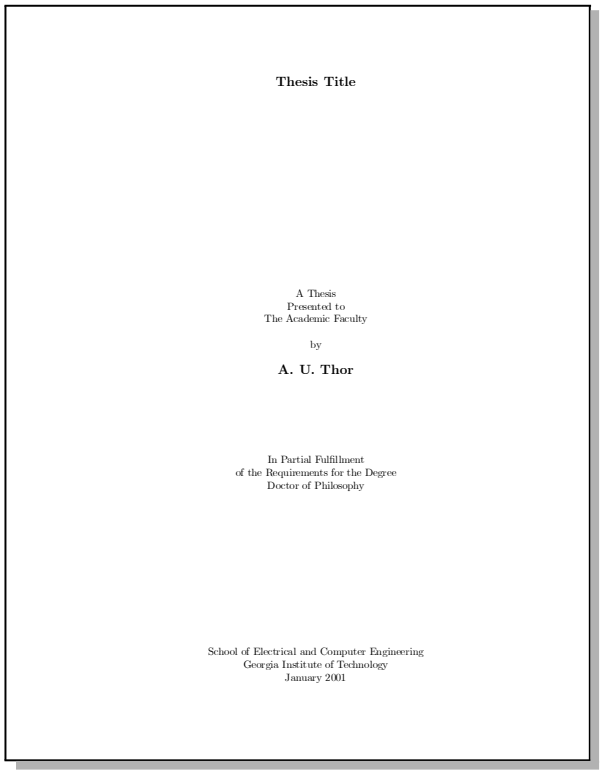

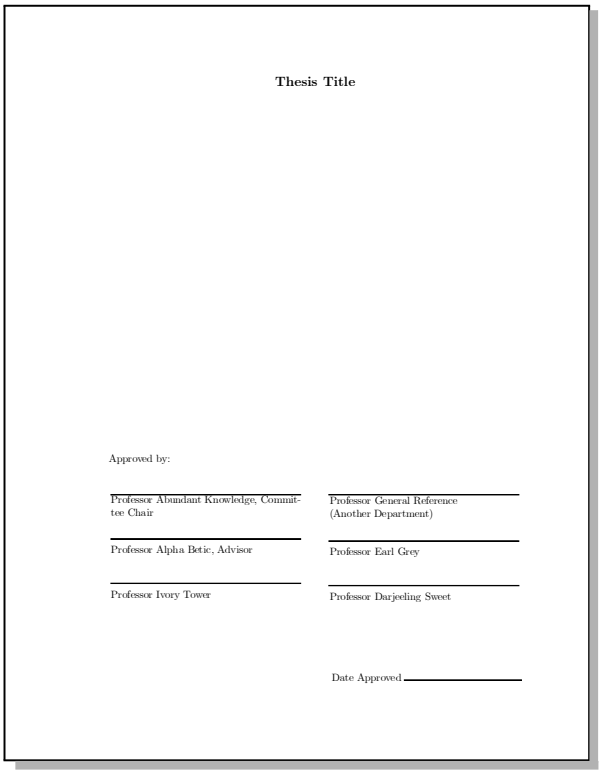

This work is dedicated to my mother and father and to the many others, though unnamed, who helped me in the completion of this task.

PREFACE

This is the preface.

ACKNOWLEDGEMENTS

I want to gratefully acknlowedge all those who helped me in this task.

TABLE OF CONTENTS

DEDICATION . . . . . **iii**
PREFACE . . . . . **iv**
ACKNOWLEDGEMENTS . . . . . **v**
LIST OF TABLES . . . . . **vii**
LIST OF FIGURES . . . . . **viii**
SUMMARY . . . . . **ix**
I INTRODUCTION **1**
II SAMPLE MATHEMATICS AND TEXT **2**
2.1 In-line and Displayed Mathematics 2
2.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 2
2.3 Theorems, Lemmata, and Other Theorem-like Environments 3
III SOME ANCILLARY STUFF **5**
REFERENCES **6**
INDEX **6**
VITA **7**

SUMMARY

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

CHAPTER I

INTRODUCTION

Every dissertation should have an introduction. You might not realize it, but the introduction should introduce the concepts, backgrouand, and goals of the dissertation.

CHAPTER II

SAMPLE MATHEMATICS AND TEXT

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1}$$

is displayed and automatically numbered as equation 1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

2.2 Mathematics in Section Heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

2.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z|\sin\varepsilon/2$. It follows from (3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (2) by substituting $1/z$ back for z. ■

CHAPTER III

SOME ANCILLARY STUFF

Ancillary material should be put in appendices, which appear just before the bibliography.

Create your BibTeX bibliography by adding a BibTeX field using your BibTeX database and the gatech-thesis BibTeX bibliography style. Compile the document and create the bibliography using the usual methods. Then, delete the BibTeX field from your document and compile again. The `\references` TeX field that follows will include the bibliography in the typeset document and also include a listing for the references in the table of contents.

VITA

Arthor U. Thor was born in an insignificant town whose only claim to fame is that it produced such a fine specimen of a researcher.

Massachusetts Institute of Technology

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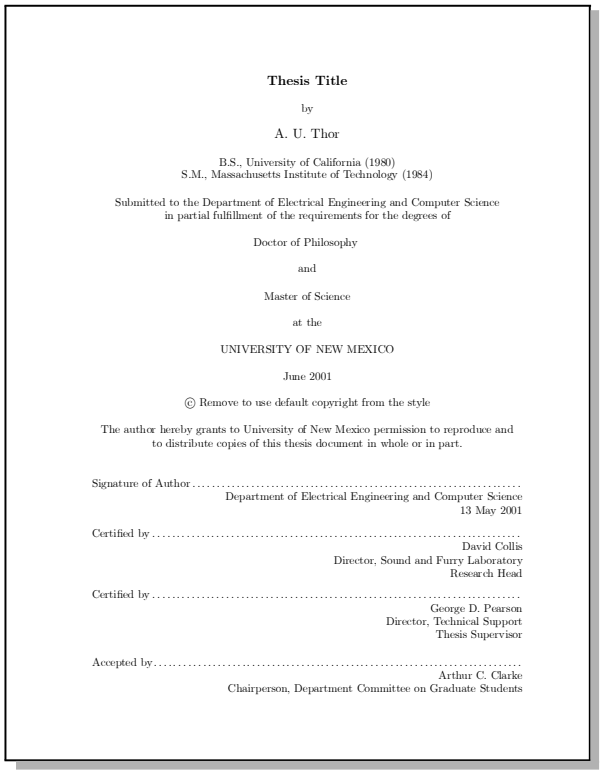

Thesis Title

by

A. U. Thor

B.S., University of California (1980)
S.M., Massachusetts Institute of Technology (1984)

Submitted to the Department of Electrical Engineering and Computer Science
in partial fulfillment of the requirements for the degrees of

Doctor of Philosophy

and

Master of Science

at the

UNIVERSITY OF NEW MEXICO

June 2001

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Signature of Author .....
Department of Electrical Engineering and Computer Science
13 May 2001

Certified by .....
David Collis
Director, Sound and Furry Laboratory
Research Head

Certified by .....
George D. Pearson
Director, Technical Support
Thesis Supervisor

Accepted by .....
Arthur C. Clarke
Chairperson, Department Committee on Graduate Students

Thesis Title

by

A. U. Thor

Submitted to the Department of Electrical Engineering and Computer Science
on 13 May 2001, in partial fulfillment of the
requirements for the degrees of
Doctor of Philosophy
and
Master of Science

Abstract

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Research Head: David Collis
Title: Director, Sound and Furry Laboratory

Thesis Supervisor: George D. Pearson
Title: Director, Technical Support

2

Chapter 1

Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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$$\sin^2\theta + \cos^2\theta = 1$$

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1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

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Chapter 2

Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is some harmless text under a subsection.

Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

Bibliography

[1] American Petroleum Institute, Technical Data Book - Petroleum Refining, 5th edition, 1992

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Northwestern University

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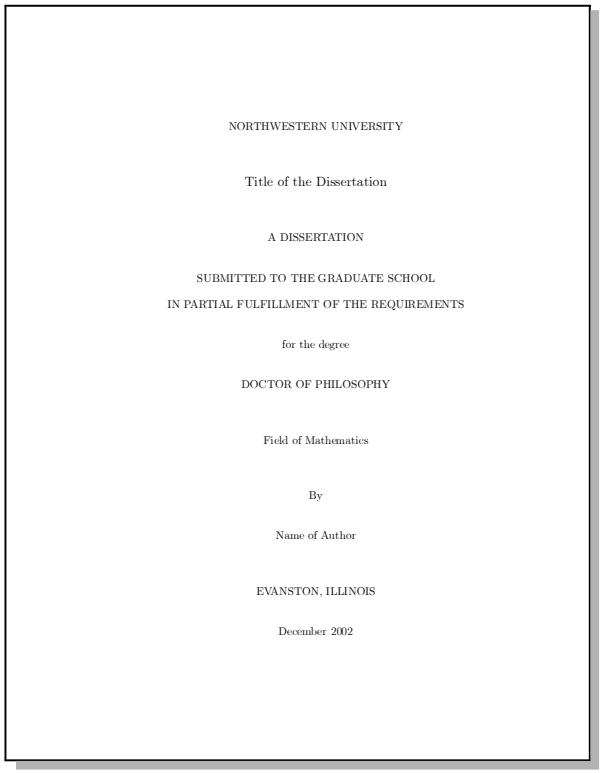


NORTHWESTERN UNIVERSITY

Title of the Dissertation

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

for the degree

DOCTOR OF PHILOSOPHY

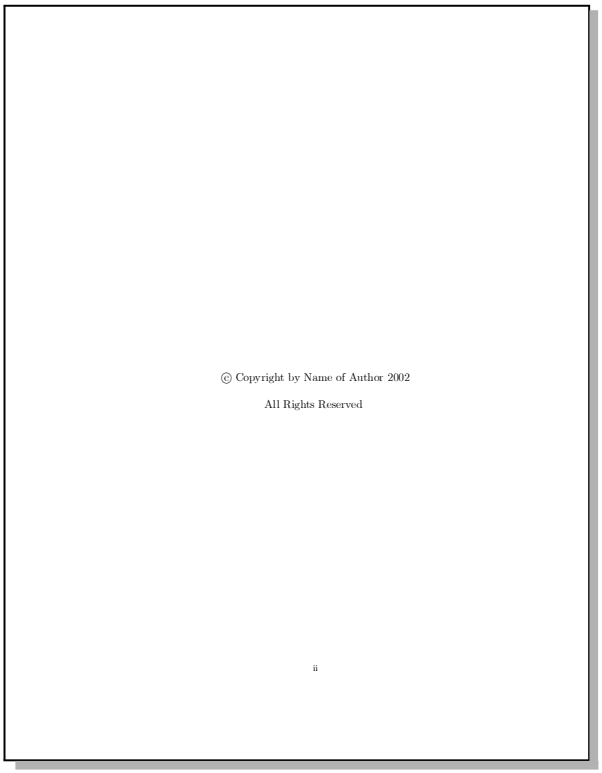
Field of Mathematics

By

Name of Author

EVANSTON, ILLINOIS

December 2002



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ABSTRACT

Title of the Dissertation

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Acknowledgements

Text for acknowledgements.

Preface

This is the preface.

Contents

ABSTRACT iii

Acknowledgements iv

Preface v

List of Tables viii

List of Figures ix

Introduction 1

Chapter 1. Sample Mathematics and Text 2

1.1. In-line and Displayed Mathematics 2

1.2. Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ 3

1.3. Theorems, Lemmata, and Other Theorem-like Environments 3

References 6

Appendix . Title of Appendix 7

1. First section of Appendix 7

Introduction

This is the introduction. Use a normal chapter heading if you prefer to write the introduction as chapter 1.

CHAPTER 1

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

References

[1] American Petroleum Institute, Technical Data Book - Petroleum Refining, 5th edition, 1992

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3337-3550

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[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

APPENDIX

Title of Appendix

1. First section of Appendix

This is the Appendix.

Vita

This is the Vita (optional).

Similar to New Mexico State University

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MY THESIS

BY

A. U. THOR

A Dissertation submitted to the Graduate School
in partial fulfillment of the requirements
for the Degree

Doctor of Philosophy

Major Subject: Physics

Minor Subject: Electrical Engineering

New Mexico State University
Las Cruces, New Mexico

May 2001

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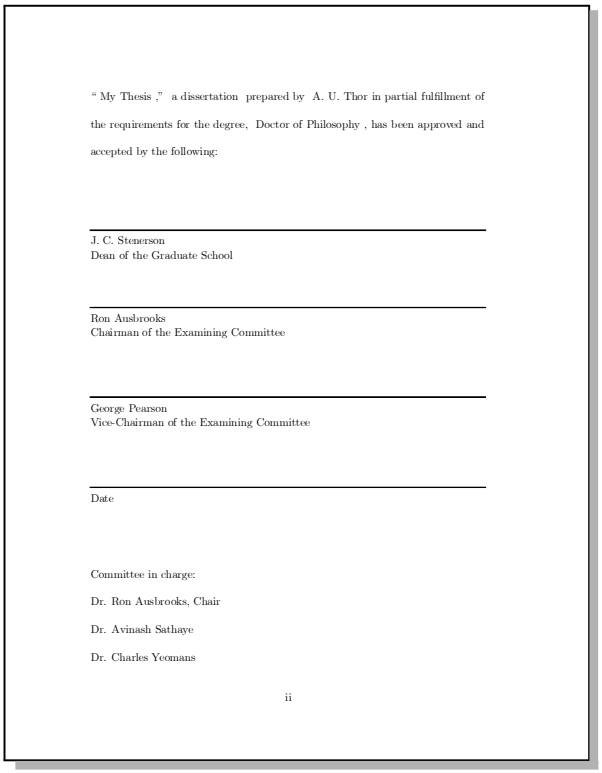

" My Thesis ," a dissertation prepared by A. U. Thor in partial fulfillment of the requirements for the degree, Doctor of Philosophy , has been approved and accepted by the following:

J. C. Stonerson
Dean of the Graduate School

Ron Ausbrooks
Chairman of the Examining Committee

George Pearson
Vice-Chairman of the Examining Committee

Date

Committee in charge:

Dr. Ron Ausbrooks, Chair

Dr. Avinash Sathaye

Dr. Charles Yeomans

ii

DEDICATION

This work is dedicated to my mother and father and to the many others, though unnamed, who helped me in the completion of this task.

(Note: The Dedication section is optional.)

ACKNOWLEDGMENTS

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any financial support or special research materials given you.

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Use a Preface rather than Acknowledgments when the research is discussed, for example, "the motivation for the study, the background of the project, the scope of the research, and the purpose of the paper" (Turabian, 1996, p. 7-8).

(Note: The Acknowledgments section is optional.)

VITA

Born May 16, 1962 etc....This is a vita–a simple biographical sketch–not a curriculum vitae. Use a simple chronological order.

N. B. Abu-Ghazaleh and P. A. Wilsey, "Models for Control Unit Synchronization for Shared Control Architectures," *Journal of Parallel and Distributed Computing*.

N. B. Abu-Ghazaleh , P. A. Wilsey , X. Fan, and D. A. Hensgen, "Synthesizing Variable Instruction Issue Interpreters for Implementing Functional Parallelism on SIMD Computers," *IEEE Transactions on Parallel and Distributed Systems*. April 1997 abstract.

N. B. Abu-Ghazaleh , and P. A. Wilsey , "Variable Instruction Scheduling for MIMD Interpretation on Pipelined SIMD Machines and for Compositional Instruction Sets," *Concurrency: Practice and Experience*. Jan. 1997. abstract.

X. Fan, N. B. Abu-Ghazaleh , and P. A. Wilsey , "On the Complexity of Scheduling MIMD Operations for SIMD Interpretation," *Journal of Parallel and Distributed Computing*, Vol 29, No 1, 91-95, August 1995. abstract.

R. A. Bagley , P. A. Wilsey, and N. B. Abu-Ghazaleh, "Composing Functional Unit Blocks for Efficient Interpretation of MIMD Code Sequences on SIMD Processors," *Parallel Processing: CONPAR 94 - VAPP VI* (LNCS 854), B. Buchberger and J. Volkert (eds), 616-627, September 1994. abstract.

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ABSTRACT

MY THESIS

BY

A. U. THOR

Doctor of Philosophy

New Mexico State University

Las Cruces, New Mexico, 1998

Dr. Ron Auslbrooks, Chair

Put the abstract here. The abstract must have a (1) statement of the problem, (2) an exposition of methods and procedures, and (3) a summary of the findings. The length may not exceed 350 words.

CONTENTS

LIST OF TABLES viii

1 SAMPLE MATHEMATICS AND TEXT 1
1.1 In-line and Displayed Mathematics 1
1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ 2
1.3 Theorems, Lemmata, and Other Theorem-like Environments . . . 2

2 FEATURES OF THIS SHELL 4
2.1 Section Headings 4
2.1.1 Subsection 4
2.1.1.1 Subsubsection 4
Subsubsubsection 4
Subsubsubsubsection 4
2.2 Tags 4
2.3 List Environments 6

APPENDICES

A. THE APPENDIX 8
B. ANOTHER APPENDIX 8

CHAPTER 1

SAMPLE MATHEMATICS AND TEXT

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [?].

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A long line above may depend on your margins

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

CHAPTER 2

FEATURES OF THIS SHELL

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

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APPENDICES

A. THE APPENDIX

This is the appendix. Use the section division for the title of each appendix.

B. ANOTHER APPENDIX

This is another appendix.

BIBLIOGRAPHY

[BB] Beeton, Barbara, Typesetting articles for the DECUS Proceedings with TEX, *Proceedings of the Digital Equipment Computer Users Society*, USA Spring 1985, 349–356.

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[TD] Southall, Richard, First principles of typographic design for document production, *TUGboat* Vol. 5 (1984), No. 2, 79–90; Corrigenda, Vol. 6 (1985), No. 1, p. 6.

[TUB] *TUGboat, the Newsletter of the TEX Users Group*, TEX Users Group, c/o American Mathematical Society, P. O. Box 9506, Providence, RI, 02940.

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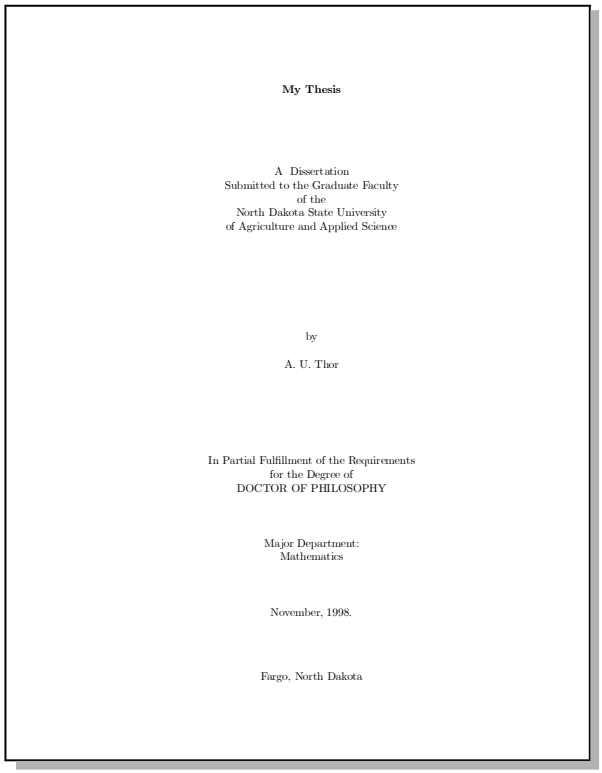


My Thesis

A Dissertation
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

by

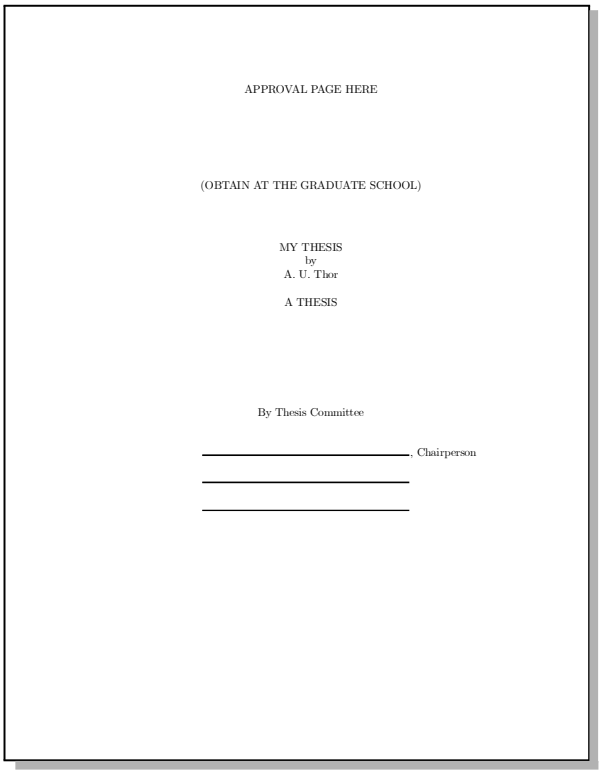
A. U. Thor

In Partial Fulfillment of the Requirements
for the Degree of
DOCTOR OF PHILOSOPHY

Major Department:
Mathematics

November, 1998.

Fargo, North Dakota



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MY THESIS
by
A. U. Thor

A THESIS

By Thesis Committee

_____, Chairperson
_____
_____

ABSTRACT

Thor, Alan Uthur, B.S., M.S., Mathematics, College of Arts and Sciences, North Dakota State University. November, 1998. My Thesis Major Professor: Dr. Merciless Ming.

Place abstract here.

DEDICATION

This work is dedicated to my mother and father and to the many others, though unnamed, who helped me in the completion of this task. (The Dedication is optional.)

ACKNOWLEDGMENTS

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any financial support or special research materials given you.

Copyright permissions may also be acknowledged here by stating that: (1) permission has been granted for reproduction of tables, tests, and other copyright protected items and (2) gives the source of the permission.

Use a Preface rather than Acknowledgments when the research is discussed, for example, "the motivation for the study, the background of the project, the scope of the research, and the purpose of the paper" (Turabian, 1996, p. 7-8).

(Note: The Acknowledgments section is optional.)

TABLE OF CONTENTS

ABSTRACT ii
DEDICATION iii
ACKNOWLEDGMENTS iv
LIST OF TABLES vi
LIST OF FIGURES vii
CHAPTER 1. SAMPLE MATHEMATICS AND TEXT 1
1.1 In-line and Displayed Mathematics 1
1.2 Mathematics in Section Heads $\int_{\alpha}^{\beta} \ln t dt$ 2
1.3 Theorems, Lemmata, and Other Theorem-like Environments 2
CHAPTER 2. FEATURES OF THIS SHELL 4
2.1 Section Headings 4
2.2 Tags 4
2.3 List Environments 5
APPENDIX A. THE FIRST APPENDIX 7
REFERENCES CITED 8

LIST OF TABLES

Table Page

2..1 Available tags 5

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You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Text Tags	Mathematics Tags	Size Tags
Bold	Fraktur	tiny
Italics	Blackboard Bold	scriptsize
Roman	Calligraphic	footnotesize
Sans Serif		small
Slanted		large
Small Caps		large
Typewriter		huge
		Huge

Table 2..1: Available tags

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

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- Bullet item 1
- Bullet item 2
  – Second level bullet item.
    * Third level bullet item.
      · Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

APPENDIX A.

THE FIRST APPENDIX

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Following is a short bibliography. It has no relationship to the previous text, but can be used to show sample citations such as[4] and.[6] This typesetting style places each citation in a superscript position. If you want multiple citations to appear next to each other, either separate the citations using a superscripted comma like[2,3,4] or type all of the citation keys inside a single citation, separating each with a comma like.[2, 3, 4]

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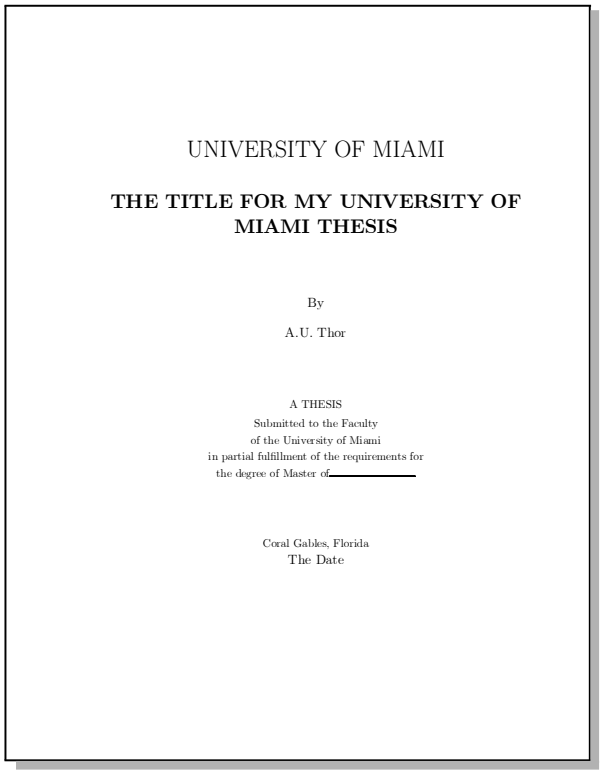


UNIVERSITY OF MIAMI

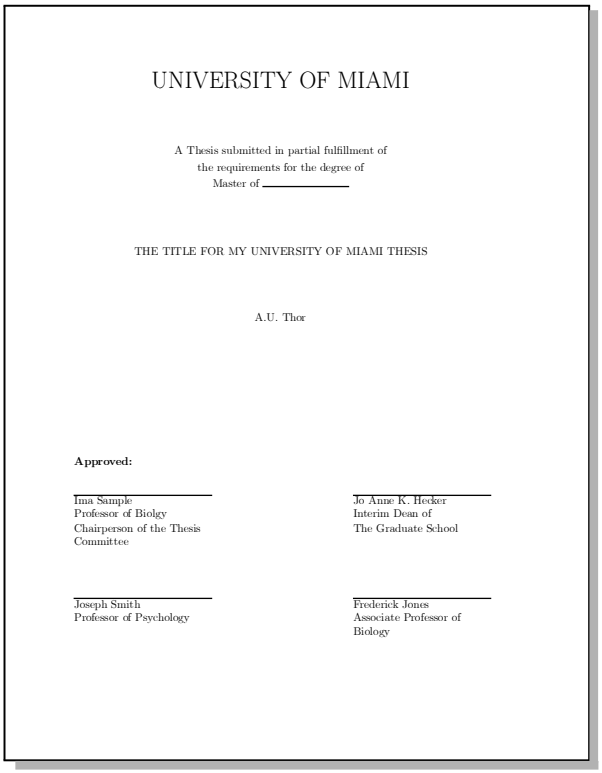
THE TITLE FOR MY UNIVERSITY OF MIAMI THESIS

By

A.U. Thor

A THESIS
Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Master of _____

Coral Gables, Florida
The Date



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Master of _____

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Professor of Biolgy
Chairperson of the Thesis
Committee

Jo Anne K. Hecker
Interim Dean of
The Graduate School

Joseph Smith
Professor of Psychology

Frederick Jones
Associate Professor of
Biology

A.U. Thor

THE TITLE FOR MY UNIVERSITY OF MIAMI THESIS

The Date

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$. Replace this text with your own abstract.

Chapter 1

Sample Mathematics and Text

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4

Chapter 2

Features of this Shell

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The First Appendix

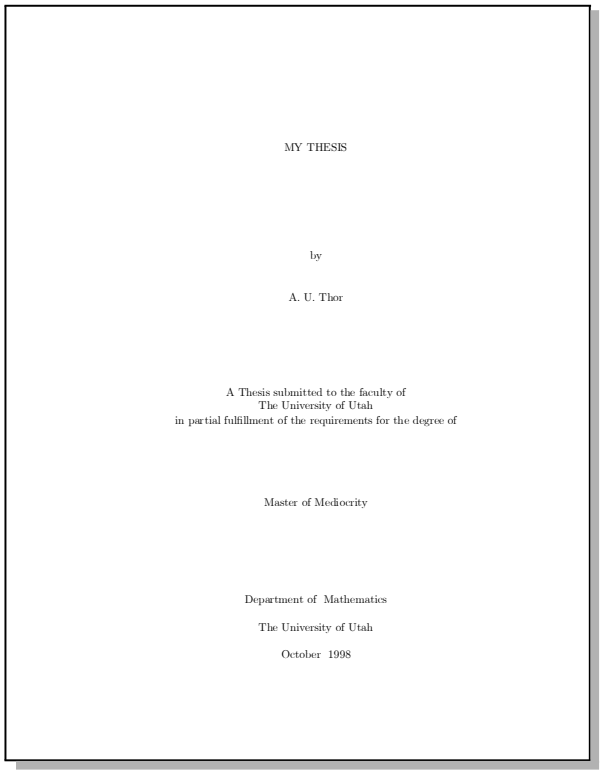
The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Similar to University of Utah

Document class base file: book.cls

Options and Packages	Defaults
Document class options	Body text 12 pt
Packages:	
sw20utah	None

The front matter is empty and not used. The body of the document contains fields for the title, author, degree, university, department, and the degree month and year. TEX fields are used to generate the title page and copyright page. The body also has space for an abstract, and acknowledgments. Fields in the body of the documents generate the table of contents, list of tables, and list of figures.



MY THESIS

by

A. U. Thor

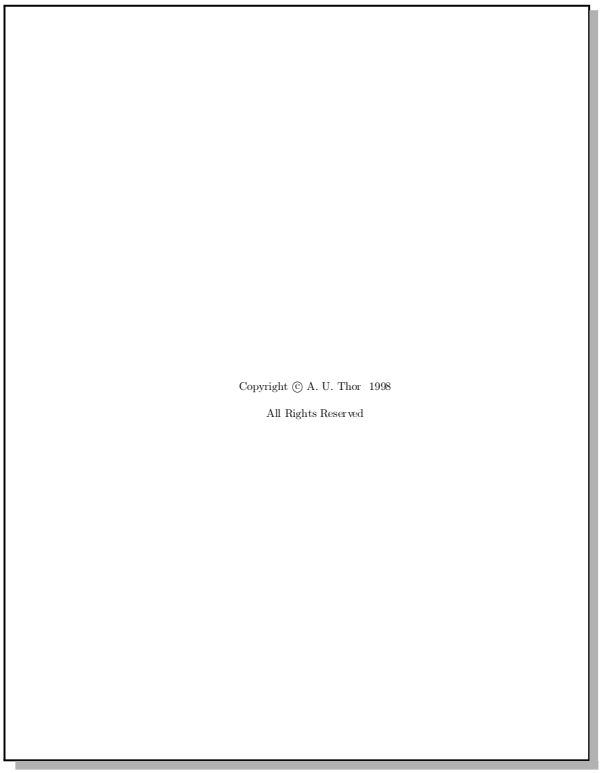
A Thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Mediocrity

Department of Mathematics

The University of Utah

October 1998



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ABSTRACT

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi}-1$. Replace this text with your own abstract.

CONTENTS

ABSTRACT ..... **iv**

LIST OF TABLES ..... **vi**

LIST OF FIGURES ..... **vii**

ACKNOWLEDGMENTS ..... **viii**

I The First Part **ix**

Chapter

1 Sample Mathematics and Text **1**

1.1 In-line and Displayed Mathematics 1
1.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 2
1.3 Theorems, Lemmata, and Other Theorem-like Environments 2

2 Features of this Shell **4**

2.1 Section Headings 4
2.2 Tags 4
2.3 List Environments 5

Appendices
A. The First Appendix 7

LIST OF TABLES

2.1 Available tags 5

ACKNOWLEDGMENTS

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any financial support or special research materials given you. Copyright permissions may also be acknowledged here by stating that: (1) permission has been granted for reproduction of tables, tests, and other copyright protected items and (2) gives the source of the permission. Use a Preface rather than Acknowledgments when the research is discussed, for example, "the motivation for the study, the background of the project, the scope of the research, and the purpose of the paper" (Turabian, 1996, p. 7-8).

CHAPTER 1

Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [?].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

1.2 Mathematics in Section Heads $\int_a^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

CHAPTER 2

Features of this Shell

2.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 SubsectionThis is some harmless text under a subsection.

Subsubsection This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

2.2 Tags

You can apply the logical markup tag Emphasized.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and Typewriter.

You can apply the special, mathematics only, tags $\mathfrak{fraktur}$, $\mathbb{BLACKBOARD\ BOLD}$, and $\mathcal{CALLIGRAPHIC}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

Text Tags	Mathematics Tags	Size Tags
Bold	Fraktur	tiny
Italics	Blackboard Bold	scriptsize
Roman	Calligraphic	footnotesize
Sans Serif		small
Slanted		large
Small Caps		large
Typewriter		huge
		Huge

Table 2.1: Available tags

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out "scratchpad" computations.

Following is a group of paragraphs marked as Body Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

> The buck stops here. Harry Truman
>
> Ask not what your country can do for you; ask what you can do for your country. John F Kennedy
>
> I am not a crook. Richard Nixon
>
> It's no exaggeration to say the undecideds could go one way or another. George Bush

2.3 List Environments

You can create numbered, bulleted, and description lists using the tag popup at the bottom left of the screen.

A. The First Appendix

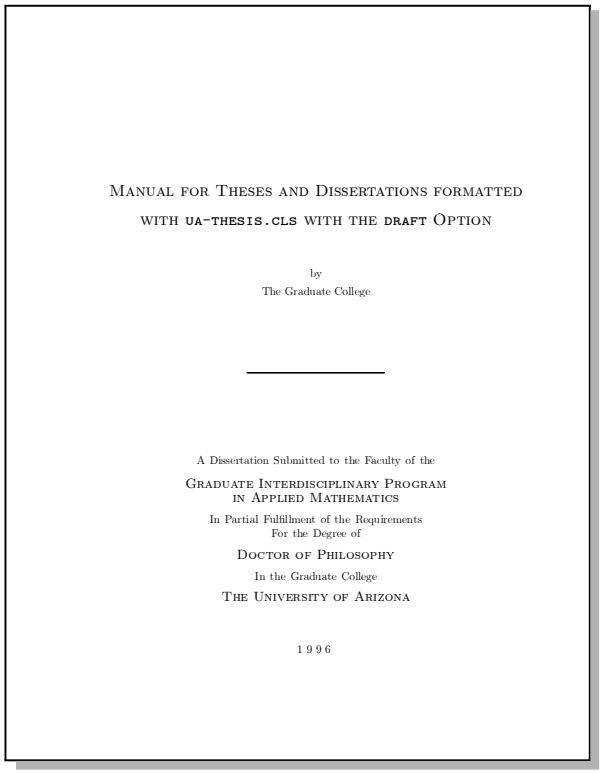
The appendix fragment is used only once. Subsequent appendices can be created using the Section tag.

University of Arizona

Document class base file: ua-thesis.cls

Options and Packages	Defaults
Document class options	Draft
Packages:	
None	

The front matter for this shell includes the title, author's name, date, and abstract. The acknowledgments are entered in the body of the thesis. New chapters begin on the next consecutive page. The shell supports theorem environments.



MANUAL FOR THESES AND DISSERTATIONS FORMATTED

WITH UA-THESIS.CLS WITH THE DRAFT OPTION

by

The Graduate College

A Dissertation Submitted to the Faculty of the

GRADUATE INTERDISCIPLINARY PROGRAM
IN APPLIED MATHEMATICS

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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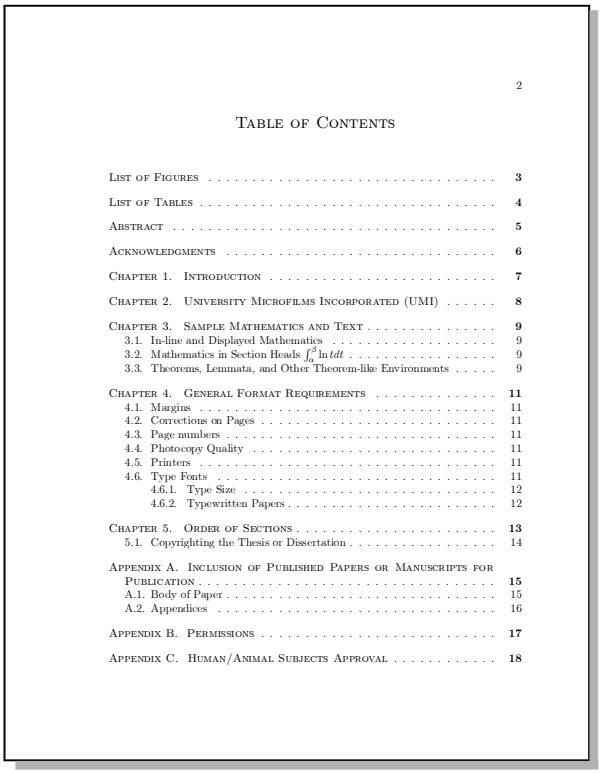

2

TABLE OF CONTENTS

LIST OF FIGURES 3

LIST OF TABLES 4

ABSTRACT 5

ACKNOWLEDGMENTS 6

CHAPTER 1. INTRODUCTION 7

CHAPTER 2. UNIVERSITY MICROFILMS INCORPORATED (UMI) 8

CHAPTER 3. SAMPLE MATHEMATICS AND TEXT 9
3.1. In-line and Displayed Mathematics 9
3.2. Mathematics in Section Heads $\int_\alpha^\beta \ln t\,dt$ 9
3.3. Theorems, Lemmata, and Other Theorem-like Environments 9

CHAPTER 4. GENERAL FORMAT REQUIREMENTS 11
4.1. Margins 11
4.2. Corrections on Pages 11
4.3. Page numbers 11
4.4. Photocopy Quality 11
4.5. Printers 11
4.6. Type Fonts 11
4.6.1. Type Size 12
4.6.2. Typewritten Papers 12

CHAPTER 5. ORDER OF SECTIONS 13
5.1. Copyrighting the Thesis or Dissertation 14

APPENDIX A. INCLUSION OF PUBLISHED PAPERS OR MANUSCRIPTS FOR PUBLICATION 15
A.1. Body of Paper 15
A.2. Appendices 16

APPENDIX B. PERMISSIONS 17

APPENDIX C. HUMAN/ANIMAL SUBJECTS APPROVAL 18

List of Tables

Table 4.1. Availalde tags 12

Abstract

This example dissertation contains the original text of the "Manual for Theses and Dissertations", written by the Graduate College at the University of Arizona. It has been obtained via the internet at

http://grad.admin.arizona.edu/degreecert/ThesisManual/manual.htm

on May 10, 1996. The page was last updated November 9, 1995. No guarantee is made that this information is current, and students should check with the Graduate College before submitting a dissertation or thesis.

Acknowledgments

The contents of this example dissertation has been entirely written by the Graduate College at the University of Arizona.

Chapter 1

Introduction

Use this manual as a guide for setting up the physical format of your thesis, dissertation or document. Your thesis will represent you, your department, and The University of Arizona in the international scholarly community. Your work is important and worthy of professional presentation. This manual lists Graduate College requirements for the mechanical aspects of meeting these high standards.

In this manual the word thesis, includes documents and dissertations. If format requirements for the document or dissertation vary from those for the thesis, specific requirements for each type of paper will be listed.

Two final copies of the thesis must be submitted; both must meet all specifications of this manual. The two final copies should be submitted unbound in a box to the Graduate College Degree Certification Office.

Chapter 2

University Microfilms Incorporated (UMI)

Your thesis will be published by University Microfilms Incorporated, Ann Arbor, Michigan. Upon certification by your major professor, your examining committee, and the Graduate College, a copy of the thesis and a Special Abstract are forwarded to UMI. The manuscript is cataloged and microfilmed, the microfilm negative is inspected and put in vault storage. Paper copies of your work will be produced on demand by UMI. Catalog information is sent to the Library of Congress for production and distribution of catalog cards for libraries. The original copy of the thesis is returned to The University of Arizona Library. The Special Abstract is printed in Microfilm Abstracts and distributed to leading libraries in the United States and abroad and to a selected list ofjournals and abstracting services.

Publication by UMI does not preclude publication by other means later. You are urged to submit your work for publication in a scholarly or professional journal. Suitable acknowledgment must indicate that the publication is a thesis, dissertation, or document, or portion thereof, which was submitted in partial fulfillment of the requirements for a degree at the University of Arizona.

You must complete a UMI publication agreement, available through the Degree Certification Office.

Chapter 3

Sample Mathematics and Text

3.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{3.1}$$

is displayed and automatically numbered as equation 3.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [?].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

3.2 Mathematics in Section Heads $\int_{\alpha}^{\beta} \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

3.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{3.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{3.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (3.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{3.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (3.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (3.2) by substituting $1/z$ back for z. □

Chapter 4

General Format Requirements

4.1 Margins

Text, illustrations (figures) or tables must not appear outside the specified margins. Specific margin requirements are listed in ORDER OF SECTIONS under each category. Page numbers are the only item which may appear outside the margin requirements.

4.2 Corrections on Pages

Do not use correction fluid or correction tape. These materials flake off in handling and storage, exposing the original errors.

4.3 Page numbers

The title page is page 1 of the thesis. All pages which follow are numbered in a single sequence with arabic numerals. Page numbers must be placed at least 1 " below the top of the sheet, and 1" from the right edge. The numbers must be at least 1/4" above the first line of text. You may omit the printed page number on the title page; all other pages must have printed page numbers. Do not use page headers. Do not use the phrase, Page xx; just the numeral.

4.4 Photocopy Quality

Photocopies must meet all requirements for margins, readability, and type of paper. This includes all photocopied documents, tables, illustrations and appendix pages.

4.5 Printers

Laser printing or other letter quality printing is required. Impact, or daisy wheel printing is generally acceptable. 24-pin dot matrix near letter quality and draft quality printing are not acceptable.

4.6 Type Fonts

Standard serif typefaces such as Courier and Times Roman reproduce and microfilm well. Do not use modern Sans Serif types, which read well in the original but do not reduce well for microfilming. Ornamental styles such as Script and Old English may

Text Tags	Mathematics Tags	Size Tags
Bold	Fraktur	tiny
Italics	Blackboard Bold	scriptsize
Roman	Calligraphic	footnotesize
Sans Serif		small
Slanted		large
Small Caps		large
Typewriter		huge
		Huge

TABLE 4.1. Available tags

not be used. Limit the use of italic styles to standard uses in bibliographic citations and foreign words. Boldface should be restricted to very small segments of the text and to infrequent occurrences. These text tags are available:

4.6.1 Type Size

Use 12-point or 14-point for proportional fonts; 10 cpi or 12 cpi for non-proportional fonts. A proportional font allows proportional spacing - a feature that gives a printed page a more pleasing appearance by allowing for different widths of characters. The letter w, for example, is wider than the letter i. Normally, when these letters are printed, both are given the same amount of space; the result can be gaps that are visually distracting. With proportional printing, the letter w is given more space than the letter i, creating a more aesthetic and professional-looking line of text.

4.6.2 Typewritten Papers

Papers prepared on good quality electric typewriters are acceptable. All margin, paper quality, and typographic requirements apply. Type size should be Pica (10 cpi) or Elite (12 cpi)

Appendix A

INCLUSION OF PUBLISHED PAPERS OR MANUSCRIPTS FOR PUBLICATION

Under a policy adopted by The University of Arizona Graduate Council in January, 1992, your department may allow published and publishable papers to be included as part of your thesis. The reprints or manuscripts are treated as appendices, and the body of your thesis must include a summary of your contribution and a summary of the research. The Graduate College will accept theses in this format from any unit with an implementation policy on file with the Graduate College Degree Certification Office.

A.1 Body of Paper

The ORDER OF SECTIONS applies. In addition, the Body of the Paper must include two chapters as follows:

1. An introduction describing the unique contribution of your work to the field of study. Use the following subsections as appropriate:
   (a) Explanation of the problem and its context
   (b) A review of the literature
   (c) Explanation of thesis format This subsection explains the relationship of the papers included and your contribution to each of the papers; where doctoral research efforts are part of a larger collaborative project, you must be able to identify one aspect of the project as your own and demonstrate an original contribution. Your role in the research and production of the published paper(s) should be clearly specified.
2. A chapter titled PRESENT STUDY which summarizes the methods, results, and conclusions of the research. The chapter should begin with a statement such as:
   The methods, results, and conclusions of this study are presented in the papers appended to this thesis. The following is a summary of the most important findings in these papers.

A.2 Appendices

All mechanical requirements for Appendices listed in the ORDER OF SECTIONS apply. Your appendices will consist of:

1. A reprint of each paper as a separate appendix in the following order:
   (a) a copy of the title page of the journal in which the article appeared
   (b) the statement of permission for use of copyrighted material (see Appendix B: Permissions)
   (c) the reprint(s), copied single-sided onto the required type of paper
2. Supplementary materials such as data tables, graphs, and maps which might ordinarily appear as appendices to a thesis.

These two types of appendices form a single sequence, assigned letters and titled as described in this manual. All Appendix pages are part of the single pagination sequence of the thesis. The page numbers will be typed in as needed.

Appendix B

PERMISSIONS

Use of copyrighted material in your thesis, including illustrations, usually requires written permission from the copyright holder. Start this time-consuming process as early as possible. Play it safe and assume that you must obtain permission if the material is copyrighted. Consult your advisor or departmental graduate secretary about this process.

Exceptions, sometimes pertaining to small fractions of a musical score or other document, are governed by the concept of "fair use." Factors weighed in determining "fair use" include: the purpose of the use, whether commercial or non-profit and educational; the nature of the copyrighted work; the amount and substance of the material used in relation to the entire work; and the effect of the use upon the potential market for or value of the copyrighted work. The "fair use" concept is explained in detail in the Chicago Manual of Style. According to the Association of American University Presses, permission is required for quotations which are complete units, for example, an entire poem, letter, book chapter, or an entire map, chart, drawing or other illustration.

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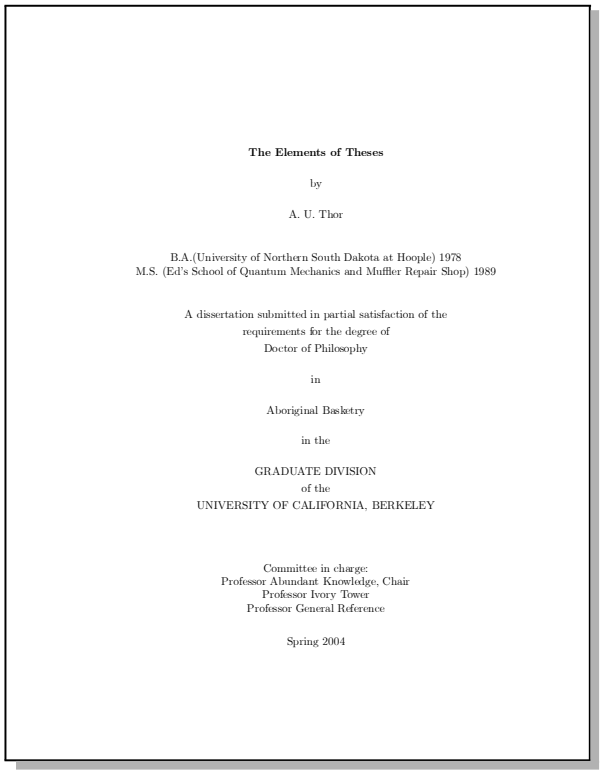
University of California

Document class base file: ucthesis.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
sw20uctd	None

The front matter contains fields for the title, author, degree year and semester, degree name, committee chairperson and members, previous degrees, academic field, campus, and abstract. The body of the document contains the beginning and end of the frontmatter environment inside encapsulated TEX fields. Between the frontmatter TEX fields are the dedication and acknowledgements, and encapsulated TEX fields to typeset the table of contents, list of figures, and list of tables.



The Elements of Theses

by

A. U. Thor

B.A.(University of Northern South Dakota at Hoople) 1978
M.S. (Ed's School of Quantum Mechanics and Muffler Repair Shop) 1989

A dissertation submitted in partial satisfaction of the
requirements for the degree of
Doctor of Philosophy

in

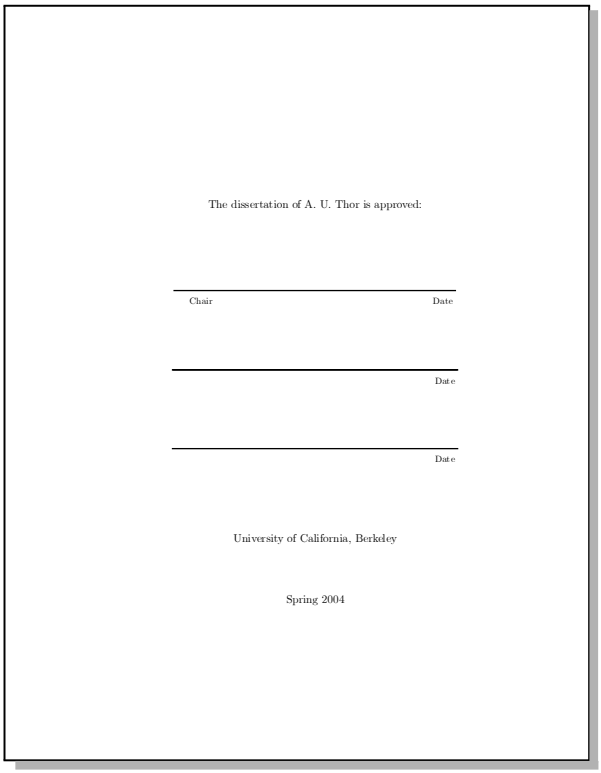
Aboriginal Basketry

in the

GRADUATE DIVISION
of the
UNIVERSITY OF CALIFORNIA, BERKELEY

Committee in charge:
Professor Abundant Knowledge, Chair
Professor Ivory Tower
Professor General Reference

Spring 2004



The dissertation of A. U. Thor is approved:

Chair Date

Date

Date

University of California, Berkeley

Spring 2004

The Elements of Theses

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by

A. U. Thor

Abstract

The Elements of Theses

by

A. U. Thor

Doctor of Philosophy in Aboriginal Basketry

University of California, Berkeley

Professor Abundant Knowledge, Chair

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

Professor Abundant Knowledge
Dissertation Committee Chair

To my mother,who never gave up on me.

Contents

List of Figures **iii**

List of Tables **iv**

I First Part **1**

1 Introduction **2**

2 Sample Mathematics and Text **3**
2.1 In-line and Displayed Mathematics . . . 3
2.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ . . . 4
2.3 Theorems, Lemmata, and Other Theorem-like Environments . . . 4

3 Features of this Shell **6**
3.1 Section Headings . . . 6
3.1.1 Subsection . . . 6
3.2 Tags . . . 7
3.3 List Environments . . . 7

4 Conclusion **9**

A Some Ancillary Material **10**

List of Tables

1.1 A normalsize table. There has been a complaint that table captions are not single-spaced. This is odd because the code indicates that they should be. . 2
1.2 A small table. 2

Acknowledgments

I want to gratefully acknlowedge all those who helped me in this task.

Chapter 1

Introduction

Every dissertation should have an introduction. You might not realize it, but the introduction should introduce the concepts, background, and goals of the dissertation.

Title	Author
War And Peace	Leo Tolstoy
The Great Gatsby	F. Scott Fitzgerald

Table 1.1: A normalsize table. There has been a complaint that table captions are not single-spaced. This is odd because the code indicates that they should be.

Table 1.2: A small table.

Title	Author
War And Peace	Leo Tolstoy
The Great Gatsby	F. Scott Fitzgerald

Chapter 2

Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

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for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Chapter 3

Features of this Shell

3.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

3.1.1 Subsection

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Subsubsection

This is some harmless text under a subsubsection.

Subsubsubsection This is some harmless text under a subsubsubsection.

Subsubsubsubsection This is some harmless text under a subsubsubsubsection.

Chapter 4

Conclusion

Every dissertation needs a conclusion, but clearly, we don't see one here. Our conclusion is that this research was useless.

Appendix A

Some Ancillary Material

Ancillary material should be put in appendices, which appear after the bibliography.

University of Georgia

Document class base file: report.cls

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Document class options	Body text 12 pt
Packages:	
uga	None

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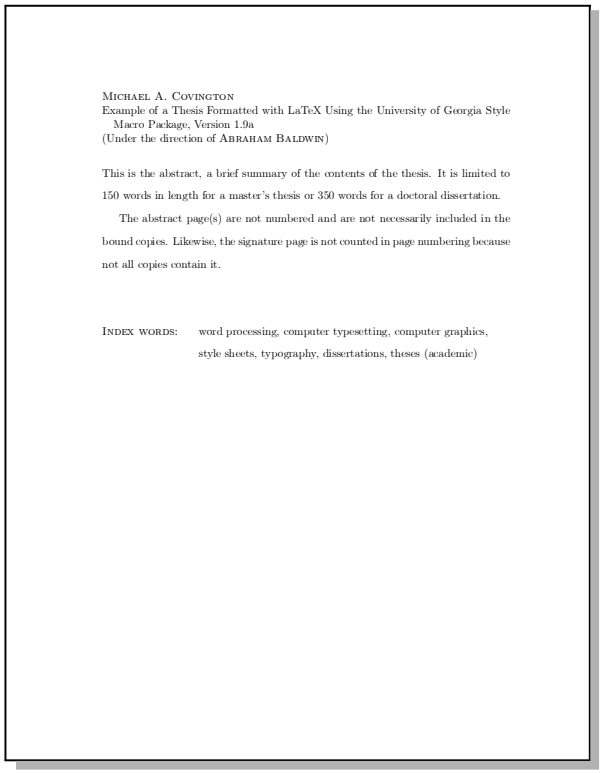

Michael A. Covington
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(Under the direction of Abraham Baldwin)

This is the abstract, a brief summary of the contents of the thesis. It is limited to 150 words in length for a master's thesis or 350 words for a doctoral dissertation.

The abstract page(s) are not numbered and are not necessarily included in the bound copies. Likewise, the signature page is not counted in page numbering because not all copies contain it.

Index words: word processing, computer typesetting, computer graphics, style sheets, typography, dissertations, theses (academic)

Example of a Thesis
Formatted with LaTeX
Using the University of Georgia
Style Macro Package, Version 1.9a

by

Michael A. Covington

B.A., The University of Georgia, 1977
M.Phil., Cambridge University, 1978

A Dissertation Submitted to the Graduate Faculty
of The University of Georgia in Partial Fulfillment
of the
Requirements for the Degree
Doctor of Philosophy

Athens, Georgia

1991

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Example of a Thesis
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by

Michael A. Covington

Approved:

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Major Professor

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Date

Approved:

_____
Graduate Dean

_____
Date

Acknowledgements

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any financial support or special research materials given you. Copyright permissions may also be acknowledged here by stating that: (1) permission has been granted for reproduction of tables, tests, and other copyright protected items and (2) gives the source of the permission. Use a Preface rather than Acknowledgments when the research is discussed, for example, "the motivation for the study, the background of the project, the scope of the research, and the purpose of the paper" (Turabian, 1996, p. 7-8).

Preface

This is the preface and it is created using a TeX field in a paragraph by itself. When the document is loaded, this appears in the edit window like a normal chapter, but it is actually an unnumbered chapter. The TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents..

Table of Contents

Page

Acknowledgements ii

Preface iii

Chapter

1 Introduction 1

2 Sample Mathematics and Text 3

2.1 In-line and Displayed Mathematics 3

2.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 4

2.3 Theorems, Lemmata, and Other Theorem-like Environments 4

3 Features of the Shell 6

3.1 Section Headings 6

3.2 Tags 6

3.3 List Environments 7

Bibliography 9

Appendix 10

Chapter 1

Introduction

This document is an example of how to format a thesis or dissertation using LaTeX and get results acceptable at The University of Georgia.

LaTeX (with its parent TeX) has two major advantages for academic use. First, to a remarkable degree it makes design decisions automatically. The author supplies only the words of a text, and LaTeX places them on the page in an aesthetic manner, avoiding rivers and awkward breaks. In this respect LaTeX is like a very intelligent typist or typesetter.

Second, LaTeX can typeset complex mathematical formulas such as

$$\sum_{i=1}^{\infty} x^{y+z} = \frac{p+q+r}{s+t+u+v}$$

both displayed (as shown above) and in the text, as in $\sum_{i=1}^{\infty} x^{y+z} = \frac{p+q+r}{s+t+u+v}$. This makes TeX and LaTeX indispensable for mathematicians, physicists, and the like.

LaTeX also has built–in formats for other kinds of displayed material such as verse,

Freude, schöne Götterfunken
Tochter aus Elysium,
Wir betreten, feuertrunken,
Himmlische, dein Heiligtum!

and direct quotations:

> The society that scorns excellence in plumbing, because plumbing is a humble activity, and tolerates shoddiness in philosophy, because philosophy is an exalted activity, will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.
>
> — John Gardner, *Excellence*

If you wish, quotes and other displayed material can be single–spaced; here is an example of how that is achieved:

> Yes, I wrote "The Purple Cow."
> I'm sorry now I wrote it.
> But I can tell you anyhow
> I'll kill you if you quote it!
>
> — Anonymous?

Well, maybe it's not as anonymous as it looks. There you have it.[1] Whenever you quote parts of a computer program in English text, they should be set off by using typewriter type.

[1] This is a footnote. Notice that footnotes are single–spaced even though the text is double–spaced.

Chapter 2

Sample Mathematics and Text

2.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{2.1}$$

is displayed and automatically numbered as equation 2.1.

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2.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{2.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{2.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (2.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{2.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Chapter 3

Features of the Shell

3.1 Section Headings

Use the Section tag for major sections, and the Subsection tag for subsections.

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3.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, Small Caps, and `Typewriter`.

You can apply the special, mathematics only, tags $\mathbb{BLACKBOARD\ BOLD}$, $\mathcal{CALLIGRAPHIC}$, and $\mathfrak{fraktur}$. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

Bibliography

LaTeX has powerful bibliography–generating tools built in, and you're welcome to use them. If you don't, you should use the "reflist" environment (a U.Ga. specialty) instead, and type your reference list, like this:

Abrahams, P. W.; Berry, K.; and Hargreaves, K. A. (1990) *TeX for the Impatient*. Reading, Mass.: Addison–Wesley.

Knuth, D. E. (1984) *The TeXbook*. Reading, Mass.: Addison–Wesley.

Lamport, L. (1986) *LaTeX: A Document Preparation System*. Reading, Mass.: Addison–Wesley.

Appendix

Some More Things

This is where an appendix could go. To include a single appendix simply place the command "`\appendix`" and then use the "`\chapter*`" command to begin and name your appendix.

If you have more than one appendix, use the command "`\appendices`" and the regular "`\chapter`" command to begin and name each appendix.

University of New Mexico

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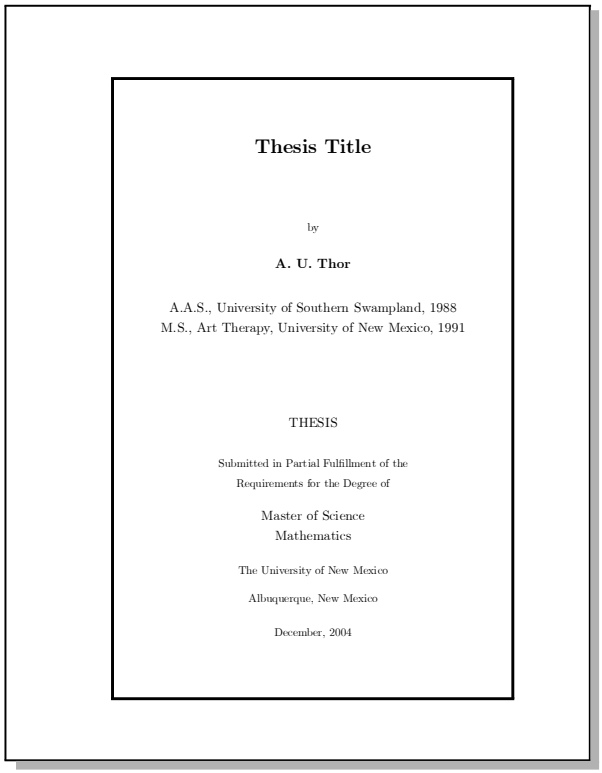


Thesis Title

by

A. U. Thor

A.A.S., University of Southern Swampland, 1988
M.S., Art Therapy, University of New Mexico, 1991

THESIS

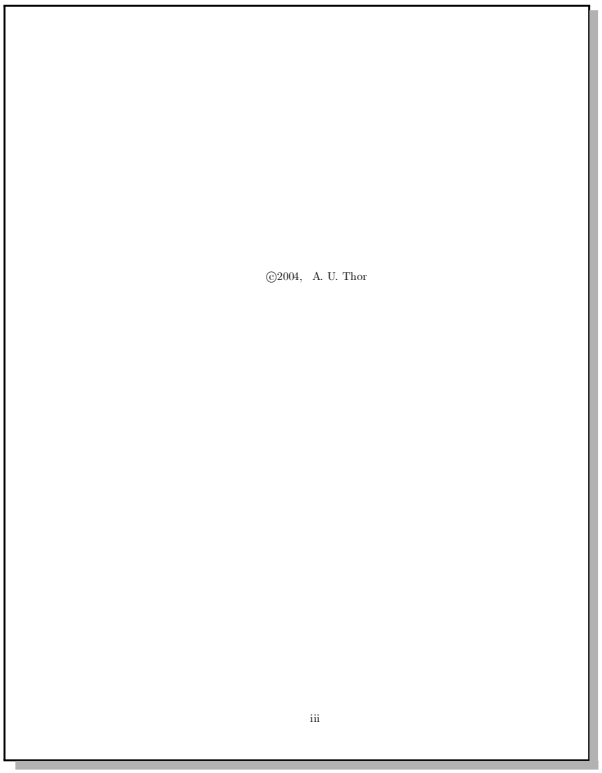
Submitted in Partial Fulfillment of the
Requirements for the Degree of

Master of Science
Mathematics

The University of New Mexico

Albuquerque, New Mexico

December, 2004



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iii

Dedication

This work is dedicated to my mother and father and to the many others, though unnamed, who helped me in the completion of this task.

"A bird in hand is worth two in the bush" – Anonymous

Acknowledgments

I would like to thank my advisor, Professor Martin Sheen, for his support and some great action movies. I would also like to thank my dog, Spot, who only ate my homework two or three times. I have several other people I would like to thank, as well.[1]

[1] To my brother and sister, who are really cool.

Thesis Title

by

A. U. Thor

ABSTRACT OF THESIS

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Abstract

We study the effects of warm water on the local penguin population. The major finding is that it is extremely difficult to induce penguins to drink warm water. The success factor is approximately $-e^{-i\pi} - 1$. Replace this text with your own abstract.

Contents

List of Figures ix

List of Tables x

Glossary xi

Introduction xii

1 Sample Mathematics and Text 1

1.1 In-line and Displayed Mathematics 1

1.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 2

1.3 Theorems, Lemmata, and Other Theorem-like Environments 2

A Proving $E = MC^2$ 4

B Derivation of $A = \pi r^2$ 5

Glossary

a_{lm}	Taylor series coefficients, where $l, m = \{0..2\}$
$A_{\mathbf{p}}$	Complex-valued scalar denoting the amplitude and phase.
A^T	Transpose of some relativity matrix.

Introduction

Every dissertation should have an introduction. You might not realize it, but the introduction should introduce the concepts, backgrouand, and goals of the dissertation.

Chapter 1

Sample Mathematics and Text

1.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

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$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

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where for the remainder $R(z)$ we have

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. ■

Appendix A

Proving $E = MC^2$

I refer the reader to many of grandpa's famous books on this subject.

Appendix B

Derivation of $A = \pi r^2$

A circle is really a square without corners. QED.

University of New South Wales

Document class base file: unswthesis.cls

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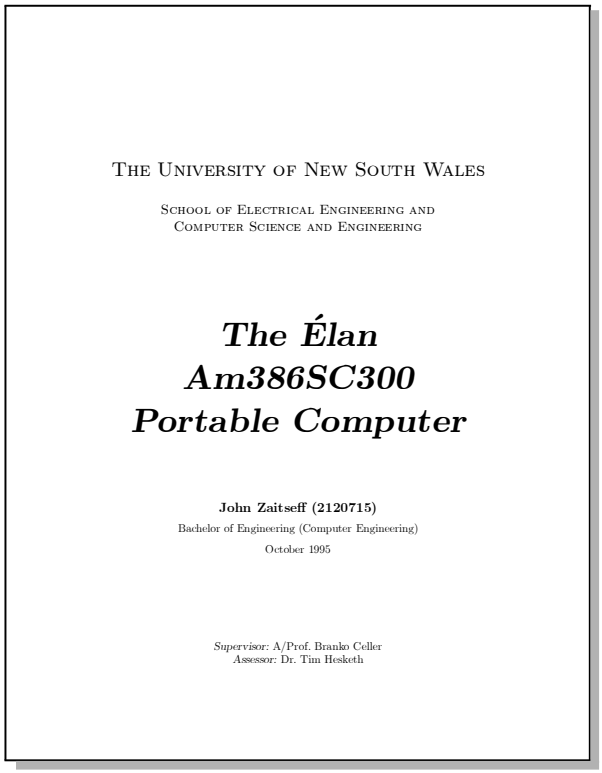


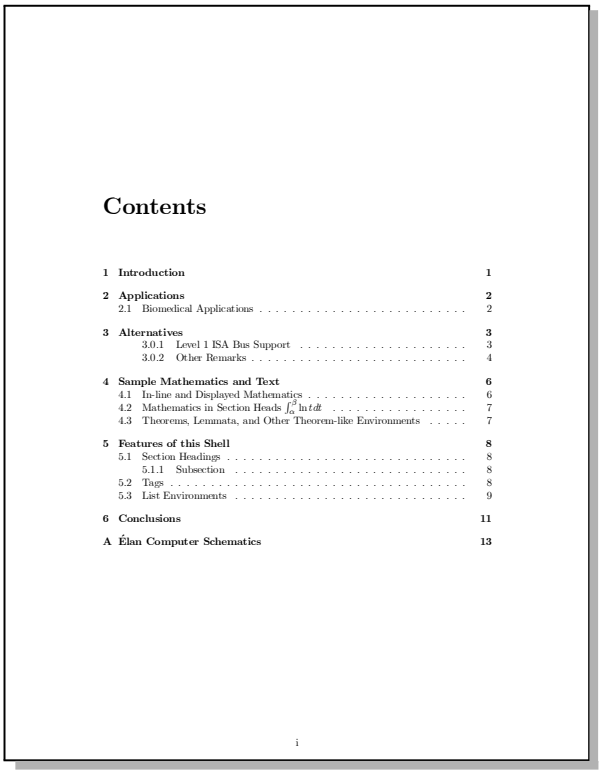
THE UNIVERSITY OF NEW SOUTH WALES

SCHOOL OF ELECTRICAL ENGINEERING AND
COMPUTER SCIENCE AND ENGINEERING

The Élan Am386SC300 Portable Computer

John Zaitseff (2120715)
Bachelor of Engineering (Computer Engineering)
October 1995

Supervisor: A/Prof. Branko Celler
Assessor: Dr. Tim Hesketh



Contents

1 Introduction 1

2 Applications 2
2.1 Biomedical Applications . . . 2

3 Alternatives 3
3.0.1 Level 1 ISA Bus Support . . . 3
3.0.2 Other Remarks . . . 4

4 Sample Mathematics and Text 6
4.1 In-line and Displayed Mathematics . . . 6
4.2 Mathematics in Section Heads $\int_a^3 \ln t\,dt$ . . . 7
4.3 Theorems, Lemmata, and Other Theorem-like Environments . . . 7

5 Features of this Shell 8
5.1 Section Headings . . . 8
5.1.1 Subsection . . . 8
5.2 Tags . . . 8
5.3 List Environments . . . 9

6 Conclusions 11

A Élan Computer Schematics 13

List of Tables

3.1 Selection of the Élan operating mode 3
3.2 ISA bus support, common subset 4
3.3 Power Management Unit operating modes 5

Chapter 1

Introduction

One of the fastest growing areas of computing today is the area of portable, often hand-held, devices. These highly-integrated computers are used in increasingly many areas, especially as Personal Digital Assistants, including hand-held data loggers, bar code scanners and meter readers.

This thesis describes the design of one such portable system, based on the Élan microprocessor. This system features the use of the current state-of-the-art technology, including high-density surface-mounted components, low battery power consumption, and directly integrated support for the new PCMCIA standard.

Acknowledgements

The acknowledgment is the place to thank the faculty, staff, family, and friends who have assisted you in preparing your thesis or dissertation. You may also acknowledge any financial support or special research materials given you. Copyright permissions may also be acknowledged here by stating that: (1) permission has been granted for reproduction of tables, tests, and other copyright protected items and (2) gives the source of the permission. Use a Preface rather than Acknowledgments when the research is discussed, for example, "the motivation for the study, the background of the project, the scope of the research, and the purpose of the paper" (Turabian, 1996, p. 7-8).

Chapter 2

Applications

2.1 Biomedical Applications

The rôle of the Élan Portable Computer, the system this thesis describes, in such biomedical systems would be to actually take the place of the hand-held device taking data readings, or as part of the instrumentation modules placed around the house. The requirements of the Élan Portable Computer in such systems are described in the next chapter.

This paragraph is so important that we'll repeat it for emphasis. The rôle of the Élan Portable Computer, the system this thesis describes, in such biomedical systems would be to actually take the place of the hand-held device taking data readings, or as part of the instrumentation modules placed around the house. The requirements of the Élan Portable Computer in such systems are described in the next chapter.

Chapter 3

Alternatives

In Chapter 2, we saw a number of applications in which a portable computer may be used.

...

The Élan CPU chooses the configuration mode at reset time, on the rising edge of $\overline{\text{RESIN}}$, by sampling the state of three pins: $\overline{\text{DTR}}$, $\overline{\text{RTS}}$ and SOUT. These pins are usually used for serial port output, except for their special function at reset. To select one of the modes, we place 10 kΩ pull-up or pull-down resistors on these pins, as per Table 3.1. In this table, a "1" indicates pull-up, "0" indicates pull-down, and "X" indicates that no resistor is required.

3.0.1 Level 1 ISA Bus Support

Table 3.2 shows the meaning of the pins used in this mode.

Before we continue, a few points to note about the notation:

- A pin name like PIN indicates either an *active-high* pin (i.e., where the pin is asserted when it is at a HIGH level, generally either 3.3 V or 5 V), or a *rising-edge*

Pin state at reset			Mode Selected
$\overline{\text{DTR}}$	$\overline{\text{RTS}}$	SOUT	
0	0	X	Internal CGA
1	0	0	Local bus, 1 × clock
1	0	1	Local bus, 2 × clock
X	1	X	Maximum ISA

0 = pull-down resistor (to GND)
1 = pull-up resistor (to VCC5)
X = no resistor

Table 3.1: Selection of the Élan operating mode

Pin Name	Type[a]	Function
AEN	O	DMA address enable (DMA cycle)
TC	O	DMA terminal count
SYSCLK	O	System clock [b]
PIRQ1	I	Programmable interrupt request 1
DRQ2	I	DMA channel 2 request
X1OUT / BAUDOUT	O	Video clock or serial port clock
$\overline{\text{MCS16}}$	I	Memory device is 16-bit[c]
$\overline{\text{IOCS16}}$	I	I/O device is 16-bit[c]
$\overline{\text{SBHE}}$	O	Byte high enable[c]
IRQ14	I	Interrupt request 14[c]

Table 3.2: ISA bus support, common subset

pin (i.e., where the pin is asserted on the rising edge, from LOW to HIGH, of a pulse).

- A name like $\overline{\text{PIN}}$ is the opposite: it indicates an *active-low* pin, or one that is asserted on the *falling-edge* HIGH to LOW of a signal.
- A name like PIN[3:0] is *shorthand* for pins individually named PIN0, PIN1, PIN2 and PIN3.
- All pins are with reference to the microprocessor, i.e., "Output" means output *from* the processor to external peripherals.

The following is a description of the pins listed in Table 3.2. Much of this information is from pages 39 to 49 of the *Data Book* [2], although some critical information is not listed in *any* part of the supplied documentation...

These modes are summarised in Table 3.3; see also pages 9–15 of the *Data Book* [2].

3.0.2 Other Remarks

One of the additional features of the internal video controller is that it may be programmed to appear in the I/O location for a CGA controller (3D4h–3DAh) or in the I/O location for a Hercules Graphics Adapter (3B4h–3BFh).

Mode	Description
Full speed	All clocks are at fastest speed and all peripherals are powered up.
Low speed	CPU clock is reduced to a lower speed; all other clocks are at full speed.
Doze	CPU, system and DMA clocks, as well as the high-speed phase-lockod loop, are stopped.
Sleep	Additional clocks and peripherals are stopped (depending on the programmed settings), as is the serial port controller (UART).
Suspend	A special BIOS routine is invoked to save the system state, then virtually all of the system is powered down. The phase-locked loops are turned off.
Off	A powered-down mode in which PGP2 and PGP3 are set to a predefined state. Memory refresh is still active. No activity can cause the processor to leave this state, except for a power-on reset.

Table 3.3: Power Management Unit operating modes

Chapter 4

Sample Mathematics and Text

4.1 In-line and Displayed Mathematics

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{4.1}$$

is displayed and automatically numbered as equation 4.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a nonexpansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T [?].

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

4.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

4.3 Theorems, Lemmata, and Other Theorem-like Environments

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1 *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{4.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{4.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (4.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{4.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (4.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\varepsilon/2},$$

that implies (4.2) by substituting $1/z$ back for z. ■

Chapter 6

Conclusions

In conclusion, this project has been *very* challenging, but very interesting as well. Although we were not able to proceed with the implementation, we are more than reasonably satisfied that the design is sound and thorough. If the project is continued in the next year, the Élan Portable Computer will eventually emerge as a symbol of today's modern computing.

Bibliography

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[2] "*Élan Am386SC300 Microprocessor Data Sheet*", Mobile Computing Products Division of Advanced Micro Devices, Inc.

[3] "*Élan Am386SC300 Microprocessor Progmmmers' Reference Manual*", Mobile Computing Products Division of Advanced Micro Devices, Inc.

[4] "*PC Interrupt List*" Ralf Brown, Release 47, August 1995. Available as `ftp://ftp.cs.cmu.edu/afs/cs.cmu.edu/user/ralf/pub/inter47*.zip`

[5] "*PCMCIA Standards*", "*PC Card Standard 2.1*", "*Socket Services Specification 2.1*", "*Card Services Specification 2.1*", "*PC Card ATA Specification 1.02*", "*AIMS Specification 1.01*", "*Recommended Extensions 1.0*", Personal Computer Memory Card International Association, July 1993.

Appendix A

Élan Computer Schematics

The following pages show the final Élan Portable Computer schematics. The actual schematics are in the following order:

1. System Block Diagram
2. Élan Microprocessor
3. Miscellaneous
4. System Memory
5. Display Interface
6. PCMCIA Buffers
7. PCMCIA Connectors
8. Parallel Port
9. Serial Port
10. Keyboard Connector
11. Expansion Connector
12. DC/DC Power
13. Power Switching

University of Pittsburgh

Document class base file: pittetd.cls

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Packages:	
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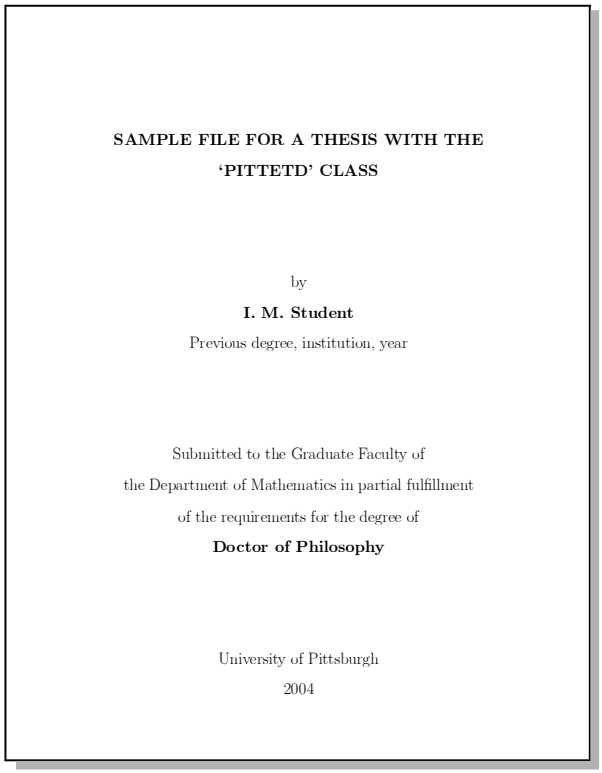
The front matter contains fields for the title, short title, author, degree, date, school, committee member names, and abstract.



SAMPLE FILE FOR A THESIS WITH THE
'PITTETD' CLASS

by

I. M. Student

Previous degree, institution, year

Submitted to the Graduate Faculty of
the Department of Mathematics in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

University of Pittsburgh
2004

UNIVERSITY OF PITTSBURGH
MATHEMATICS DEPARTMENT

This dissertation was presented
by

I. M. Student

It was defended on
July 20th 1967
and approved by
Chair's name, Departmental Affiliation
Second member's name, Dept. Aff.
Third member's name, Dept. Aff.
Dissertation Advisors: Chair's name, Departmental Affiliation,
Second advisor, Dept. Aff.

ii

SAMPLE FILE FOR A THESIS WITH THE 'PITTETD' CLASS

I. M. Student, PhD

University of Pittsburgh, 2004

This document is a sample file for the creation of ETD's at Pitt through LaTeX.

TABLE OF CONTENTS

1.0 SAMPLE MATHEMATICS AND TEXT 2
1.1 In-line and Displayed Mathematics 2
1.2 Mathematics in Section Heads $\int_\alpha^\beta \ln t dt$ 3
1.3 Theorems, Lemmata, and Other Theorem-like Environments 3
BIBLIOGRAPHY 5
APPENDIX. TITLE OF APPENDIX 6

1.0 SAMPLE MATHEMATICS AND TEXT

1.1 IN-LINE AND DISPLAYED MATHEMATICS

The expression $\sum_{i=1}^{\infty} a_i$ is in-line mathematics, while the numbered equation

$$\sum_{i=1}^{\infty} a_i \tag{1.1}$$

is displayed and automatically numbered as equation 1.1.

Let H be a Hilbert space, C be a closed bounded convex subset of H, T a non-expansive self map of C. Suppose that as $n \to \infty$, $a_{n,k} \to 0$ for each k, and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \to 0$. Then for each x in C, $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T.

Two sets of LaTeX parameters govern mathematical displays.[1] The spacing above and below a display depends on whether the lines above or below are short or long, as shown in the following examples.

A short line above:

$$x^2 + y^2 = z^2$$

and a short line below.

A long line above may depend on your margins

$$\sin^2\theta + \cos^2\theta = 1$$

as will a long line below. This line is long enough to illustrate the spacing for mathematical displays, regardless of the margins.

[1] LaTeX automatically selects the spacing depending on the surrounding line lengths.

1.2 MATHEMATICS IN SECTION HEADS $\int_\alpha^\beta \ln TDT$

Mathematics can appear in section heads. Note that mathematics in section heads may cause difficulties in typesetting styles with running headers or table of contents entries.

1.3 THEOREMS, LEMMATA, AND OTHER THEOREM-LIKE ENVIRONMENTS

A number of theorem-like environments is available. The following lemma is a well-known fact on differentiation of asymptotic expansions of analytic functions.

Lemma 1. *Let $f(z)$ be an analytic function in $\mathbb{C}_+$. If $f(z)$ admits the representation*

$$f(z) = a_0 + \frac{a_1}{z} + o\left(\frac{1}{z}\right),$$

for $z \to \infty$ inside a cone $\Gamma_\varepsilon = \{z \in \mathbb{C}_+ : 0 < \varepsilon \le \arg z \le \pi - \varepsilon\}$ then

$$a_1 = -\lim z^2 f'(z),\ z \to \infty,\ z \in \Gamma_\varepsilon. \tag{1.2}$$

Proof. Change z for $1/z$. Then $\Gamma_\varepsilon \to \overline{\Gamma}_\varepsilon = \{z \in \mathbb{C}_- : \overline{z} \in \Gamma_\varepsilon\}$ and

$$f(1/z) = a_0 + a_1 z + o(z). \tag{1.3}$$

Fix $z \in \overline{\Gamma}_\varepsilon$, and let $C_r(z) = \{\lambda \in \mathbb{C}_- : |\lambda - z| = r\}$ be a circle with radius $r = |z| \sin\varepsilon/2$. It follows from (1.3) that

$$\frac{1}{2\pi i}\int_{C_r(z)} \frac{f(\lambda)\,d\lambda}{(\lambda - z)^2} = \sum_{m=0}^{1} a_m \frac{1}{2\pi i}\int_{C_r(z)} \frac{(\lambda - z_0)^m\,d\lambda}{(\lambda - z)^2} + R(z), \tag{1.4}$$

where for the remainder $R(z)$ we have

$$\begin{aligned} |R(z)| &\le r^{-1} \max_{\lambda \in C_r(z)} o(|z|) = r^{-1} \max_{\lambda \in C_r(z)} |\lambda| \cdot O(|z| + r) \\ &= \frac{|z| + r}{r} \cdot O(|z| + r) = \frac{1 + \sin\varepsilon}{\sin\varepsilon} \cdot O(|z|). \end{aligned}$$

Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

$$\frac{d}{dz} f(1/z) = a_1 + R(z) \to a_1, \text{ as } z \to \infty,\ z \in \overline{\Gamma}_{\epsilon/2},$$

that implies (1.2) by substituting $1/z$ back for z. □

Following is a short bibliography. It has no relationship to the previous text, but can be used to show sample citations such as [4] and [6]. This typesetting style places each citation inside square brackets. If you want multiple citations to appear in a single set of square brackets you must type all of the citation keys inside a single citation, separating each with a comma. Here is an example: [2, 3, 4].

Head	Head	Head
entry	entry	entry
entry	entry	entry
entry	entry	entry

Table 1: Sample table.

BIBLIOGRAPHY

[1] American Petroleum Institute, Technical Data Book - Petroleum Refining, 5th edition, 1992

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

[3] Harstad, K. and Bellan, J., "The Lewis number under supercritical conditions", *Int. J. Heat Mass Transfer*, in print

[4] Hirshfelder, J. O., Curtis, C. F. and Bird, R. B., *Molecular Theory of Gases and Liquids*, John Wiley and Sons, Inc., 1964

[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

APPENDIX

TITLE OF APPENDIX

This is the Appendix.

University of Washington

Document class base file: uwthesis.cls

Options and Packages	Defaults
Document class options	Standard
Packages:	
None	

The front matter contains a field to mark the preliminary pages and fields for the title, author, year, degree, committee member names, copyright information, and abstract.

Thesis Title

A. U. Thor

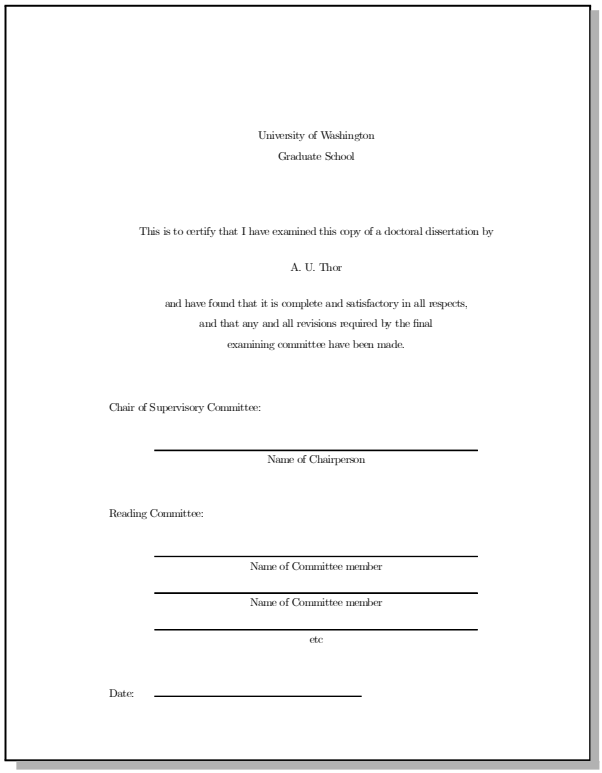
A dissertation submitted in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy

University of Washington

2000

Program Authorized to Offer Degree: Computing & Communications



University of Washington
Graduate School

This is to certify that I have examined this copy of a doctoral dissertation by

A. U. Thor

and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by the final
examining committee have been made.

Chair of Supervisory Committee:

Name of Chairperson

Reading Committee:

Name of Committee member

Name of Committee member

etc

Date:

Extensive copying of this demonstration thesis, including its input files and macro package, is allowable for scholarly purposes, consistent with "fair use" as prescribed in the U.S. Copyright Law. Requests for copying or reproduction of this thesis may be avoided by a simple connection to the author's web site at

`http://staff.washington.edu/fox/tex/uwthesis.html`

where all the necessary files and documentation may be found.

Signature_____

Date_____

University of Washington

Abstract

Thesis Title

by A. U. Thor

Chair of Supervisory Committee:

Professor Name of Chairperson
Chair's department

This sample dissertation is an aid to students who are attempting to format their theses with LaTeX, a sophisticated text formatter widely available at the University of Washington and other institutions of higher learning.

It describes the use of a specialized macro package developed specifically for thesis production at the University. The macros customize LaTeX for the correct thesis style, allowing the student to concentrate on the substance of his or her text.

It demonstrates the solutions to a variety of formatting challenges found in thesis production.

It serves as a template for a real dissertation.

TABLE OF CONTENTS

List of Figures **ii**

List of Tables **iii**

Glossary **iv**

Chapter 1: Sample Mathematics and Text **1**

1.1 In-line and Displayed Mathematics 1

1.2 Mathematics in Section Heads $\int_a^3 \ln t dt$ 2

1.3 Theorems, Lemmata, and Other Theorem-like Environments 2

Appendix A: Proving $E = MC^2$ **3**

Appendix B: Derivation of $A = \pi r^2$ **4**

Bibliography **6**

GLOSSARY

ARGUMENT: replacement text which customizes a LaTeX macro for each particular usage.

BACK-UP: a copy of a file to be used when catastrophe strikes the original. People who make no back-ups deserve no sympathy.

CONTROL SEQUENCE: the normal form of a command to LaTeX.

DELIMITER: something, often a character, that indicates the beginning and ending of an argument. More generally, a deliniter is a field separator.

DOCUMENT CLASS: a file of macros that tailors LaTeX for a particular document. The macros described by this thesis constitute a document class.

DOCUMENT OPTION: a macro or file of macros that further modifies LaTeX for a particular document. The option `[chapternotes]` constitutes a document option.

FIGURE: illustrated material, including graphs, diagrams, drawings and photographs.

FONT: a character set (the alphabet plus digits and special symbols) of a particular size and style. A couple of fonts used in this thesis are twelve point roman and *twelve point roman slanted*.

FOOTNOTE: a note placed at the bottom of a page, end of a chapter, or end of a thesis that comments on or cites a reference for a designated part of the text.

FORMATTER: (as opposed to a word-processor) arranges printed material according to instructions embedded in the text. A word-processor, on the other hand, is normally controlled by keyboard strokes that move text about on a display.

ACKNOWLEDGMENTS

The author wishes to express sincere appreciation to University Computing Services, where he has had the opportunity to work with the TEX formatting system, and to the author of TEX, Donald Knuth, *il miglior fabbro*.

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DEDICATION

To Mother

Chapter 1

SAMPLE MATHEMATICS AND TEXT

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where for the remainder $R(z)$ we have

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Therefore $R(z) \to 0$ as $z \to \infty$, $z \in \overline{\Gamma}_{\varepsilon/2}$, and hence by the Cauchy theorem (1.4) implies

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that implies (1.2) by substituting $1/z$ back for z. ■

Appendix A

PROVING $E = MC^2$

I refer the reader to many of grandpa's famous books on this subject.

VITA

Arthor U. Thor was born in an insignificant town whose only claim to fame is that it produced such a fine specimen of a researcher.

BIBLIOGRAPHY

[1] American Petroleum Institute, Technical Data Book - Petroleum Refining, 5th edition, 1992

[2] Harstad, K. and Bellan, J., "Isolated fluid oxygen drop behavior in fluid hydrogen at rocket chamber pressures", *Int. J. Heat Mass Transfer*, 1998a, **41**, 3537-3550

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[5] Prausnitz, J., Lichtenthaler, R. and de Azevedo, E., Molecular thermodynamics for fluid-phase equilibrium, Prentice -Hall, Inc., 1986

[6] Reid, R. C., Prausnitz, J. M. and Polling, B. E., The Properties of Gases and Liquids, 4th Edition, McGraw-Hill Book Company, 1987

Part II

Gallery of BibTeX Bibliography Styles

10 Using BibTeX with SWP or SW

If the shell for your *SWP* or *SW* document supports bibliographies, you can create automatic bibliographies with BibTeX, a public domain program created by Oren Patashnik. BibTeX uses the citations you insert into your document to extract bibliographic information from established reference databases. When you compile your document, BibTeX generates the bibliography, storing it in a file with the same name as your document but with a `.bbl` extension. When you typeset, LaTeX includes the `.bbl` file in your document, formatting it and the citations according to the *bibliography style* you have selected.

You must typeset your document to generate a BibTeX bibliography and the citations that refer to it. If you don't typeset, the bibliography and citation cross-references aren't generated. The bibliography doesn't appear on the preview screen or in print, and the citations appear in shaded boxes as they do in the document window.

Creating a BibTeX bibliography involves several steps:

- Creating or obtaining a BibTeX database.
- Specifying a BibTeX bibliography.
- Inserting an instruction to include the bibliography file, select the database, and specify the style.
- Creating citations in your document that refer to the entries in the selected database.
- Generating the bibliography.

Detailed instructions for creating a BibTeX bibliography appear in the online Help and in *Creating Documents with Scientific WorkPlace and Scientific Word*. Additional information about BibTeX is available if you typeset preview the `btxdoc.dvi` and `btxhak.dvi` files in the `TCITeX\doc\BibTeX` subdirectory of your program installation.

Understanding BibTeX Databases

BibTeX databases contain information about publications of widely varied types, including articles, books and sets of books, booklets, collections and the articles they contain, manuals, theses, dissertations, proceedings and the papers they contain, technical reports, unpublished work, and other miscellaneous publications. Each publication included in a BibTeX database has an optional key and some basic information required by BibTeX, as for this article:

```
@ARTICLE{article-minimal,
    author = {L[eslie] A. Aamport},
    title = {The Gnats and Gnus Document Preparation Sys-
```

```
tem},
      journal = {\mbox{G-Animal's} Journal},
      year = 1986,
   }
```

Entries may also contain some optional information, as shown here:

```
   @ARTICLE{article-full,
      author = {L[eslie] A. Aamport},
      title = {The Gnats and Gnus Document Preparation Sys-
tem},
      journal = {\mbox{G-Animal's} Journal},
      year = 1986,
      volume = 41,
      number = 7,
      pages = "73+",
      month = jul,
      note = "This is a full ARTICLE entry",
   }
```

The database information is stored in a logical format with no visual formatting information. The bibliography style you choose determines which information to use when you cite the publication and determines how to order, format, and punctuate it in the citation itself and in the reference list of your document.

Although BibTEX databases are available from various sources, you can create your own. One tool for creating, manipulating, and managing a bibliographic database is the freely distributed program BibDB. Your program CD includes the Windows version of BibDB in the `WinBibDB` subdirectory, and it is installed if you select the complete installation type when *SWP* or *SW* was installed. The details of using BibDB to create and edit BibTEX databases are outside the scope of this document, but more information is available in the `WinBibDB` subdirectory and in many LATEX books.

Understanding BibTEX Bibliography Styles

LATEX formats BibTEX bibliographies and citations according to the bibliography style that you select. BibTEX styles are widely available; over 100 are included with *SWP* and *SW*, and others are available from the Comprehensive TEX Archive Network (CTAN) at **http://www.ctan.org**. BibTEX styles carry the extension `.bst` and are installed in the `TCITeX\BibTeX\bst` subdirectory and additional subdirectories below this level of your program installation. Although you can change the directory used for BibTEX databases and styles, we recommend that you leave the directory locations unchanged.

Most of the bibliography styles provided with *SWP* and *SW* are appropriate for creating bibliographies, reference lists, and citations in books, articles, and other documents. Some styles have special uses, such as for creating bibliographies in HTML documents or creating personal address books. Although many of the styles produce similar results, no two are identical. Many have been designed to meet the editorial requirements of specific journals or publishers. Some require specific packages or document classes. Just as you choose a document shell with care, so too should you choose a bibliography style. Make certain the style you choose produces citations and references

appropriate for your work. If you are unsure of your requirements, we urge you to use one of these standard BibTeX styles:

BibTeX Style	Format
`abbrv.bst`	Entries are labeled with numbers and sorted alphabetically, with first names, months, and journal names abbreviated.
`alpha.bst`	Entries are sorted alphabetically and labeled using an abbreviation of the author's name and the publication date.
`plain.bst`	Entries are labeled with numbers and sorted alphabetically.
`unsrt.bst`	Entries are labeled with numbers and appear in the order of first citation.

Selecting a BibTeX Bibliography Style

As noted above, creating a BibTeX bibliography for your *SWP* or *SW* document involves several steps, including selecting the bibliography style (`.bst`) file you want to use to format the database information. You initially select the style when you include the `.bbl` file in your document, but you can change the selection at any time.

► **To select a bibliography style**

1. Make sure you have chosen a BibTeX bibliography for your document: from the Typeset menu, choose Bibliography Choice, choose BibTeX, and then choose OK.

2. If the instruction to include the bibliography, which appears as

, has already been added to the document, place the insertion point to its right and choose Properties.

   or

   If the instruction has not yet been added, insert it:

   a. Move the insertion point to the end of the line that is to precede the bibliography and press ENTER.

   b. On the Typeset Object toolbar, click the Bibliography button or, from the Insert menu, choose Typeset Object, and then choose Bibliography.

   c. From the BibTeX Bibliography dialog box, select the database files containing the references you want to cite. More than one BibTeX database file can be selected.

3. In the Style area of the BibTeX Bibliography dialog box, select the BibTeX style for formatting the references and citations.

4. Choose OK.

To help you select a suitable bibliography style, this chapter provides information about many of the bibliography styles included with the program. The chapter indicates how each style formats citations and the corresponding reference list labels and how

it organizes the reference list. For each style, the chapter notes the names of sample databases provided and required programs, LaTeX packages, or LaTeX documentclasses, if any. It also includes brief information about the origin and intended use of the style and a sample typeset page showing a paragraph with citations and the corresponding reference list formatted according to the style.

Unless otherwise noted, the sample pages were created with the Standard LaTeX Article document shell. Therefore, the reference list carries the title *References*. With the Standard LaTeX Book or Report shells, the reference list carries the title *Bibliography*. Also unless otherwise noted, the pages were created using the sample database `xampl.bib`.

11 BibTeX Bibliography Styles

aaai-named.bst

Format of reference list label	[Author, date] [Author and Author date] [Author *et al.*, date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author and Author, date] [Author *et al.*, date]
Required files	`aaai-named.sty`
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports short citations (year only) and requires certain redefinitions in the typesetting specifications to work properly.

► **To modify the typesetting specifications for aaai-named.bst**

1. Using an ASCII editor, open a new file and enter the following lines of code:

   \let\@internalcite\cite

   \def\cite{\def\citename##1{##1}\@internalcite}

   \def\shortcite{\def\citename##1{}\@internalcite}

   \def\@biblabel#1{\def\citename##1{##1}[#1]\hfill}

2. Save the file in the `TCITeX/TeX/LaTeX/TCImisc` directory of your program installation using the name `aaai-named.sty`.

3. Open your document in *SWP* or *SW* and follow the standard procedure to add the package `aaai-named.sty` to your document.

4. Create the citations and generate the BibTeX bibliography.

Sample Citations and Bibliography

Example using aaai-named

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho *et al.*, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1973c1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[Knuth, 1973c1981] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[Knvth, 1988] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[Lincoll, 1977] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[Oaho *et al.*, 1983] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

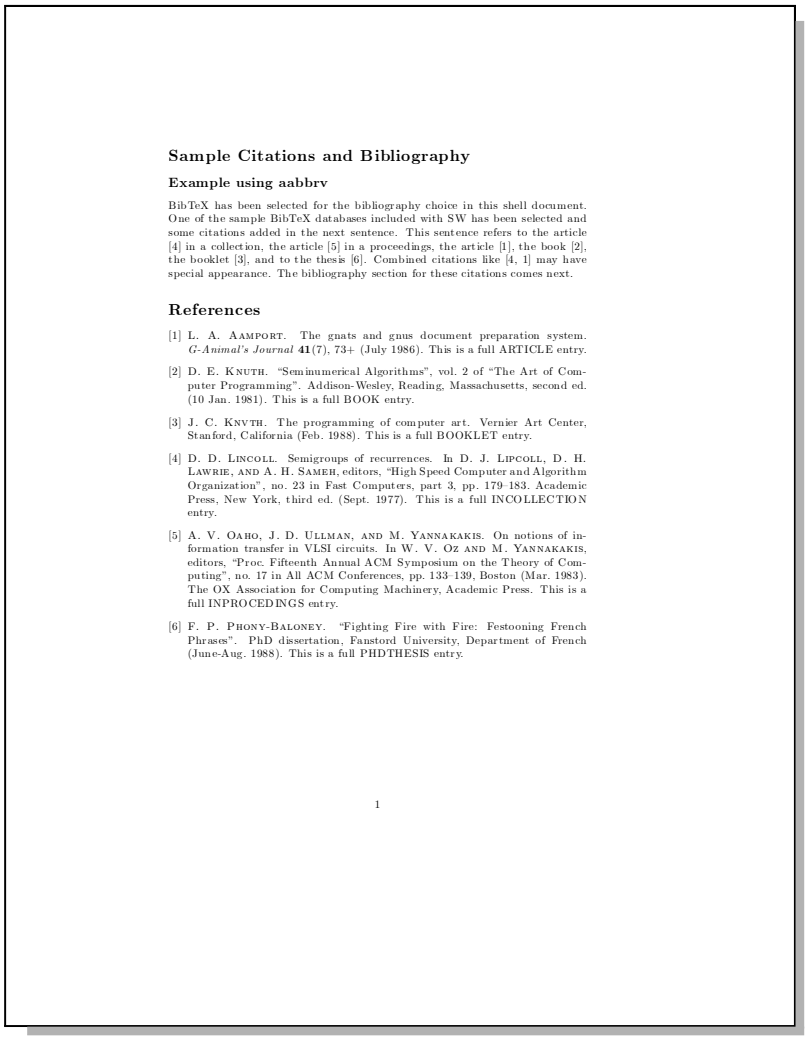
[Phony-Baloney, 1988] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

aabbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Required files	`LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears.

The style abbreviates first names, month names, and journal names in the entries. Otherwise, it is the same as `aplain.bst`, which sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using aabbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[2] D. E. Knuth. "Seminumerical Algorithms", vol. 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second ed. (10 Jan. 1981). This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California (Feb. 1988). This is a full BOOKLET entry.

[4] D. D. Lincoll. Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, "High Speed Computer and Algorithm Organization", no. 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third ed. (Sept. 1977). This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis. On notions of information transfer in VLSI circuits. In W. V. Oz and M. Yannakakis, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", no. 17 in All ACM Conferences, pp. 133–139, Boston (Mar. 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[6] F. P. Phony-Baloney. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-Aug. 1988). This is a full PHDTHESIS entry.

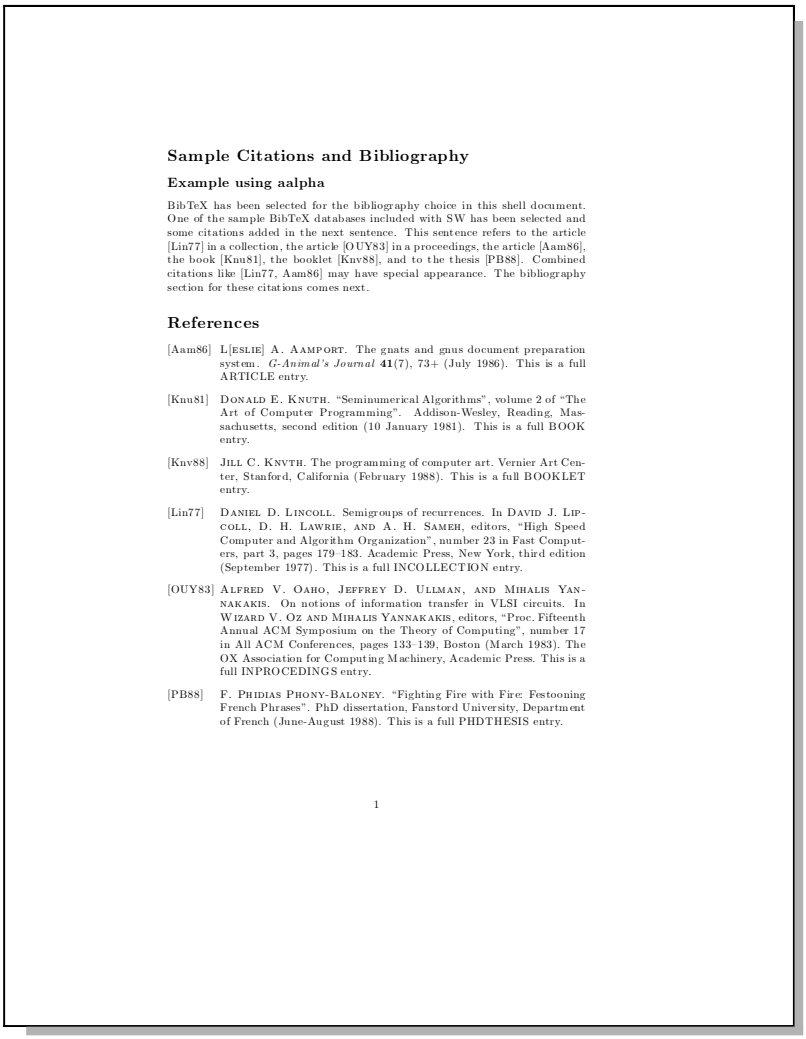
1

aalpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Required files	`TCITeX/TeX/LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears.

The style uses source labels such as *Knu66,* formed from the author's name and the year of publication. Otherwise, it is the same as `aplain.bst`, which sorts entries alphabetically.



Sample Citations and Bibliography

Example using aalpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. "Seminumerical Algorithms", volume 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second edition (10 January 1981). This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California (February 1988). This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, "High Speed Computer and Algorithm Organization", number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition (September 1977). This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", number 17 in All ACM Conferences, pages 133–139, Boston (March 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

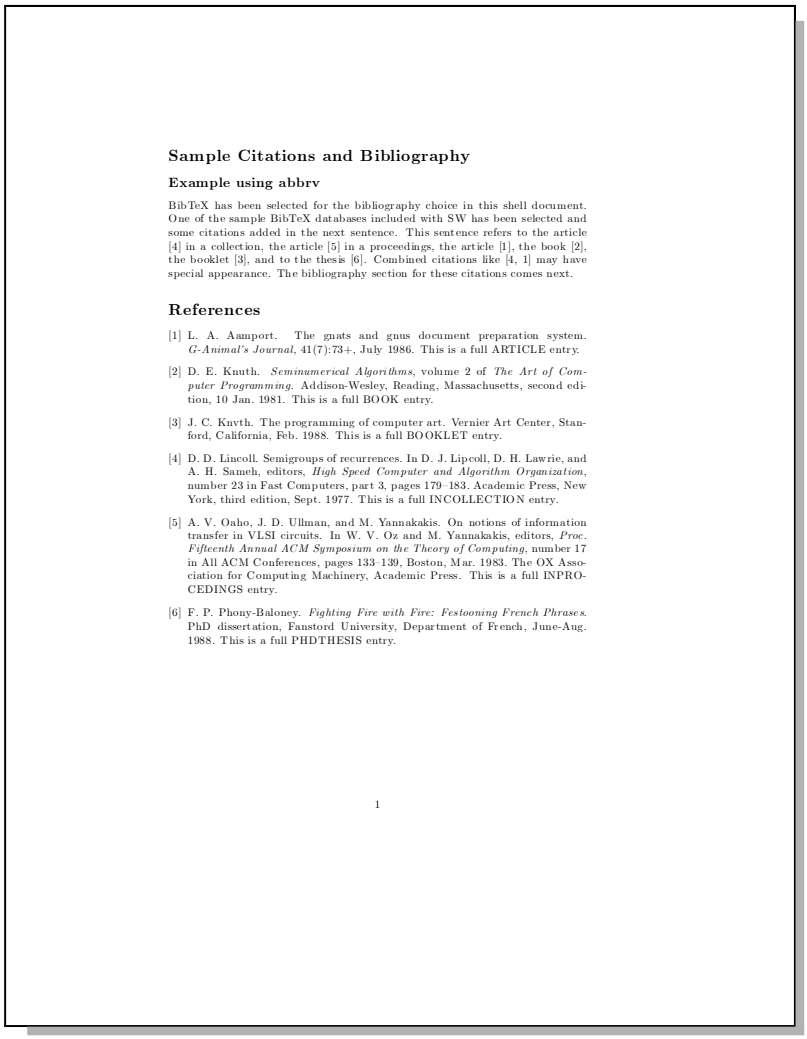
[PB88] F. Phidias Phony-Baloney. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-August 1988). This is a full PHDTHESIS entry.

1

abbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`

One of the BibTeX standard bibliography styles, `abbrv.bst` creates compact entries by abbreviating first names, month names, and journal names. Otherwise, it is the same as `plain.bst`, which sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using abbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[2] D. E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 Jan. 1981. This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll. Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, Sept. 1977. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis. On notions of information transfer in VLSI circuits. In W. V. Oz and M. Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, Mar. 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

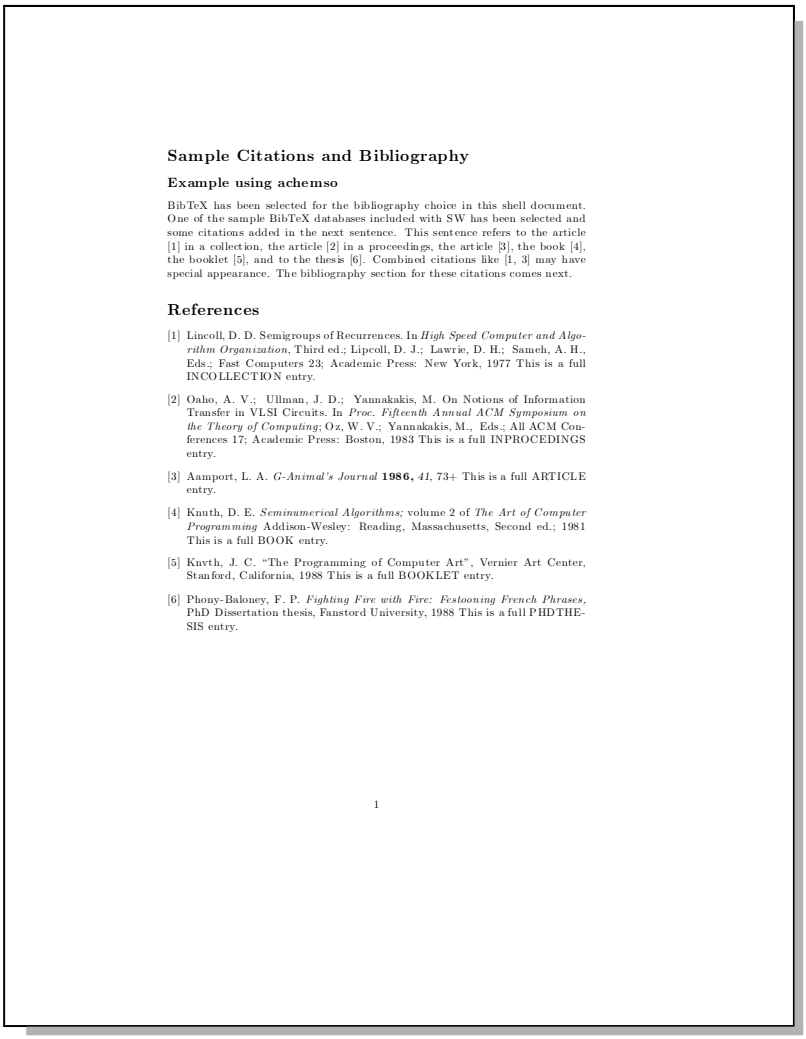
[6] F. P. Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

achemso.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/achemso`

The style is provided with the ***achemso*** package, which produces bibliographies appropriate for use with the American Chemical Society article shell. The style is similar to the LaTeX standard bibliography style `unsrt.bst`, with bibliography entries appearing in the order of their first citation.



Sample Citations and Bibliography

Example using achemso

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D. Semigroups of Recurrences. In *High Speed Computer and Algorithm Organization*, Third ed.; Lipcoll, D. J.; Lawrie, D. H.; Sameh, A. H., Eds.; Fast Computers 23; Academic Press: New York, 1977 This is a full INCOLLECTION entry.

[2] Oaho, A. V.; Ullman, J. D.; Yannakakis, M. On Notions of Information Transfer in VLSI Circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*; Oz, W. V.; Yannakakis, M., Eds.; All ACM Conferences 17; Academic Press: Boston, 1983 This is a full INPROCEDINGS entry.

[3] Aamport, L. A. *G-Animal's Journal* **1986,** *41*, 73+ This is a full ARTICLE entry.

[4] Knuth, D. E. *Seminumerical Algorithms;* volume 2 of *The Art of Computer Programming* Addison-Wesley: Reading, Massachusetts, Second ed.; 1981 This is a full BOOK entry.

[5] Knvth, J. C. "The Programming of Computer Art", Vernier Art Center, Stanford, California, 1988 This is a full BOOKLET entry.

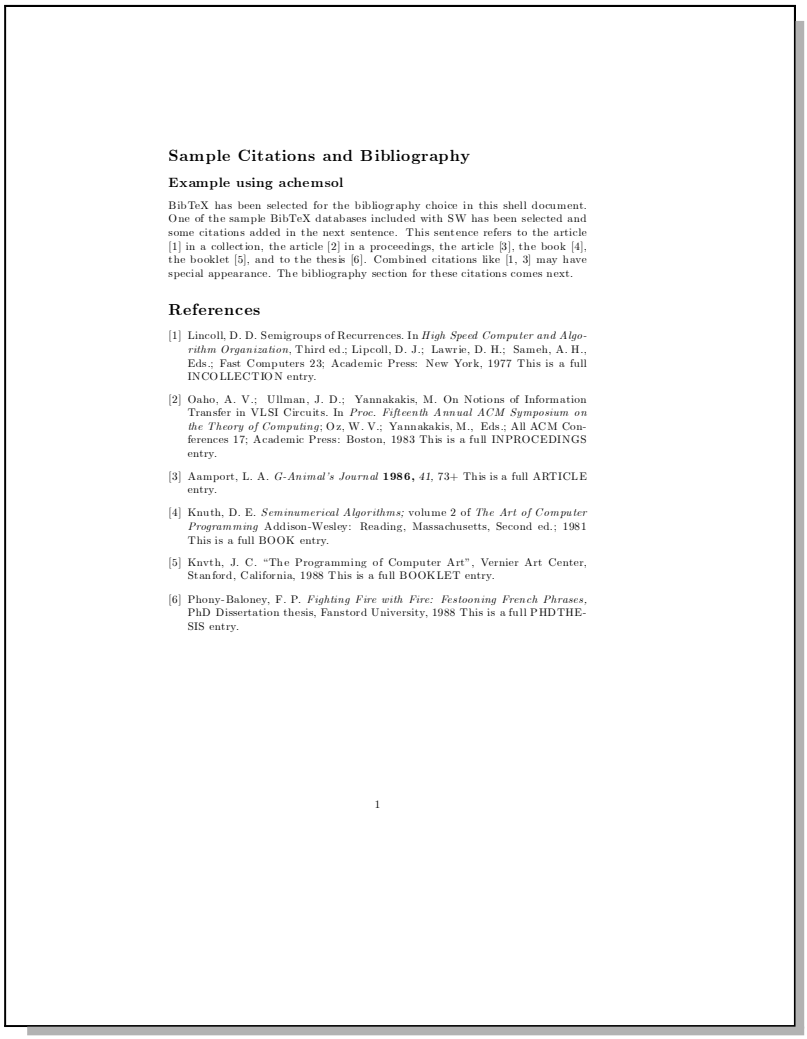
[6] Phony-Baloney, F. P. *Fighting Fire with Fire: Festooning French Phrases*, PhD Dissertation thesis, Fanstord University, 1988 This is a full PHDTHESIS entry.

1

achemsol.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/achemso`

The style is provided with the ***achemso*** package, which produces bibliographies appropriate for use with the American Chemical Society article shell. The style is the same as `achemso.bst`, except that it includes the annotate field. Bibliography entries appear in the order of their first citation.



Sample Citations and Bibliography

Example using achemsol

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D. Semigroups of Recurrences. In *High Speed Computer and Algorithm Organization*, Third ed.; Lipcoll, D. J.; Lawrie, D. H.; Sameh, A. H., Eds.; Fast Computers 23; Academic Press: New York, 1977 This is a full INCOLLECTION entry.

[2] Oaho, A. V.; Ullman, J. D.; Yannakakis, M. On Notions of Information Transfer in VLSI Circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*; Oz, W. V.; Yannakakis, M., Eds.; All ACM Conferences 17; Academic Press: Boston, 1983 This is a full INPROCEDINGS entry.

[3] Aamport, L. A. *G-Animal's Journal* **1986,** *41*, 73+ This is a full ARTICLE entry.

[4] Knuth, D. E. *Seminumerical Algorithms;* volume 2 of *The Art of Computer Programming* Addison-Wesley: Reading, Massachusetts, Second ed.; 1981 This is a full BOOK entry.

[5] Knvth, J. C. "The Programming of Computer Art", Vernier Art Center, Stanford, California, 1988 This is a full BOOKLET entry.

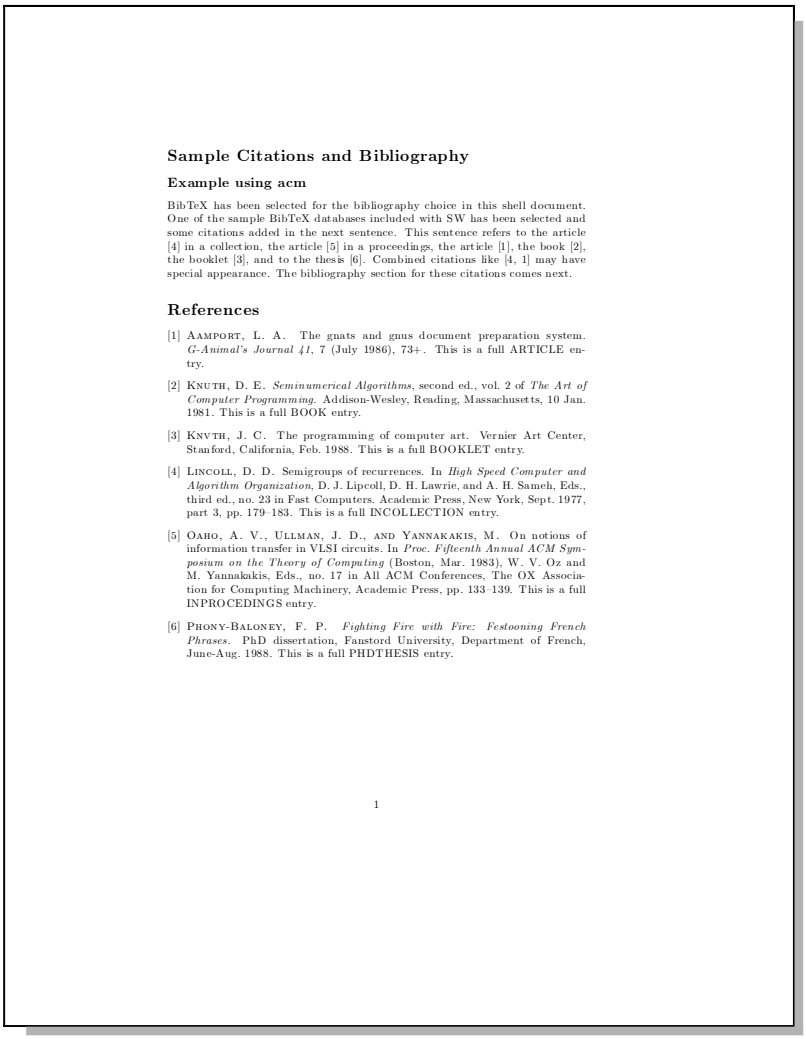
[6] Phony-Baloney, F. P. *Fighting Fire with Fire: Festooning French Phrases*, PhD Dissertation thesis, Fanstord University, 1988 This is a full PHDTHESIS entry.

1

acm.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`
Sample BibTEX Database: `pubform.bib`	

In entries for the *ACM Transactions* bibliography style (24-Jan.-88 version), the author's name appears in small capitals, with the last name followed by initials. Some dates appear in parentheses. Otherwise, the style is similar to `abbrv.bst`, which sorts entries alphabetically and labels them with numbers and which abbreviates first names, month names, and journal names. This BibTEX style is included in the `bst\base` directory of the TrueTEX distribution, but does not appear on CTAN in the directory `biblio/BibTeX/distribs/styles`.



Sample Citations and Bibliography

Example using acm

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] Aamport, L. A. The gnats and gnus document preparation system. *G-Animal's Journal 41*, 7 (July 1986), 73+. This is a full ARTICLE entry.

[2] Knuth, D. E. *Seminumerical Algorithms*, second ed., vol. 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, 10 Jan. 1981. This is a full BOOK entry.

[3] Knvth, J. C. The programming of computer art. Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

[4] Lincoll, D. D. Semigroups of recurrences. In *High Speed Computer and Algorithm Organization*, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Eds., third ed., no. 23 in Fast Computers. Academic Press, New York, Sept. 1977, part 3, pp. 179–183. This is a full INCOLLECTION entry.

[5] Oaho, A. V., Ullman, J. D., and Yannakakis, M. On notions of information transfer in VLSI circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* (Boston, Mar. 1983), W. V. Oz and M. Yannakakis, Eds., no. 17 in All ACM Conferences, The OX Association for Computing Machinery, Academic Press, pp. 133–139. This is a full INPROCEDINGS entry.

[6] Phony-Baloney, F. P. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

address.bst

Format of reference list label	Name
Organization of reference list	Alphabetical by person
Format of citation	Name
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTeX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{key}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described below. The styles support a `\nodir{`***key***`}` command, which creates an address book with no citations in the text.

The `address.bst` style produces a reference list containing full database information corresponding to the cited keys. It prints the corresponding name at the citation point unless the `\nodir{`***key***`}` command is used.

► To enter a `\dir` command in a TeX field

1. Place the insertion point where you want the citation to appear.
2. From the Insert menu, choose Typeset Object and then choose TeX Field.
3. In the entry area, type `\dir{`***key***`}` where ***key*** is the key for the database entry you want to cite.
4. Choose OK.

The first sample shown below illustrates an address list created with `\dir{`***key***`}` commands in the text. The second sample illustrates an address list created using a `\nodir{*}` command without any preceding text. The sample documents were created with the sample databases `business.bib` and `family.bib`.

Sample Citations and Bibliography

Example using address

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. The citations in this sentence have been created with TEX commands that replace standard citations. The list below contains the address for **Knudsoft (RS.2 Computer Room)** and also for **Microknud Corp.**. It also contains listings for **Daffy Duck Knudson, Bugs Bunny and Pluto** and for **Donald Ernest Knudson**. The phone book for these citations comes next.

Knudsoft (RS.2 Computer Room)
phn: +01-(0)2-434.23.23

Daffy Duck Knudson, Bugs Bunny and Pluto (aka gnat, gnu and pluto)
⋆ 10/2, 5/11 and 1/1
p Haight Street 512, 80214 Novosibirsk, Gnuland
phn: +01-(0)2-765.43.21
gsm: +01-(0)5-555.55.55
acc: `010-1234567-05`
r Manor Lane 2, 80214 Novosibirsk, Gnuland
phn: +01-(0)2-876.54.32
w University of Novosibirsk, Department of Octopus Parthenogenesis
Planck Institut (V1-V2, Park. U-67), Hessenberg Road, 80214 Novosibirsk, Gnuland

Donald Ernest Knudson
⋆ 29/1
p phn: +01-(0)2-234.56.78
`duck@novosi.uni.gnu`
▷ 1952 Permafrost Press Award winner

Microknud Corp.
Haight Street 513
80214 Novosibirsk, Gnuland
phn: +01-(0)2-465.83.99
fax: 005.79.00
`http://microknu.com/ass/bill.html`

Sample Citations and Bibliography

Example using address

Christophe Geuzaine
⋆ 6/2/1973
p Christophe.Geuzaine@advalvas.be
w Ir., Research Assistant
University of Liège, Dept. of Electrical Engineering
Institut Montefiore (B28, P32, I21),
Sart Tilman Campus, B-4000 Liège, Belgium
phn: +32-(0)4-366.37.10
fax: +32-(0)4-366.29.10
Christophe.Geuzaine@ulg.ac.be
http://www.geuz.org/

The Knudsoft Company
knud@knudsoft.com
http://knudsoft.com/hole/gates.htm

Knudsoft (RS.2 Computer Room)
phn: +01-(0)2-434.23.23

Bip P. Knudson (aka road runner)
⋆ 27/2
p bip_bip@free.prov.gnu

Daffy Duck Knudson, Bugs Bunny and Pluto (aka gnat, gnu and pluto)
⋆ 10/2, 5/11 and 1/1
p Haight Street 512, 80214 Novosibirsk, Gnuland
phn: +01-(0)2-765.43.21
gsm: +01-(0)5-555.55.55
acc: 010-1234567-05
r Manor Lane 2, 80214 Novosibirsk, Gnuland
phn: +01-(0)2-876.54.32
w University of Novosibirsk, Department of Octopus Parthenogenesis
Planck Institut (V1-V2, Park. U-67), Hessenberg Road, 80214 Novosibirsk, Gnuland

Donald Ernest Knudson
⋆ 29/1
p phn: +01-(0)2-234.56.78
duck@novosi.uni.gnu
▷ 1952 Permafrost Press Award winner

address-html.bst

Format of reference list label	Name
Organization of reference list	Alphabetical by person
Format of citation	Name or none
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTeX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described on page 428. The styles support a `\nodir{`***key***`}` command, which creates an address book with no citations in the text.

Similar to `address.bst`, `address-html.bst` produces an HTML file for a reference list containing full database information corresponding to the cited keys or to the `\nodir{`***key***`}` command. The style supports URL fields within the bibliographic information, so that entries in the list become links to the resources themselves. The resulting HTML file can stand alone or be incorporated into the HTML file for the document containing the citations. The style doesn't produce an automatic heading for the list.

To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and specify and generate a BibTeX address list. Then, use the resulting HTML file as it stands or incorporate it into your document, according to the instructions that follow.

► To incorporate the HTML bibliography into a document

1. Using an ASCII editor, open the `.bbl` file created for your document.
2. Delete the <`HTML`>, <`TITLE`>, and </`HTML`> commands.
3. Copy the contents of the file to the clipboard.
4. Open your document in *SWP* or *SW*.
5. Delete the [BIBTEX] instruction.
6. In its place, insert an HTML object:

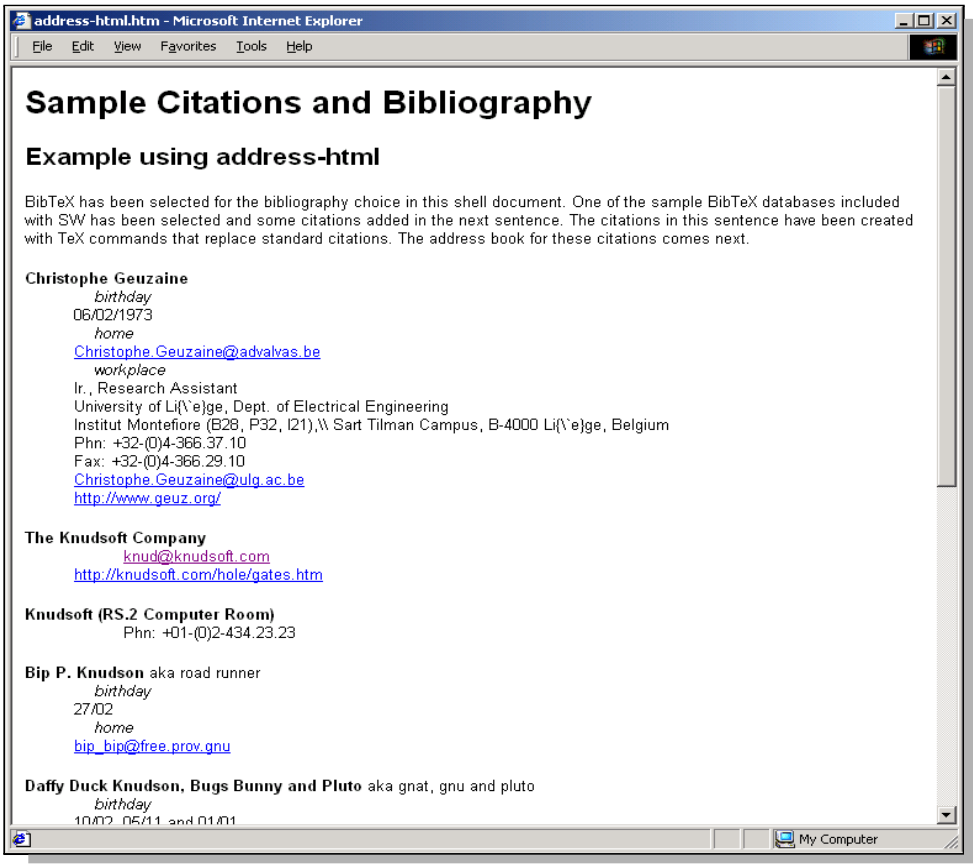
   a. From the Insert menu, choose HTML Field.

b. Paste the contents of the clipboard into the field.
c. Choose OK.

7. Export the file to HTML:

a. From the File menu, choose Export Document.
b. Select the document.
c. In the Save as type box, choose the HTML format you want.
d. Choose OK.

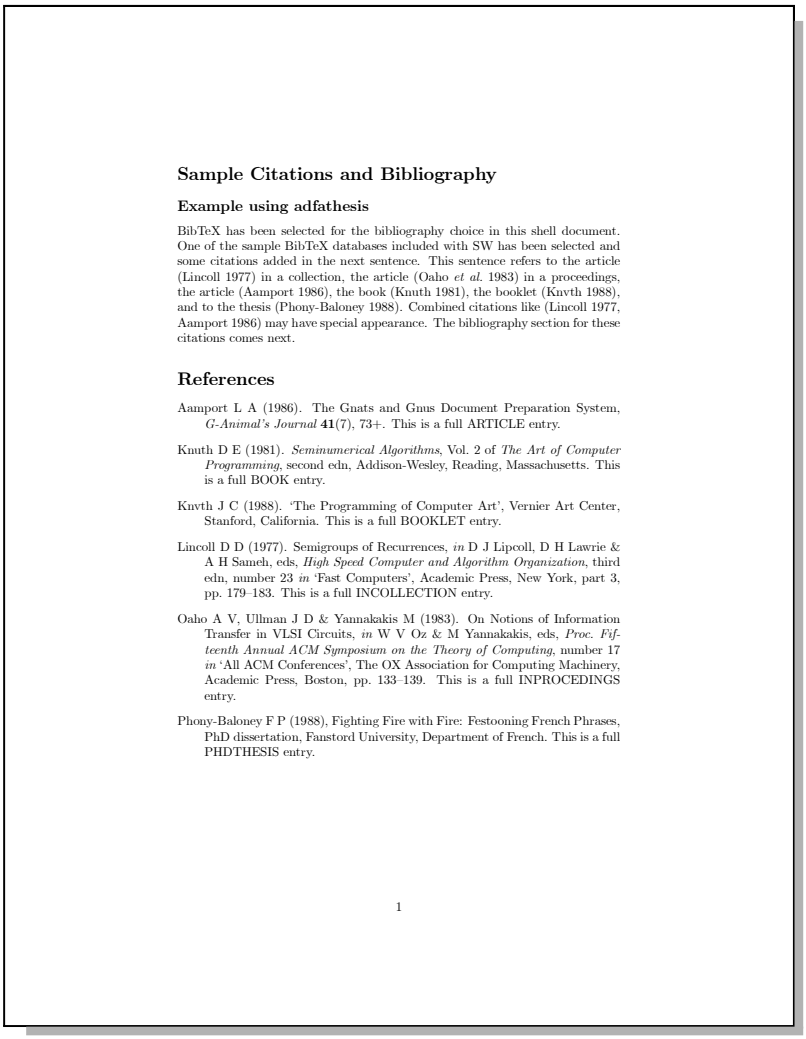
The sample .htm file shown here was created in *SWP* according to these instructions. The .tex file includes a \nodir{*} command that was deleted after the .htm file was created but before the document was exported to HTML. The sample document was created with the sample databases business.bib and family.bib.



adfathesis.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date)
	(Author date, Author date)
	(Author *et al.* date)
Required files	***harvard*** package
Directory	`TCITeX/BibTeX/bst/adfathesis`

This style is designed for theses at the Australian Defence Force Academy. It is a modified version of the style `jphysicsB.bst`, which is provided as part of the harvard family of BibTeX bibliography styles. To avoid LaTeX errors when using the harvard styles, delete the BibTeX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using adfathesis

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho *et al.* 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport L A (1986). The Gnats and Gnus Document Preparation System, *G-Animal's Journal* **41**(7), 73+. This is a full ARTICLE entry.

Knuth D E (1981). *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, second edn, Addison-Wesley, Reading, Massachusetts. This is a full BOOK entry.

Knvth J C (1988). 'The Programming of Computer Art', Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll D D (1977). Semigroups of Recurrences, *in* D J Lipcoll, D H Lawrie & A H Sameh, eds, *High Speed Computer and Algorithm Organization*, third edn, number 23 *in* 'Fast Computers', Academic Press, New York, part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho A V, Ullman J D & Yannakakis M (1983). On Notions of Information Transfer in VLSI Circuits, *in* W V Oz & M Yannakakis, eds, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 *in* 'All ACM Conferences', The OX Association for Computing Machinery, Academic Press, Boston, pp. 133–139. This is a full INPROCEDINGS entry.

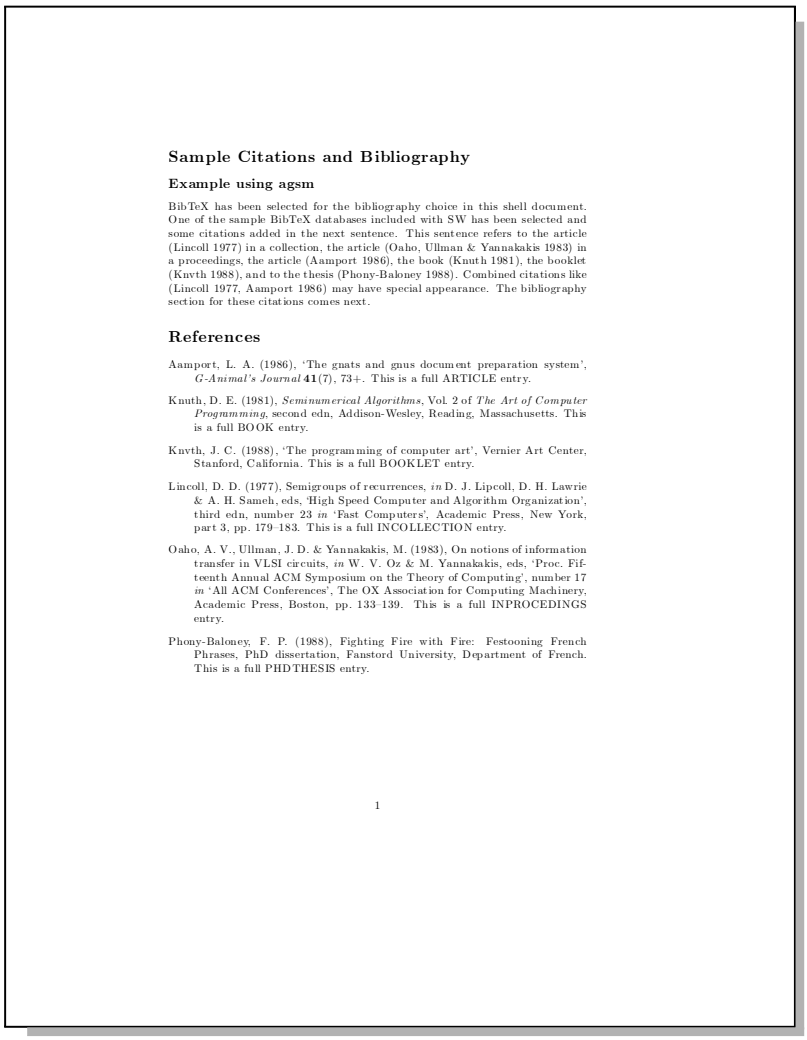
Phony-Baloney F P (1988), Fighting Fire with Fire: Festooning French Phrases, PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

agsm.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author & Author date) (Author, Author & Author date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTEX Database:	
`harvard.bib`	Contains five entries.

The `agsm` style is provided as part of the harvard family of BibTEX bibliography styles, which can also be used with manual bibliographies. The style satisfies the requirements of the *Australian Government Style Manual*. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims . . .* or *The key result (Medd) . . .*, or as possessives, as in *Medd's (1999) proof . . . .* To avoid LATEX errors when using the harvard styles, delete the BibTEX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using agsm

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman & Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986), 'The gnats and gnus document preparation system', *G-Animal's Journal* **41**(7), 73+. This is a full ARTICLE entry.

Knuth, D. E. (1981), *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Progmamming*, second edn, Addison-Wesley, Reading, Massachusetts. This is a full BOOK entry.

Knvth, J. C. (1988), 'The programming of computer art', Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977), Semigroups of recurrences, *in* D. J. Lipcoll, D. H. Lawrie & A. H. Sameh, eds, 'High Speed Computer and Algorithm Organization', third edn, number 23 *in* 'Fast Computers', Academic Press, New York, part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D. & Yannakakis, M. (1983), On notions of information transfer in VLSI circuits, *in* W. V. Oz & M. Yannakakis, eds, 'Proc. Fifteenth Annual ACM Symposium on the Theory of Computing', number 17 *in* 'All ACM Conferences', The OX Association for Computing Machinery, Academic Press, Boston, pp. 133–139. This is a full INPROCEDINGS entry.

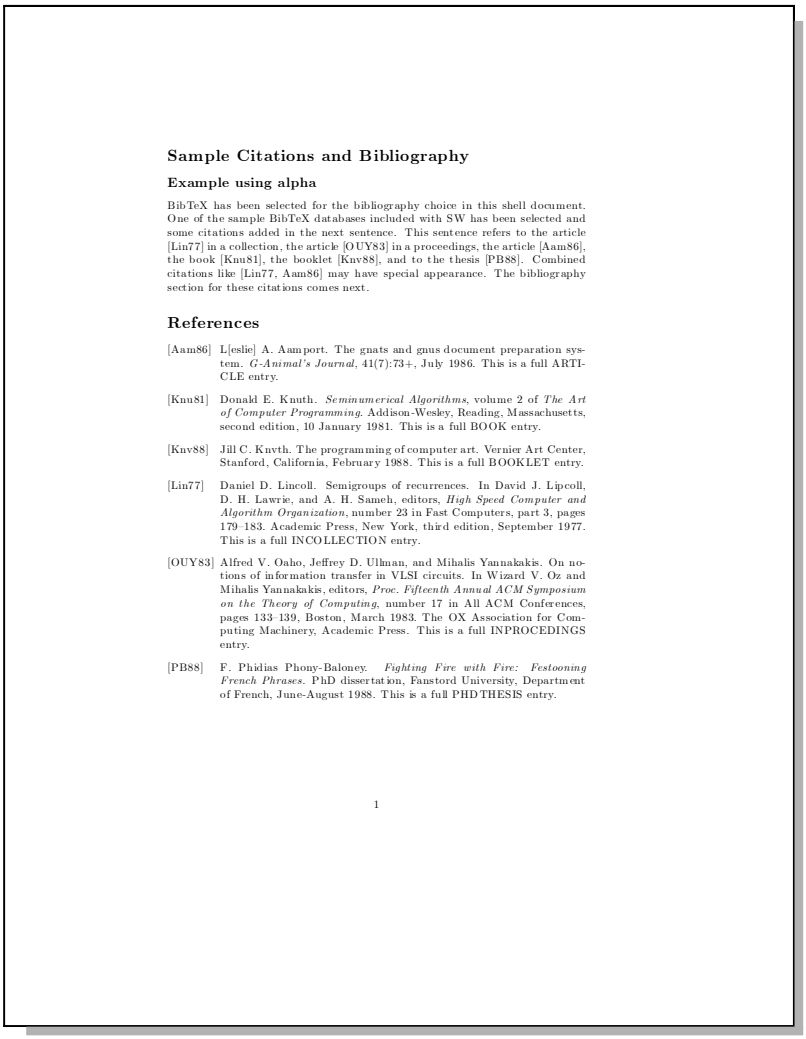
Phony-Baloney, F. P. (1988), Fighting Fire with Fire: Festooning French Phrases, PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

alpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/base`

The style uses source labels such as *Knu66,* formed from the author's name and the year of publication. Otherwise, it is the same as `plain.bst`, which sorts entries alphabetically.



Sample Citations and Bibliography

Example using alpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEEDINGS entry.

[PB88] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

alphahtml.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands <dl> and </dl>. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references.

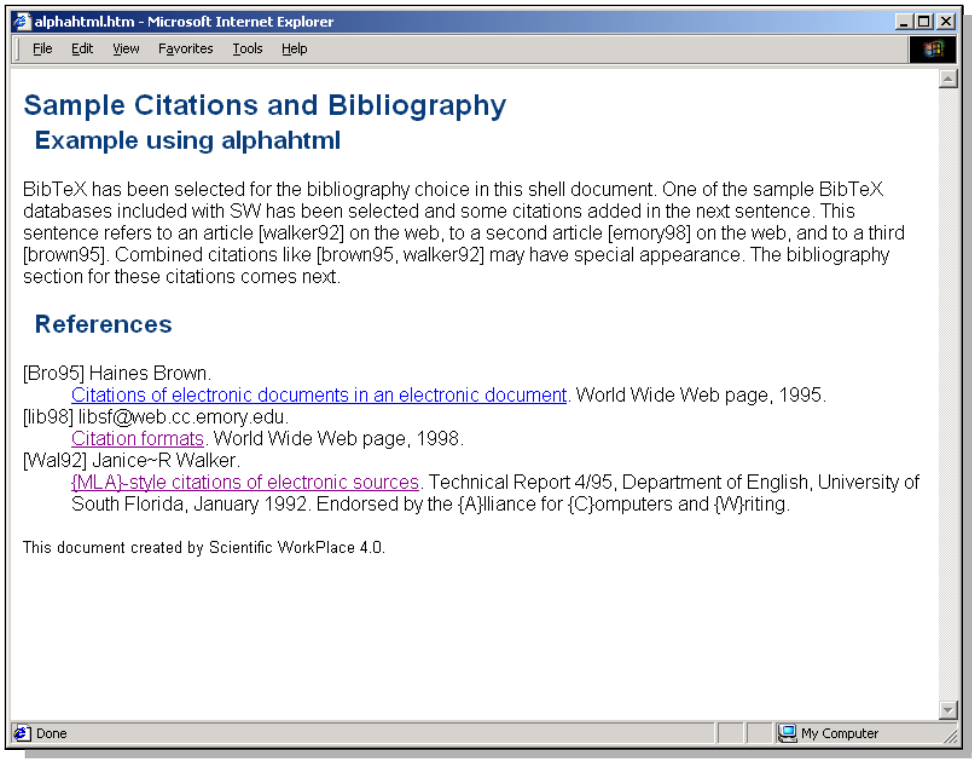
The style is based on `plainhtml.bst` and `alpha.bst`, which creates source labels such as *Knu66,* formed from the author's name and the year of publication. The style sorts entries alphabetically. The styles `alphahtml-date.bst` and `alphahtmldater.bst` are related.

To use the style in *SWP* and *SW,* follow the standard procedure to insert citations in your document and to specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document according to the instructions that follow.

► To incorporate the HTML bibliography into a document

1. Using an ASCII editor, open the `.bbl` file created for your document.
2. Copy the contents of the file to the clipboard.
3. Open your document in *SWP* or *SW*.
4. Delete the [BIBTEX] instruction.
5. In its place, insert an HTML object:
   a. From the Insert menu, choose HTML Field.
   b. Paste the contents of the clipboard into the field.
   c. Choose OK.
6. Export the file to HTML:
   a. From the File menu, choose Export Document.
   b. Select the document.
   c. In the Save as type box, choose the HTML format you want.
   d. Choose OK.

The sample `.htm` file shown on the next page was created according to these instructions and using a modification of the database file `bibrefs.bib`.


alphahtml.htm - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Sample Citations and Bibliography
Example using alphahtml
BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to an article [walker92] on the web, to a second article [emory98] on the web, and to a third [brown95]. Combined citations like [brown95, walker92] may have special appearance. The bibliography section for these citations comes next.
References
[Bro95] Haines Brown.
Citations of electronic documents in an electronic document. World Wide Web page, 1995.
[lib98] libsf@web.cc.emory.edu.
Citation formats. World Wide Web page, 1998.
[Wal92] Janice~R Walker.
{MLA}-style citations of electronic sources. Technical Report 4/95, Department of English, University of South Florida, January 1992. Endorsed by the {A}lliance for {C}omputers and {W}riting.
This document created by Scientific WorkPlace 4.0.
Done
My Computer

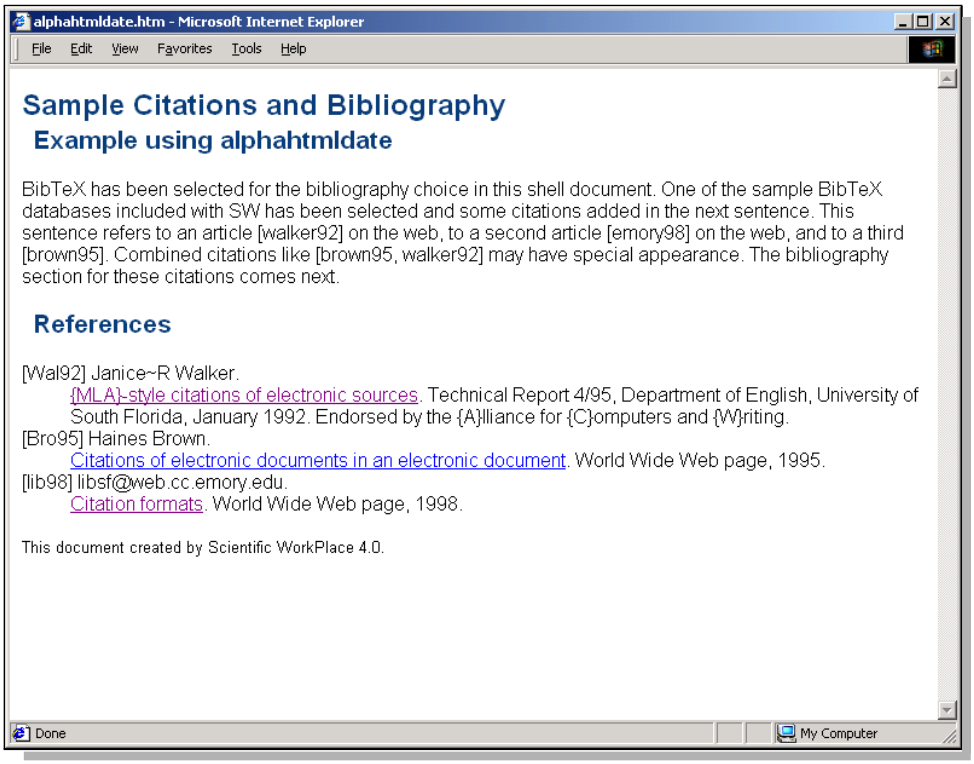
alphahtmldate.bst

Format of reference list label	[Source label]
Organization of reference list	Chronological order
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands `<dl>` and `</dl>`. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references.

The style is based on `alphahtml.bst`, which creates source labels such as *Knu66,* formed from the author's name and the year of publication. The style sorts entries chronologically. It is related to `alphahtmldater.bst`.

To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document as described for `alphahtml.bst` on page 436. The sample `.htm` file below was created according to those instructions and using a modification of the database file `bibrefs.bib`.

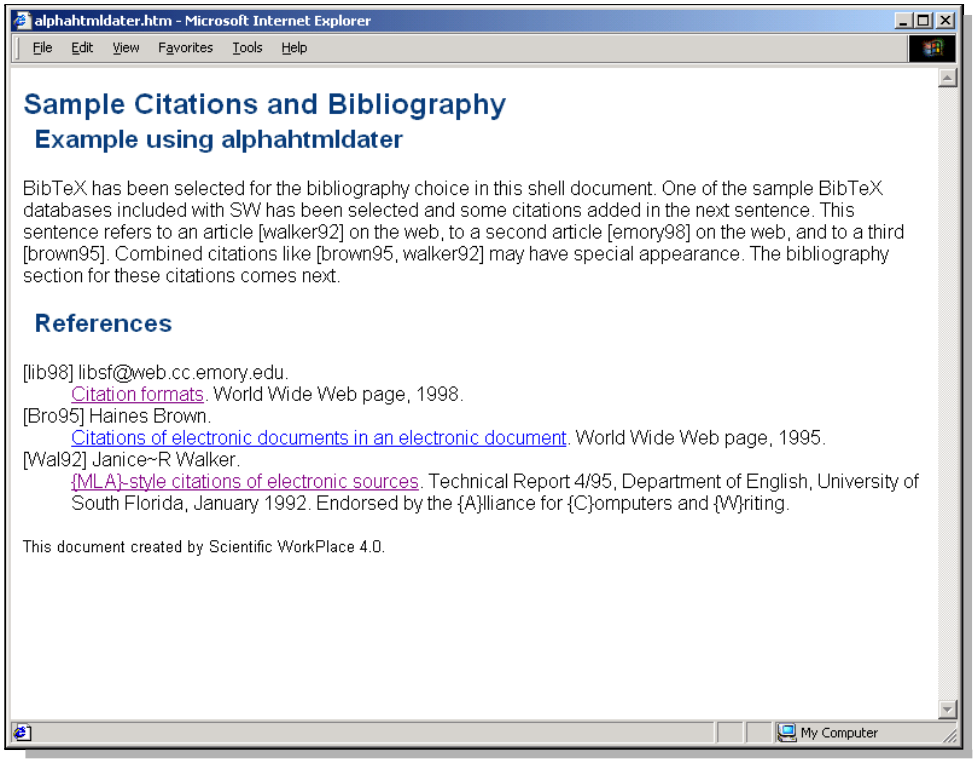


alphahtmldater.bst

Format of reference list label	[Source label]
Organization of reference list	Reverse chronological order
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands `<dl>` and `</dl>`. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references. The style is based on `alphahtml.bst`, but lists references in reverse chronological order.

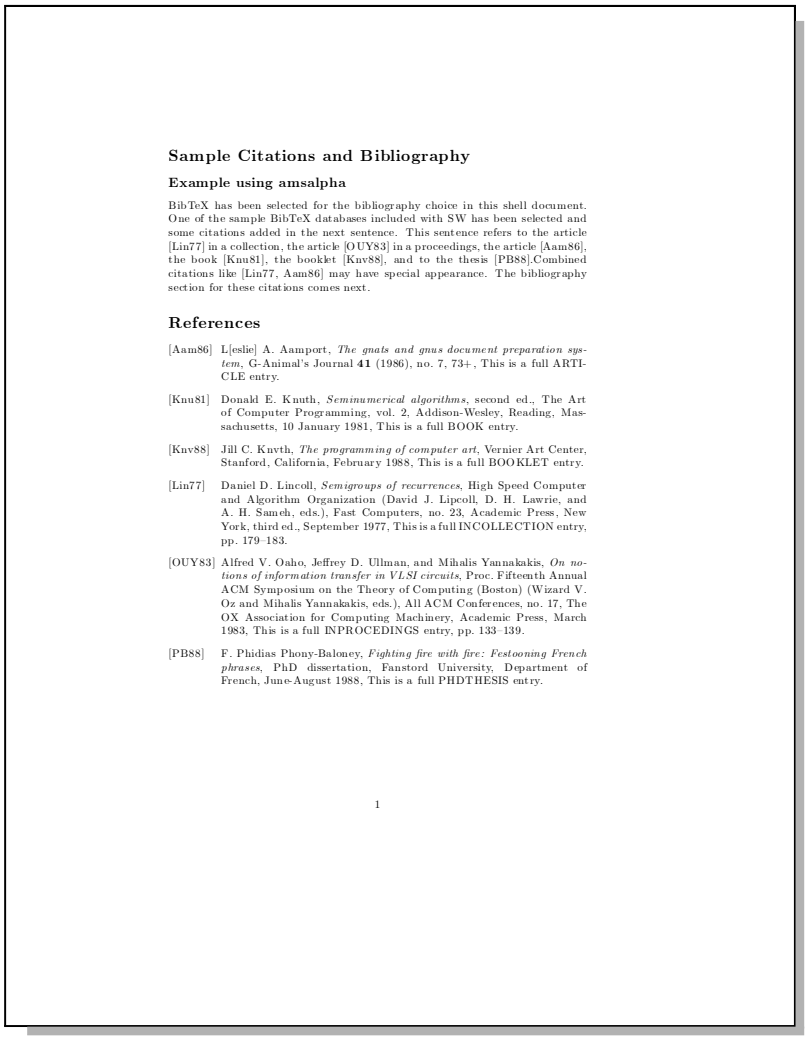
To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and to specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document as described for `alphahtml.bst` on page 436. The sample `.htm` file below was created according to those instructions and using a modification of the database file `bibrefs.bib`.



amsalpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/amslatex`
Sample BibTeX Database:	
`mrabbrev.bib`	Contains 4318 strings

$\mathcal{AMS}$-LaTeX is a required component of the standard LaTeX distribution. The style constructs source labels such as *Knu66,* from the author's name and the year of publication.



Sample Citations and Bibliography

Example using amsalpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88].Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport, *The gnats and gnus document preparation system*, G-Animal's Journal **41** (1986), no. 7, 73+, This is a full ARTICLE entry.

[Knu81] Donald E. Knuth, *Seminumerical algorithms*, second ed., The Art of Computer Programming, vol. 2, Addison-Wesley, Reading, Massachusetts, 10 January 1981, This is a full BOOK entry.

[Knv88] Jill C. Knvth, *The programming of computer art*, Vernier Art Center, Stanford, California, February 1988, This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll, *Semigroups of recurrences*, High Speed Computer and Algorithm Organization (David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds.), Fast Computers, no. 23, Academic Press, New York, third ed., September 1977, This is a full INCOLLECTION entry, pp. 179–183.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis, *On notions of information transfer in VLSI circuits*, Proc. Fifteenth Annual ACM Symposium on the Theory of Computing (Boston) (Wizard V. Oz and Mihalis Yannakakis, eds.), All ACM Conferences, no. 17, The OX Association for Computing Machinery, Academic Press, March 1983, This is a full INPROCEDINGS entry, pp. 133–139.

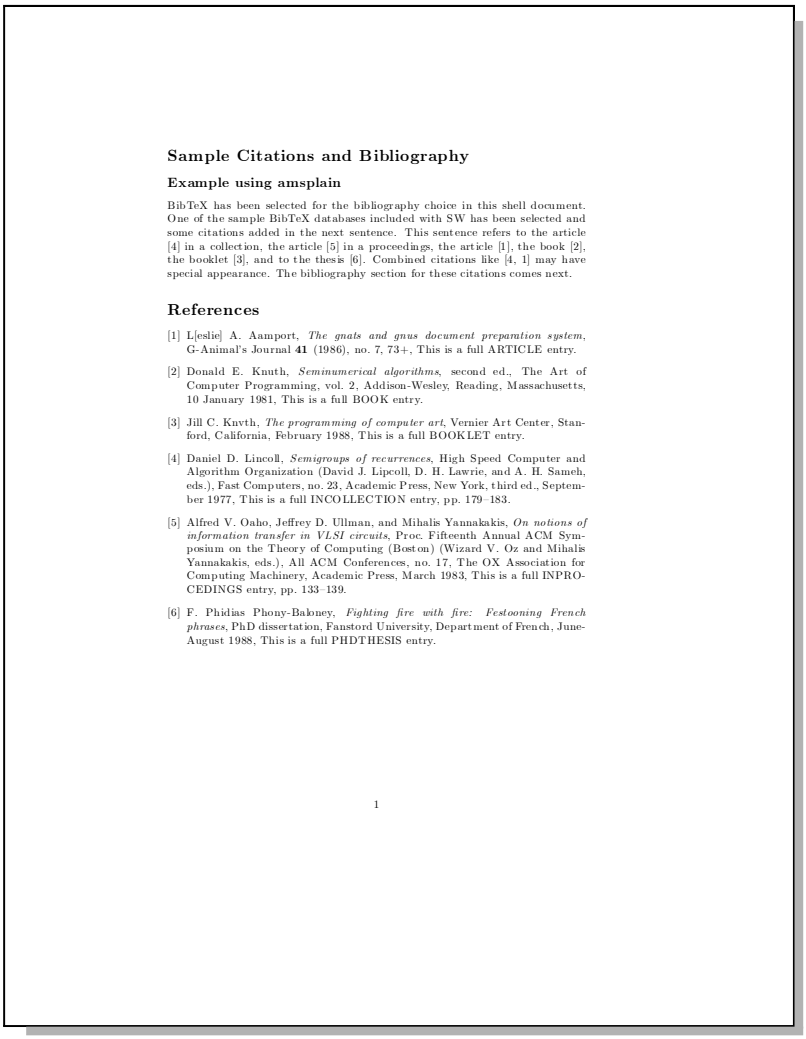
[PB88] F. Phidias Phony-Baloney, *Fighting fire with fire: Festooning French phrases*, PhD dissertation, Fanstord University, Department of French, June-August 1988, This is a full PHDTHESIS entry.

1

amsplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/amslatex`
Sample BibTeX Database:	
`mrabbrev.bib`	Contains 4318 strings.

$\mathcal{AMS}$-LaTeX is a required component of the standard LaTeX distribution. The style sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using amsplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport, *The gnats and gnus document preparation system*, G-Animal's Journal **41** (1986), no. 7, 73+, This is a full ARTICLE entry.

[2] Donald E. Knuth, *Seminumerical algorithms*, second ed., The Art of Computer Programming, vol. 2, Addison-Wesley, Reading, Massachusetts, 10 January 1981, This is a full BOOK entry.

[3] Jill C. Knvth, *The programming of computer art*, Vernier Art Center, Stanford, California, February 1988, This is a full BOOKLET entry.

[4] Daniel D. Lincoll, *Semigroups of recurrences*, High Speed Computer and Algorithm Organization (David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds.), Fast Computers, no. 23, Academic Press, New York, third ed., September 1977, This is a full INCOLLECTION entry, pp. 179–183.

[5] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis, *On notions of information transfer in VLSI circuits*, Proc. Fifteenth Annual ACM Symposium on the Theory of Computing (Boston) (Wizard V. Oz and Mihalis Yannakakis, eds.), All ACM Conferences, no. 17, The OX Association for Computing Machinery, Academic Press, March 1983, This is a full INPROCEDINGS entry, pp. 133–139.

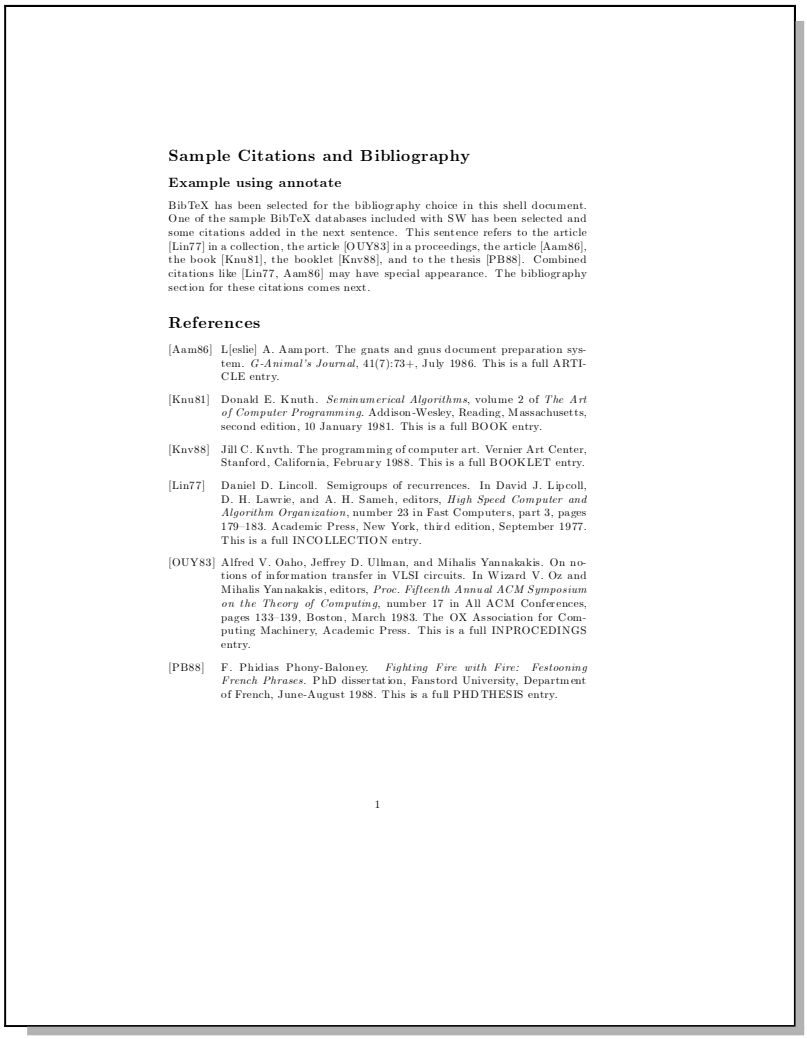
[6] F. Phidias Phony-Baloney, *Fighting fire with fire: Festooning French phrases*, PhD dissertation, Fanstord University, Department of French, June-August 1988, This is a full PHDTHESIS entry.

1

annotate.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/beebe`

This style is based on the standard BibTEX style `alpha.bst`, which sorts entries alphabetically and forms entry labels, such as *Knu66,* from the author's name and the year of publication. The style adds the annote keyword.



Sample Citations and Bibliography

Example using annotate

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

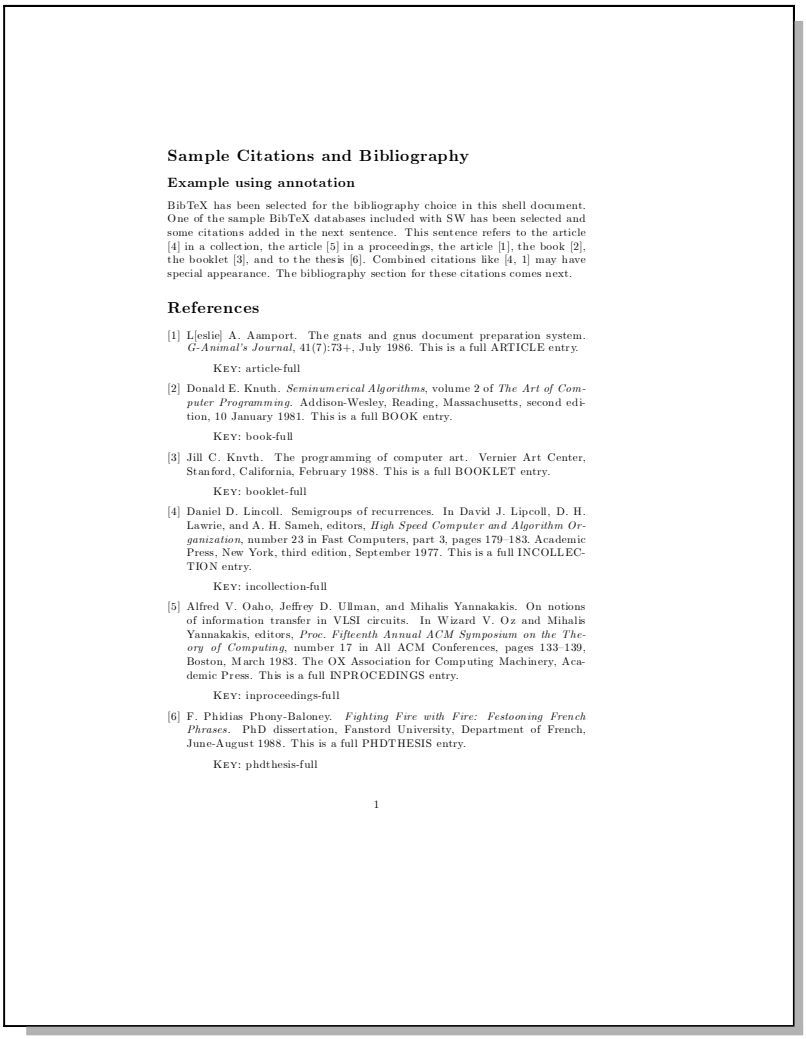
[PB88] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

annotation.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

This style is based on the standard BibTeX style `plain.bst`, which sorts entries alphabetically and labels them with numbers. The style adds the annote keyword, which appears in the reference list.



Sample Citations and Bibliography

Example using annotation

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

KEY: article-full

[2] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

KEY: book-full

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

KEY: booklet-full

[4] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

KEY: incollection-full

[5] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

KEY: inproceedings-full

[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

KEY: phdthesis-full

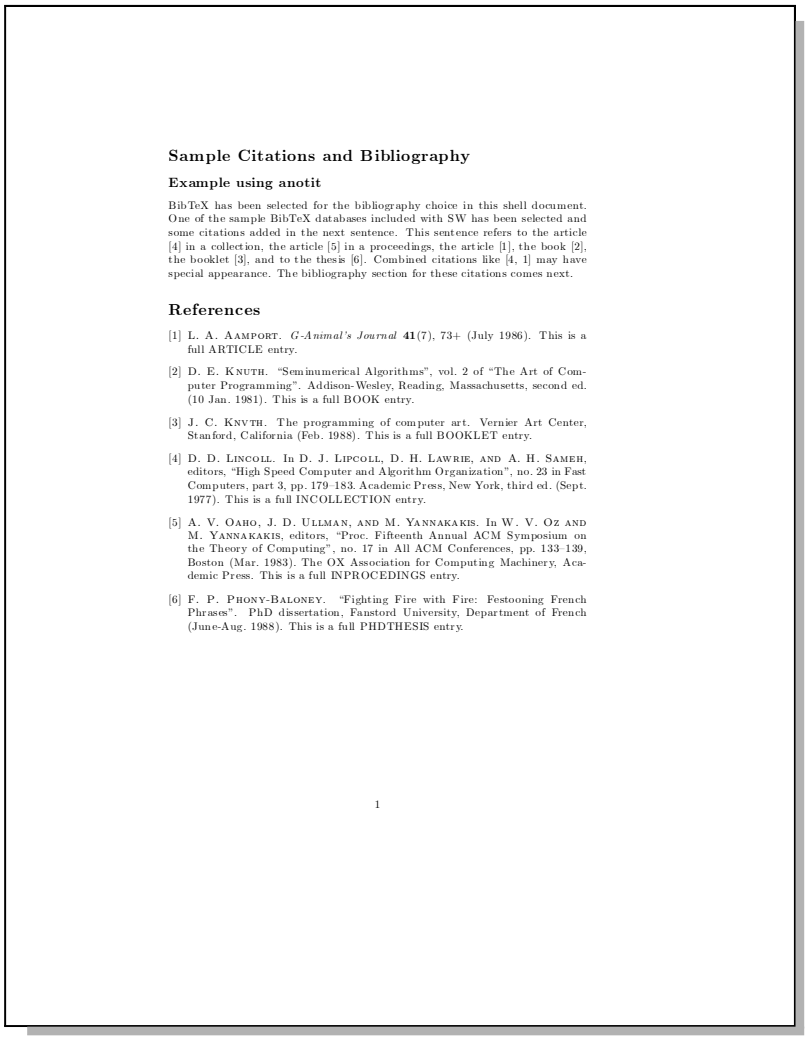
1

anotit.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Required files	`LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears.

The style excludes the titles of articles. Otherwise, it is the same as `aabbrv.bst`, which abbreviates first names, month names, and journal names in the entries. The style sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using anotit

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[2] D. E. Knuth. "Seminumerical Algorithms", vol. 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second ed. (10 Jan. 1981). This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California (Feb. 1988). This is a full BOOKLET entry.

[4] D. D. Lincoll. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, "High Speed Computer and Algorithm Organization", no. 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third ed. (Sept. 1977). This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis. In W. V. Oz and M. Yannakakis, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", no. 17 in All ACM Conferences, pp. 133–139, Boston (Mar. 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

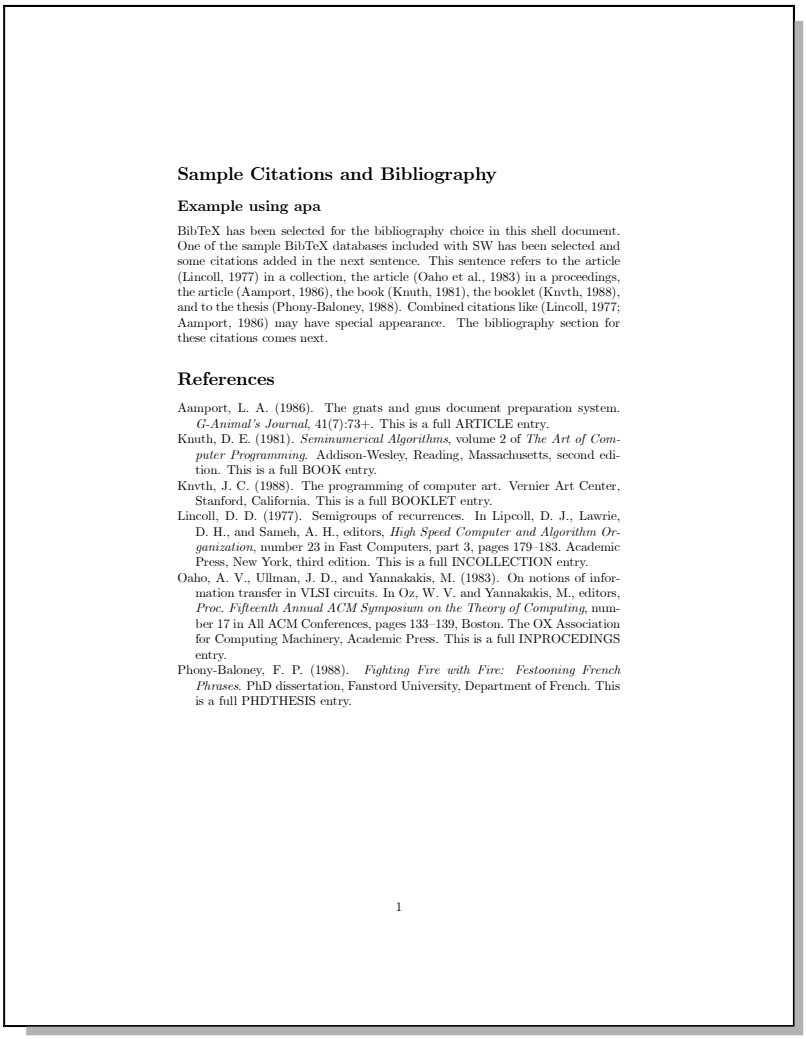
[6] F. P. Phony-Baloney. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-Aug. 1988). This is a full PHDTHESIS entry.

1

apa.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*astron*.package
Directory	`TCITeX/BibTeX/bst/beebe`

The style has been adapted from `alpha.bst`. It supports a short citation form and must be used with the *astron* package.



Sample Citations and Bibliography

Example using apa

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977). Semigroups of recurrences. In Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In Oz, W. V. and Yannakakis, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

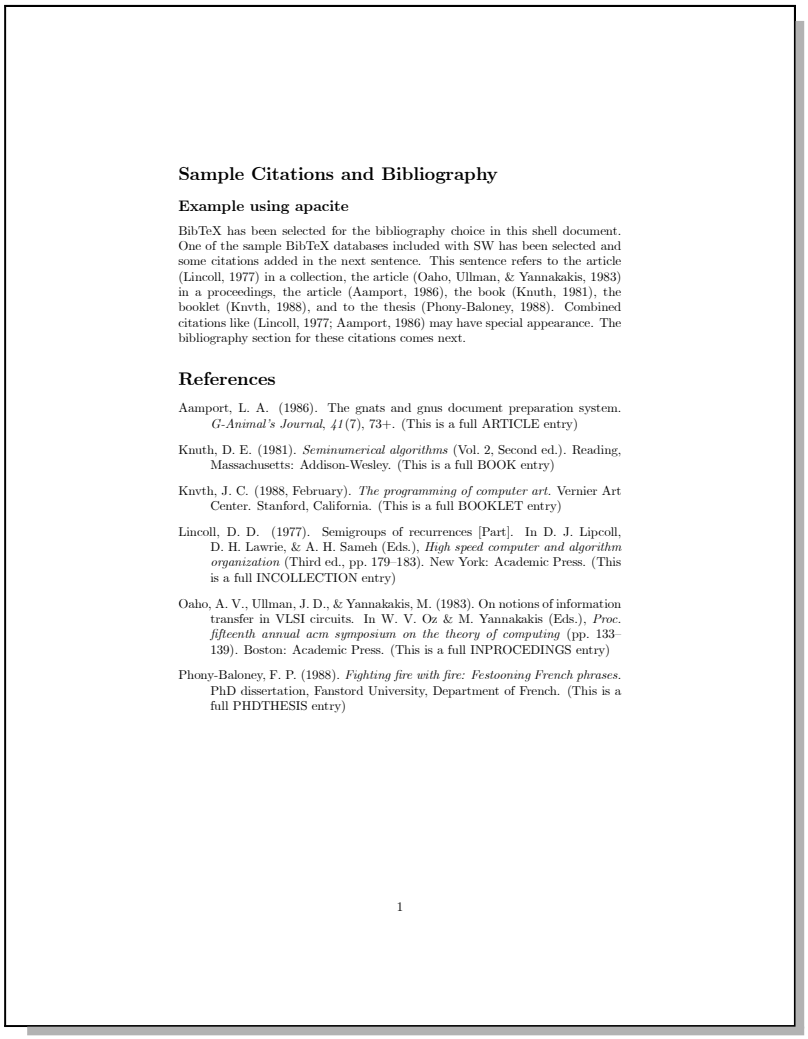
Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

apacite.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author, Author, & Author, date)
Required files	*apacite* package
Directory	`TCITeX/BibTeX/bst/apacite`
Sample BibTeX Database:	
`testAPA.bib`	Contains 54 entries.

This BibTeX bibliography style for the American Psychological Association must be used with the *apacite* package.



Sample Citations and Bibliography

Example using apacite

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho, Ullman, & Yannakakis, 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, *41*(7), 73+. (This is a full ARTICLE entry)

Knuth, D. E. (1981). *Seminumerical algorithms* (Vol. 2, Second ed.). Reading, Massachusetts: Addison-Wesley. (This is a full BOOK entry)

Knvth, J. C. (1988, February). *The programming of computer art*. Vernier Art Center. Stanford, California. (This is a full BOOKLET entry)

Lincoll, D. D. (1977). Semigroups of recurrences [Part]. In D. J. Lipcoll, D. H. Lawrie, & A. H. Sameh (Eds.), *High speed computer and algorithm organization* (Third ed., pp. 179–183). New York: Academic Press. (This is a full INCOLLECTION entry)

Oaho, A. V., Ullman, J. D., & Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In W. V. Oz & M. Yannakakis (Eds.), *Proc. fifteenth annual acm symposium on the theory of computing* (pp. 133–139). Boston: Academic Press. (This is a full INPROCEDINGS entry)

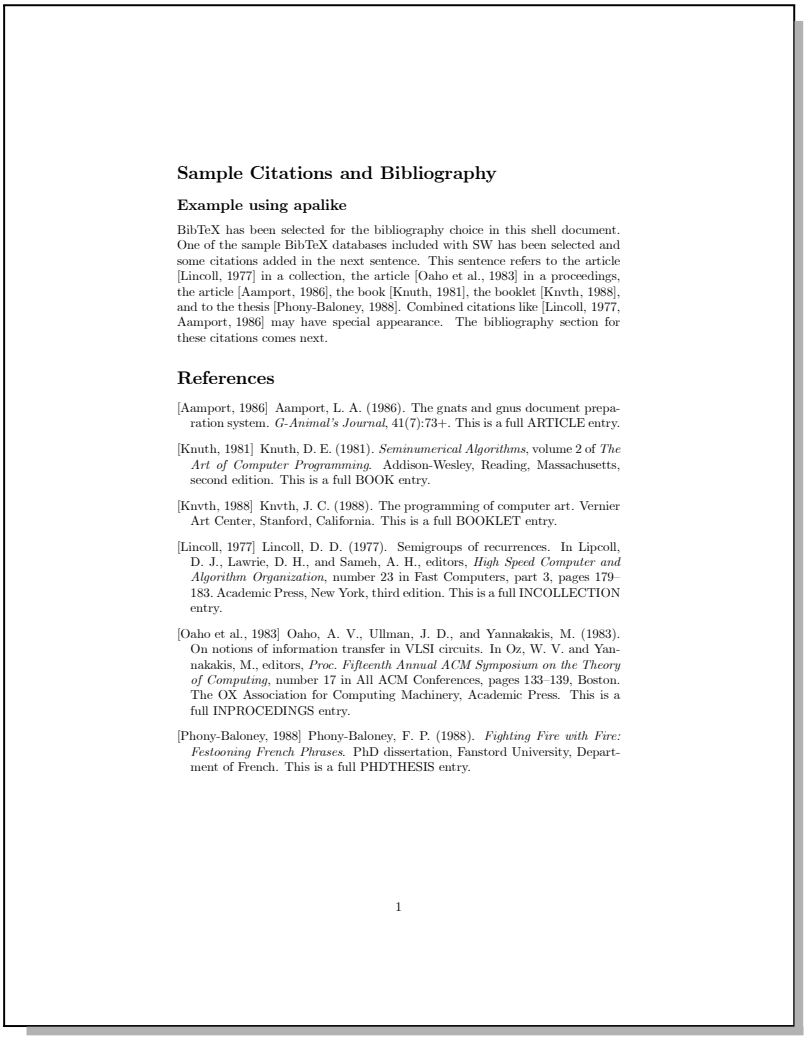
Phony-Baloney, F. P. (1988). *Fighting fire with fire: Festooning French phrases*. PhD dissertation, Fanstord University, Department of French. (This is a full PHDTHESIS entry)

1

apalike.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author and Author, date] [Author et al., date]
Required files	*apalike* package
Directory	`TCITeX/BibTeX/bst/base`

This standard BibTEX style requires the *apalike* package. The style formats bibliography entries alphabetically by author, last name first. Citations in the text can include single and multiple author-date references.



Sample Citations and Bibliography

Example using apalike

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho et al., 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). Semigroups of recurrences. In Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

[Oaho et al., 1983] Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In Oz, W. V. and Yannakakis, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

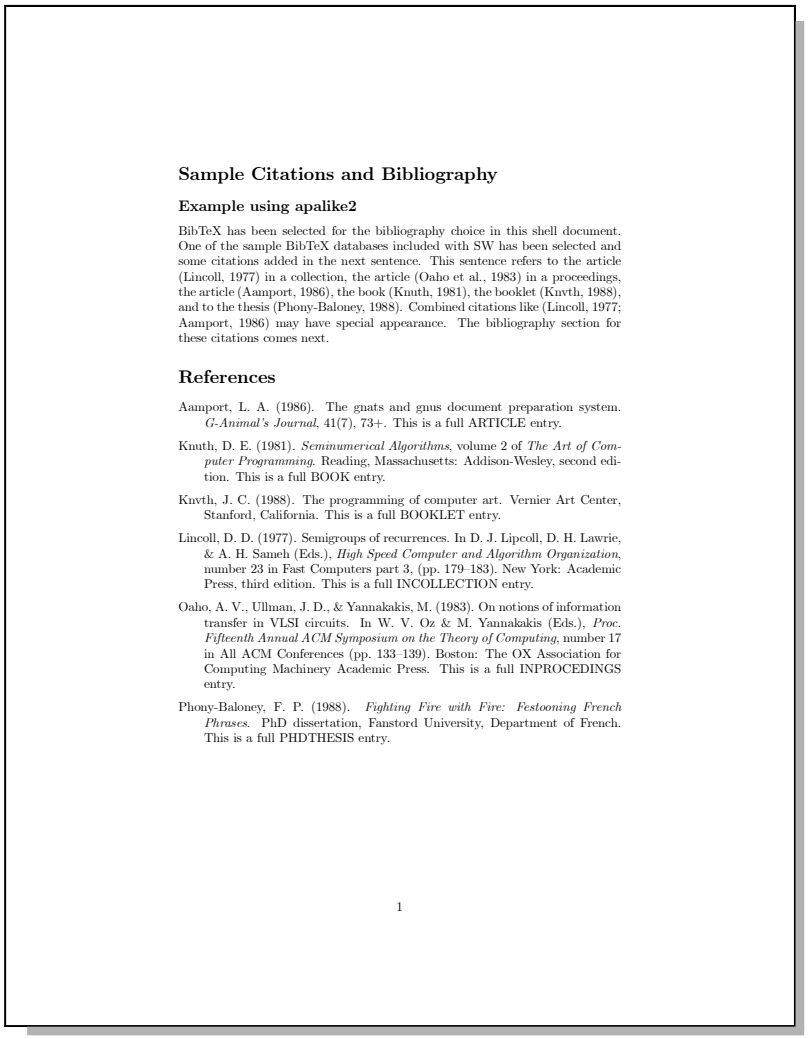
[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

apalike2.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author et al., date)
Required files	*apalike* package
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a variant of `apalike.bst`. It requires the *apalike* package. The style formats bibliography entries alphabetically by author. At the beginning of the entry, authors' names are presented last name first. Within the entry, authors' names are presented last name last. Citations in the text can include single and multiple author-date references.



Sample Citations and Bibliography

Example using apalike2

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7), 73+. This is a full ARTICLE entry.

Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Reading, Massachusetts: Addison-Wesley, second edition. This is a full BOOK entry.

Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977). Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, & A. H. Sameh (Eds.), *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers part 3, (pp. 179–183). New York: Academic Press, third edition. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., & Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In W. V. Oz & M. Yannakakis (Eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences (pp. 133–139). Boston: The OX Association for Computing Machinery Academic Press. This is a full INPROCEDINGS entry.

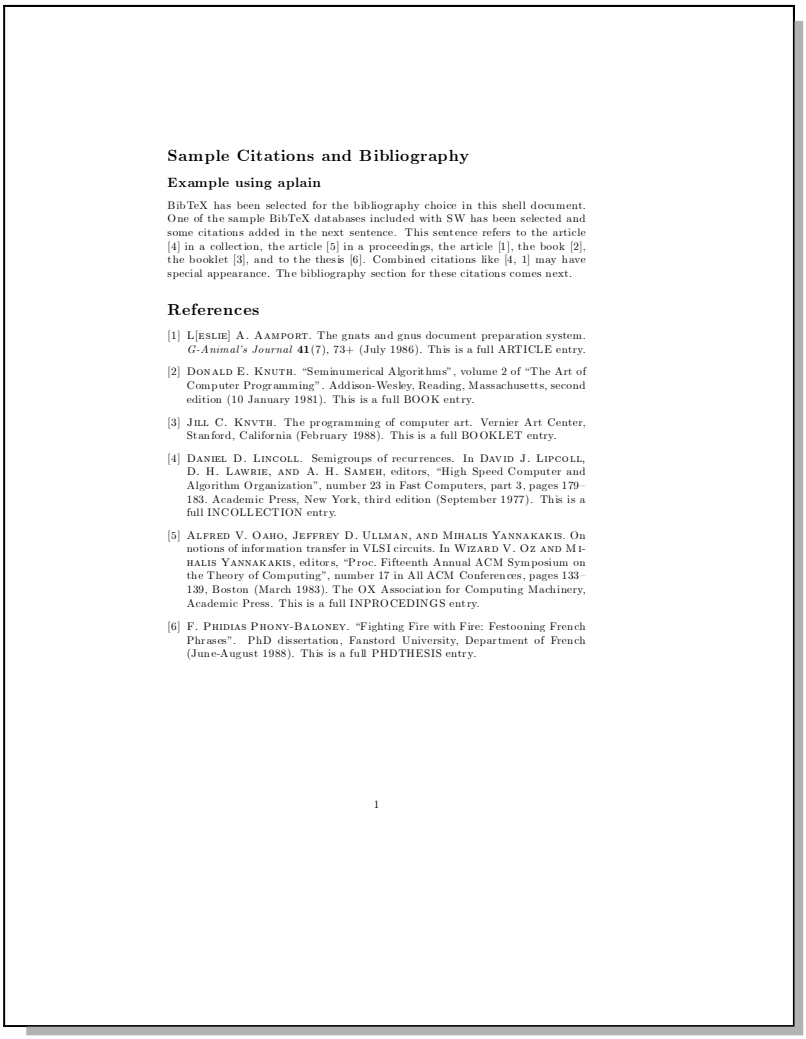
Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

aplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Required files	`LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears. The style is similar to the standard BibTeX style `plain.bst`, which sorts entries alphabetically and labels them with numbers. Authors' names appear in small capitals in the reference list.



Sample Citations and Bibliography

Example using aplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[ESLIE] A. AAMPORT. The gnats and gnus document preparation system. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[2] DONALD E. KNUTH. "Seminumerical Algorithms", volume 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second edition (10 January 1981). This is a full BOOK entry.

[3] JILL C. KNVTH. The programming of computer art. Vernier Art Center, Stanford, California (February 1988). This is a full BOOKLET entry.

[4] DANIEL D. LINCOLL. Semigroups of recurrences. In DAVID J. LIPCOLL, D. H. LAWRIE, AND A. H. SAMEH, editors, "High Speed Computer and Algorithm Organization", number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition (September 1977). This is a full INCOLLECTION entry.

[5] ALFRED V. OAHO, JEFFREY D. ULLMAN, AND MIHALIS YANNAKAKIS. On notions of information transfer in VLSI circuits. In WIZARD V. OZ AND MIHALIS YANNAKAKIS, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", number 17 in All ACM Conferences, pages 133–139, Boston (March 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[6] F. PHIDIAS PHONY-BALONEY. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-August 1988). This is a full PHDTHESIS entry.

1

apsr.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author & Author date) (Author, Author & Author date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTeX Database:	
`harvard.bib`	Contains five entries.

The bibliography style `apsr.bst` is provided as part of the harvard family of BibTeX bibliography styles, which can also be used with manual bibliographies. The style is for the *American Political Science Review*. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims* . . . or *The key result (Medd)* . . ., or as possessives, as in *Medd's (1999) proof* . . . . To avoid LaTeX errors when using the harvard styles, delete the BibTeX style files in the `bst\beebe` directory.

Sample Citations and Bibliography

Example using apsr

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman & Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. 1986. "The Gnats and Gnus Document Preparation System." *G-Animal's Journal* 41(7):73+. This is a full ARTICLE entry.

Knuth, Donald E. 1981. *Seminumerical Algorithms*. Vol. 2 of *The Art of Computer Programming* second ed. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, Jill C. 1988. "The Programming of Computer Art." Stanford, California: Vernier Art Center. This is a full BOOKLET entry.

Lincoll, Daniel D. 1977. Semigroups of Recurrences. In *High Speed Computer and Algorithm Organization*, ed. David J. Lipcoll, D. H. Lawrie & A. H. Sameh. Third ed. number 23 *in* "Fast Computers" New York: Academic Press part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho, Alfred V., Jeffrey D. Ullman & Mihalis Yannakakis. 1983. On Notions of Information Transfer in VLSI Circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, ed. Wizard V. Oz & Mihalis Yannakakis. Number 17 *in* "All ACM Conferences" The OX Association for Computing Machinery Boston: Academic Press pp. 133–139. This is a full INPROCEDINGS entry.

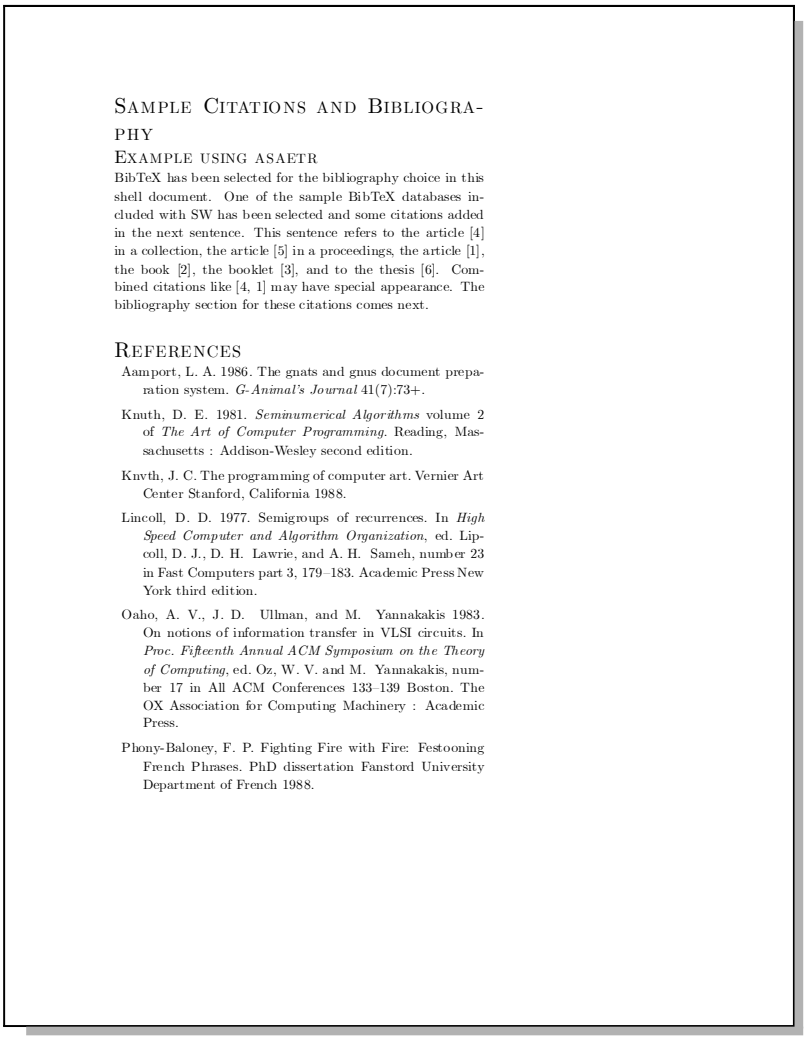
Phony-Baloney, F. Phidias. 1988. Fighting Fire with Fire: Festooning French Phrases PhD dissertation Fanstord University Department of French: . This is a full PHDTHESIS entry.

1

asaetr.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	[number]
Required documentclass	asaetr
Directory	`TCITeX/BibTeX/bst/asaetr`
Sample BibTeX Database:	
`asaetr.bib`	Contains two entries.

This style supports the bibliography requirements of the *Transactions of the ASAE (American Society for Agricultural Engineers)*. The ASAE Transactions shell document was created with the asaetr document class, a requirement for `asaetr.bst`.



SAMPLE CITATIONS AND BIBLIOGRAPHY

EXAMPLE USING ASAETR

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

REFERENCES

Aamport, L. A. 1986. The gnats and gnus document preparation system. *G-Animal's Journal* 41(7):73+.

Knuth, D. E. 1981. *Seminumerical Algorithms* volume 2 of *The Art of Computer Programming*. Reading, Massachusetts : Addison-Wesley second edition.

Knvth, J. C. The programming of computer art. Vernier Art Center Stanford, California 1988.

Lincoll, D. D. 1977. Semigroups of recurrences. In *High Speed Computer and Algorithm Organization*, ed. Lipcoll, D. J., D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers part 3, 179–183. Academic Press New York third edition.

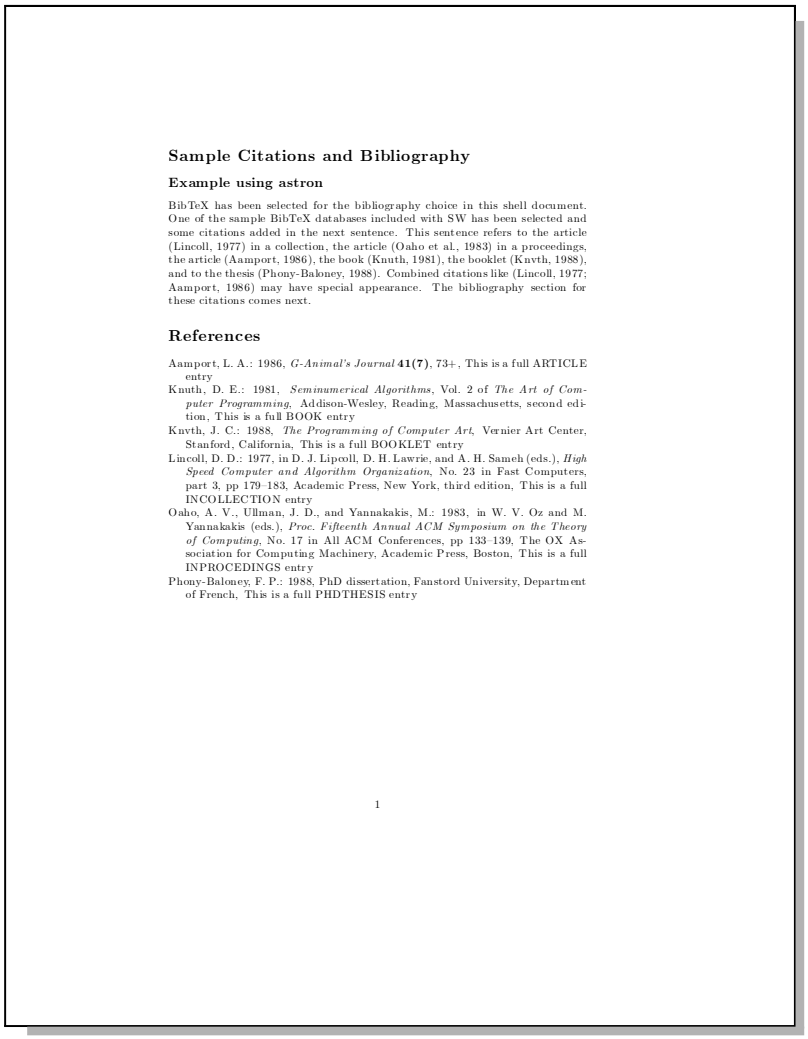
Oaho, A. V., J. D. Ullman, and M. Yannakakis 1983. On notions of information transfer in VLSI circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, ed. Oz, W. V. and M. Yannakakis, number 17 in All ACM Conferences 133–139 Boston. The OX Association for Computing Machinery : Academic Press.

Phony-Baloney, F. P. Fighting Fire with Fire: Festooning French Phrases. PhD dissertation Fanstord University Department of French 1988.

astron.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*astron* package
Directory	`TCITeX/BibTeX/bst/beebe`

The style is the BibTeX bibliography style for astronomical journals. It requires the *astron* package.



Sample Citations and Bibliography

Example using astron

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knyth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A.: 1986, *G-Animal's Journal* **41(7)**, 73+, This is a full ARTICLE entry

Knuth, D. E.: 1981, *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, This is a full BOOK entry

Knyth, J. C.: 1988, *The Programming of Computer Art*, Vernier Art Center, Stanford, California, This is a full BOOKLET entry

Lincoll, D. D.: 1977, in D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh (eds.), *High Speed Computer and Algorithm Organization*, No. 23 in Fast Computers, part 3, pp 179–183, Academic Press, New York, third edition, This is a full INCOLLECTION entry

Oaho, A. V., Ullman, J. D., and Yannakakis, M.: 1983, in W. V. Oz and M. Yannakakis (eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, No. 17 in All ACM Conferences, pp 133–139, The OX Association for Computing Machinery, Academic Press, Boston, This is a full INPROCEDINGS entry

Phony-Baloney, F. P.: 1988, PhD dissertation, Fanstord University, Department of French, This is a full PHDTHESIS entry

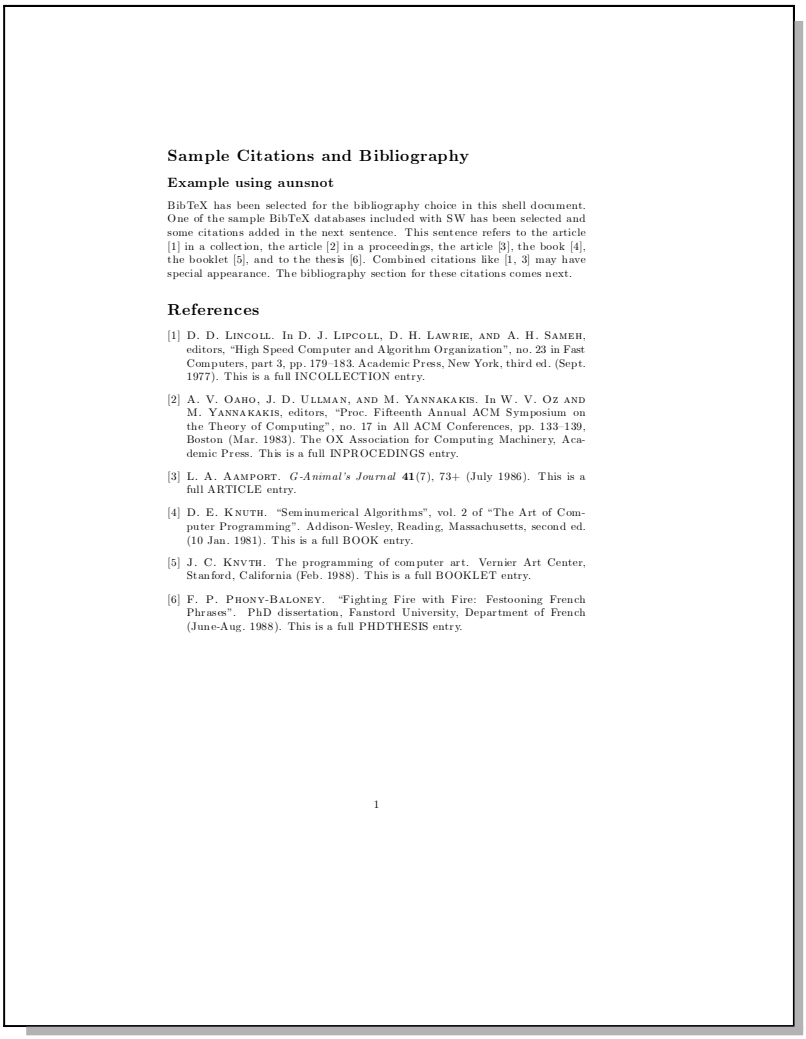
1

aunsnot.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Required files	`LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears.

In this style, entries appear in the order of their first citation. Otherwise, the style is the same as the style `anotit.bst`, which excludes the titles of articles and abbreviates first names, month names, and journal names in the entries. Authors' names appear in small capitals in the reference list.



Sample Citations and Bibliography

Example using aunsnot

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, "High Speed Computer and Algorithm Organization", no. 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third ed. (Sept. 1977). This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis. In W. V. Oz and M. Yannakakis, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", no. 17 in All ACM Conferences, pp. 133–139, Boston (Mar. 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[3] L. A. Aamport. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[4] D. E. Knuth. "Seminumerical Algorithms", vol. 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second ed. (10 Jan. 1981). This is a full BOOK entry.

[5] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California (Feb. 1988). This is a full BOOKLET entry.

[6] F. P. Phony-Baloney. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-Aug. 1988). This is a full PHDTHESIS entry.

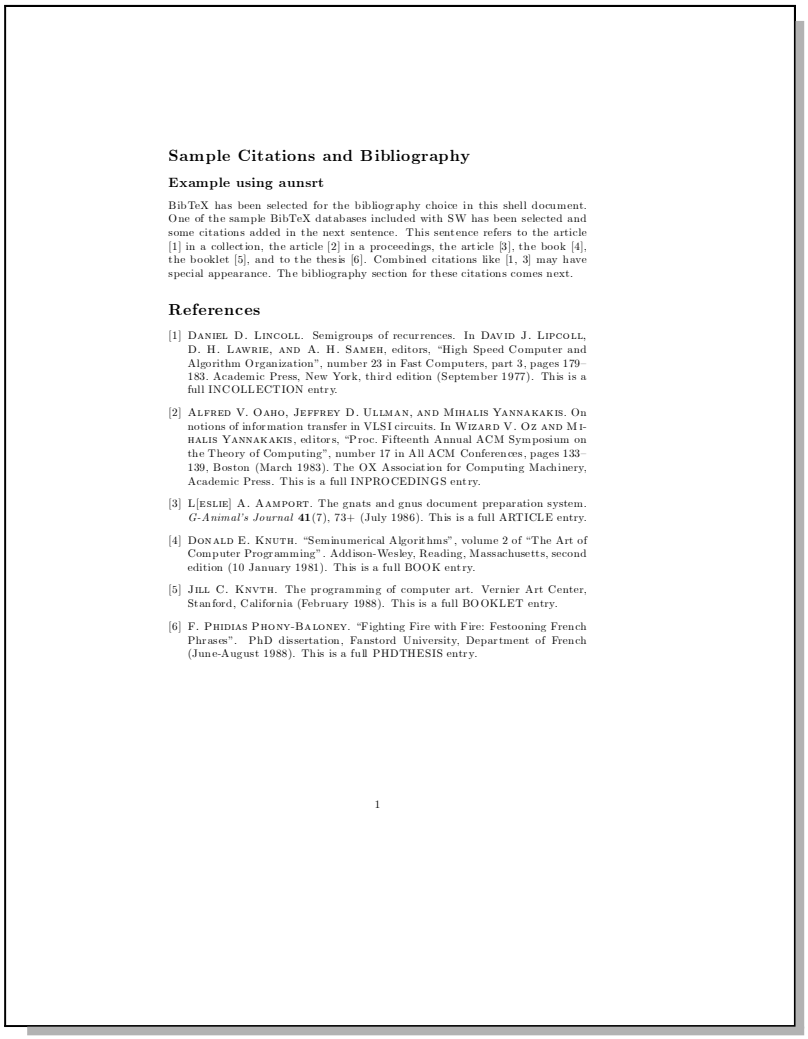
1

aunsrt.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Required files	`LaTeX/contrib/other/BibTeX/apreambl.tex`
Directory	`TCITeX/BibTeX/bst/abstyles`
Sample BibTeX Database:	
`acompat.bib`	Contains compatibility definitions for use with standard styles; does not contain any actual bibliography records.

The style is one of the BibTeX 'adaptable' family of styles derived by Hans-Hermann Bode. The program automatically inputs the file `apreambl.tex` to the document before the bibliography command appears.

In this style, entries appear in the order of their first citation. Otherwise, the style is the same as the style `aplain.bst`, which sorts entries alphabetically and labels them with numbers. Authors' names appear in small capitals in the reference list.



Sample Citations and Bibliography

Example using aunsrt

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, "High Speed Computer and Algorithm Organization", number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition (September 1977). This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, "Proc. Fifteenth Annual ACM Symposium on the Theory of Computing", number 17 in All ACM Conferences, pages 133–139, Boston (March 1983). The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal* **41**(7), 73+ (July 1986). This is a full ARTICLE entry.

[4] Donald E. Knuth. "Seminumerical Algorithms", volume 2 of "The Art of Computer Programming". Addison-Wesley, Reading, Massachusetts, second edition (10 January 1981). This is a full BOOK entry.

[5] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California (February 1988). This is a full BOOKLET entry.

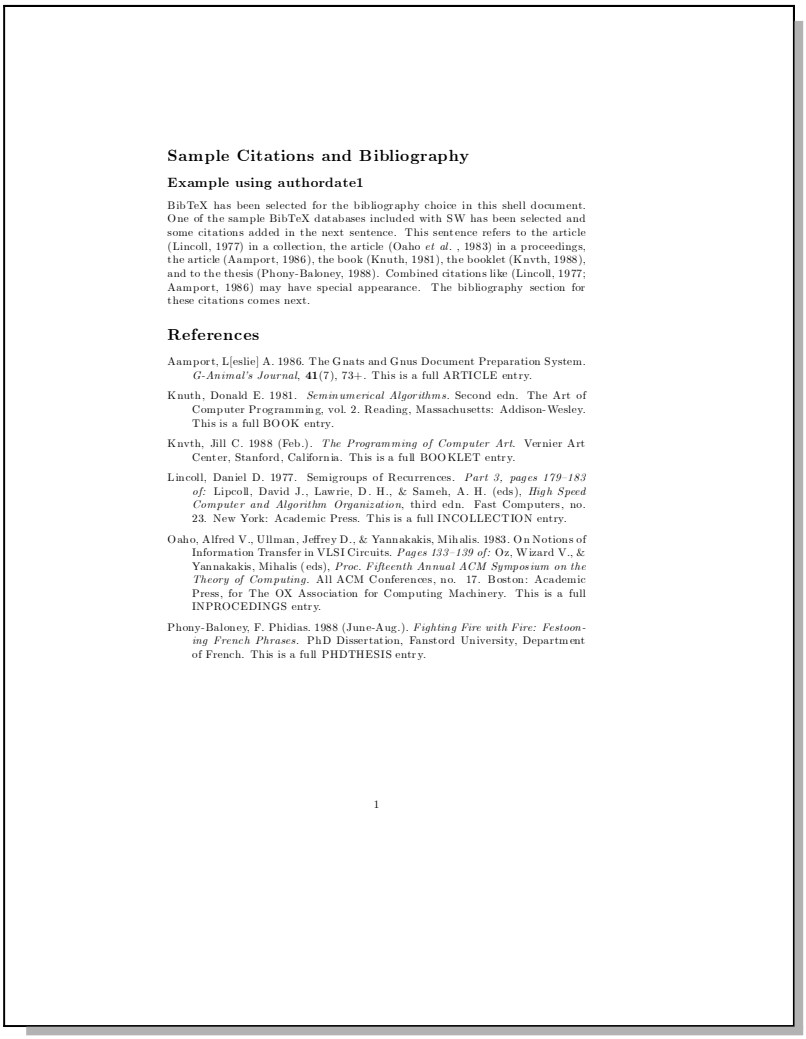
[6] F. Phidias Phony-Baloney. "Fighting Fire with Fire: Festooning French Phrases". PhD dissertation, Fanstord University, Department of French (June-August 1988). This is a full PHDTHESIS entry.

1

authordate1.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author *et al.*, date)
Required files	***authordate1-4*** package
Directory	`TCITeX/BibTeX/bst/beebe`

This style produces author-date reference lists based loosely on the recommendations of *British Standard 1629* (1976 edition), Butcher's *Copy-editing* (Cambridge University Press, 1981), and the *Chicago Manual of Style* (1982 edition). Uppercase letters in article, journal, and book titles are left as given in the `.bib` file. The style must be used in conjunction with certain re-definitions of `thebibliography` and `\cite`, which are provided in the required LaTeX package ***authordate1-4***.



Sample Citations and Bibliography

Example using authordate1

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho *et al.* , 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. 1986. The Gnats and Gnus Document Preparation System. *G-Animal's Journal*, **41**(7), 73+. This is a full ARTICLE entry.

Knuth, Donald E. 1981. *Seminumerical Algorithms*. Second edn. The Art of Computer Programming, vol. 2. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, Jill C. 1988 (Feb.). *The Programming of Computer Art*. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, Daniel D. 1977. Semigroups of Recurrences. *Part 3, pages 179–183 of:* Lipcoll, David J., Lawrie, D. H., & Sameh, A. H. (eds), *High Speed Computer and Algorithm Organization*, third edn. Fast Computers, no. 23. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, Alfred V., Ullman, Jeffrey D., & Yannakakis, Mihalis. 1983. On Notions of Information Transfer in VLSI Circuits. *Pages 133–139 of:* Oz, Wizard V., & Yannakakis, Mihalis (eds), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*. All ACM Conferences, no. 17. Boston: Academic Press, for The OX Association for Computing Machinery. This is a full INPROCEDINGS entry.

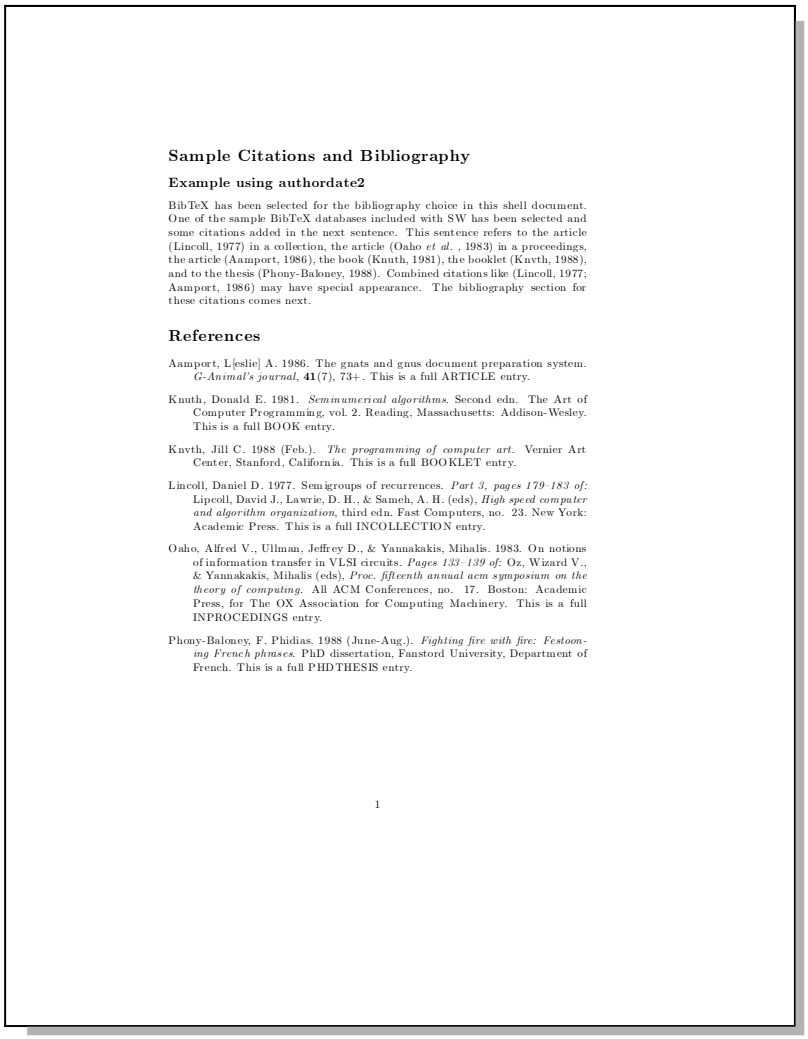
Phony-Baloney, F. Phidias. 1988 (June-Aug.). *Fighting Fire with Fire: Festooning French Phrases*. PhD Dissertation, Faustord University, Department of French. This is a full PHDTHESIS entry.

1

authordate2.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author *et al.*, date)
Required files	***authordate1-4*** package
Directory	`TCITeX/BibTeX/bst/beebe`

As does `authordate1.bst`, this style produces author-date reference lists based loosely on the recommendations of *British Standard 1629* (1976 edition), Butcher's *Copy-editing* (Cambridge University Press, 1981), and the *Chicago Manual of Style* (1982 edition). The style differs from `authordate1.bst` in that it uses downstyle titles; that is, titles that are lowercase except for the first letter, any letter following a colon, and letters protected by opening and closing braces. The style must be used in conjunction with certain re-definitions of `thebibliography` and `\cite`, which are provided in the required LaTeX package ***authordate1-4***.



Sample Citations and Bibliography

Example using authordate2

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho *et al.* , 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knyth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. 1986. The gnats and gnus document preparation system. *G-Animal's journal*, **41**(7), 73+. This is a full ARTICLE entry.

Knuth, Donald E. 1981. *Seminumerical algorithms*. Second edn. The Art of Computer Programming, vol. 2. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knyth, Jill C. 1988 (Feb.). *The programming of computer art*. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, Daniel D. 1977. Semigroups of recurrences. *Part 3, pages 179–183 of:* Lipcoll, David J., Lawrie, D. H., & Sameh, A. H. (eds), *High speed computer and algorithm organization*, third edn. Fast Computers, no. 23. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, Alfred V., Ullman, Jeffrey D., & Yannakakis, Mihalis. 1983. On notions of information transfer in VLSI circuits. *Pages 133–139 of:* Oz, Wizard V., & Yannakakis, Mihalis (eds), *Proc. fifteenth annual acm symposium on the theory of computing*. All ACM Conferences, no. 17. Boston: Academic Press, for The OX Association for Computing Machinery. This is a full INPROCEDINGS entry.

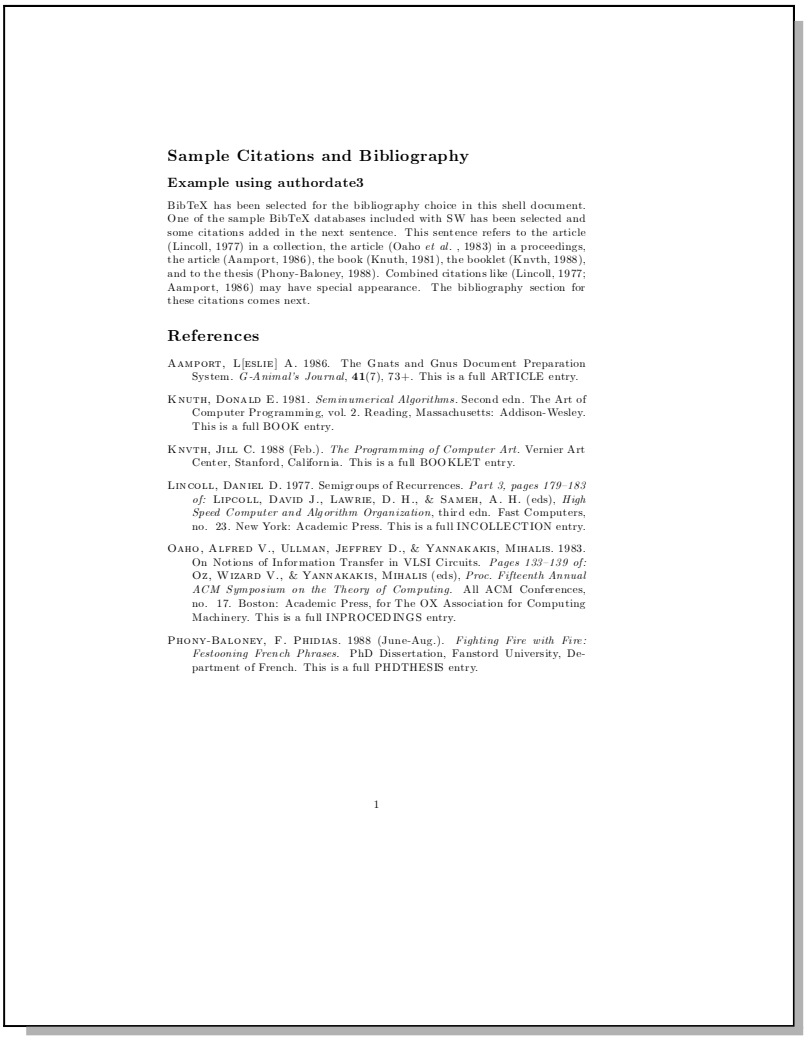
Phony-Baloney, F. Phidias. 1988 (June-Aug.). *Fighting fire with fire: Festooning French phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

authordate3.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author *et al.*, date)
Required files	***authordate1-4*** package
Directory	`TCITeX/BibTeX/bst/beebe`

As does `authordate1.bst`, this style produces author-date reference lists based loosely on the recommendations of *British Standard 1629* (1976 edition), Butcher's *Copy-editing* (Cambridge University Press, 1981), and the *Chicago Manual of Style* (1982 edition). Uppercase letters in article, journal, and book titles are left as given in the `.bib` file. The style differs from `authordate1.bst` in that author's names are given in small capitals in the list of references. The style must be used in conjunction with certain re-definitions of `thebibliography` and `\cite`, which are provided in the required LaTeX package ***authordate1-4***.



Sample Citations and Bibliography

Example using authordate3

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho *et al.* , 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. 1986. The Gnats and Gnus Document Preparation System. *G-Animal's Journal*, **41**(7), 73+. This is a full ARTICLE entry.

Knuth, Donald E. 1981. *Seminumerical Algorithms*. Second edn. The Art of Computer Programming, vol. 2. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, Jill C. 1988 (Feb.). *The Programming of Computer Art*. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, Daniel D. 1977. Semigroups of Recurrences. *Part 3, pages 179–183 of:* Lipcoll, David J., Lawrie, D. H., & Sameh, A. H. (eds), *High Speed Computer and Algorithm Organization*, third edn. Fast Computers, no. 23. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, Alfred V., Ullman, Jeffrey D., & Yannakakis, Mihalis. 1983. On Notions of Information Transfer in VLSI Circuits. *Pages 133–139 of:* Oz, Wizard V., & Yannakakis, Mihalis (eds), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*. All ACM Conferences, no. 17. Boston: Academic Press, for The OX Association for Computing Machinery. This is a full INPROCEDINGS entry.

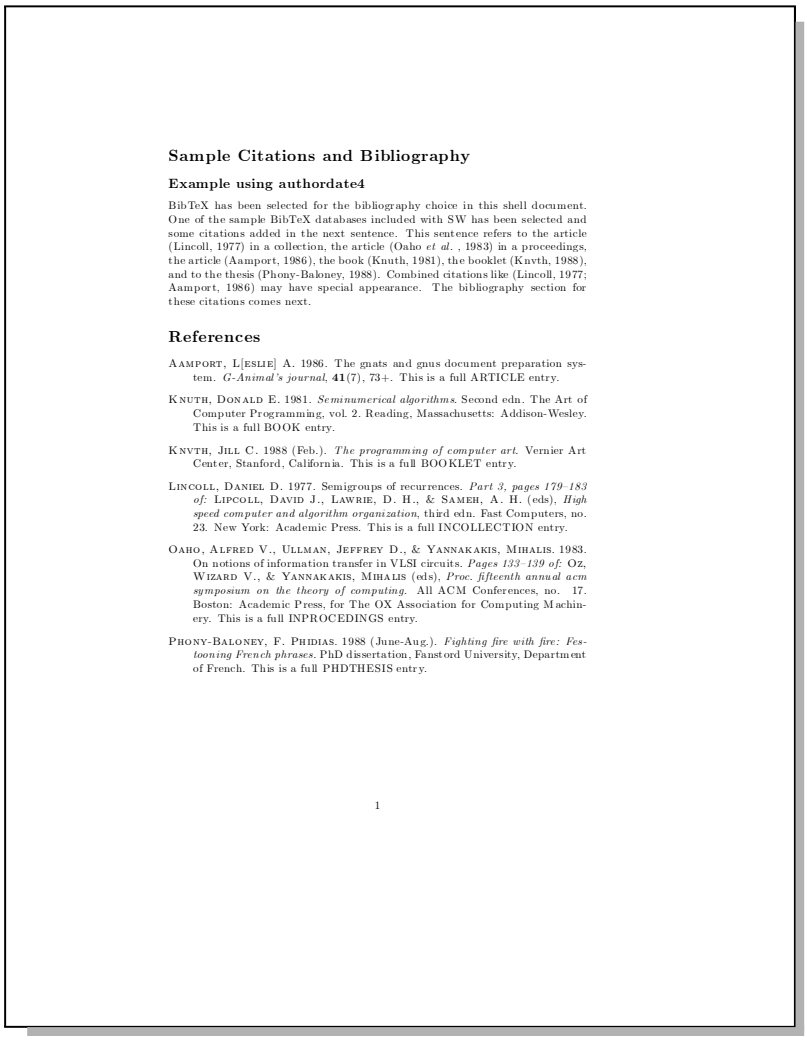
Phony-Baloney, F. Phidias. 1988 (June-Aug.). *Fighting Fire with Fire: Festooning French Phrases*. PhD Dissertation, Faustord University, Department of French. This is a full PHDTHESIS entry.

1

authordate4.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author & Author, date) (Author *et al.*, date)
Required files	***authordate1-4*** package
Directory	`TCITeX/BibTeX/bst/beebe`

As does `authordate3.bst`, this style produces author-date reference lists based loosely on the recommendations of *British Standard 1629* (1976 edition), Butcher's *Copy-editing* (Cambridge University Press, 1981), and the *Chicago Manual of Style* (1982 edition). Author's names are given in small capitals in the list of references. The style differs from `authordate3.bst` in that it uses downstyle titles—titles that are lowercase except for the first letter, any letter following a colon, and letters protected by opening and closing braces. The style must be used in conjunction with certain re-definitions of `thebibliography` and `\cite`, which are provided in the required LaTeX package ***authordate1-4***.



Sample Citations and Bibliography

Example using authordate4

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho *et al.* , 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. 1986. The gnats and gnus document preparation system. *G-Animal's journal*, **41**(7), 73+. This is a full ARTICLE entry.

Knuth, Donald E. 1981. *Seminumerical algorithms*. Second edn. The Art of Computer Programming, vol. 2. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, Jill C. 1988 (Feb.). *The programming of computer art*. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, Daniel D. 1977. Semigroups of recurrences. *Part 3, pages 179–183 of:* Lipcoll, David J., Lawrie, D. H., & Sameh, A. H. (eds), *High speed computer and algorithm organization*, third edn. Fast Computers, no. 23. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, Alfred V., Ullman, Jeffrey D., & Yannakakis, Mihalis. 1983. On notions of information transfer in VLSI circuits. *Pages 133–139 of:* Oz, Wizard V., & Yannakakis, Mihalis (eds), *Proc. fifteenth annual acm symposium on the theory of computing*. All ACM Conferences, no. 17. Boston: Academic Press, for The OX Association for Computing Machinery. This is a full INPROCEDINGS entry.

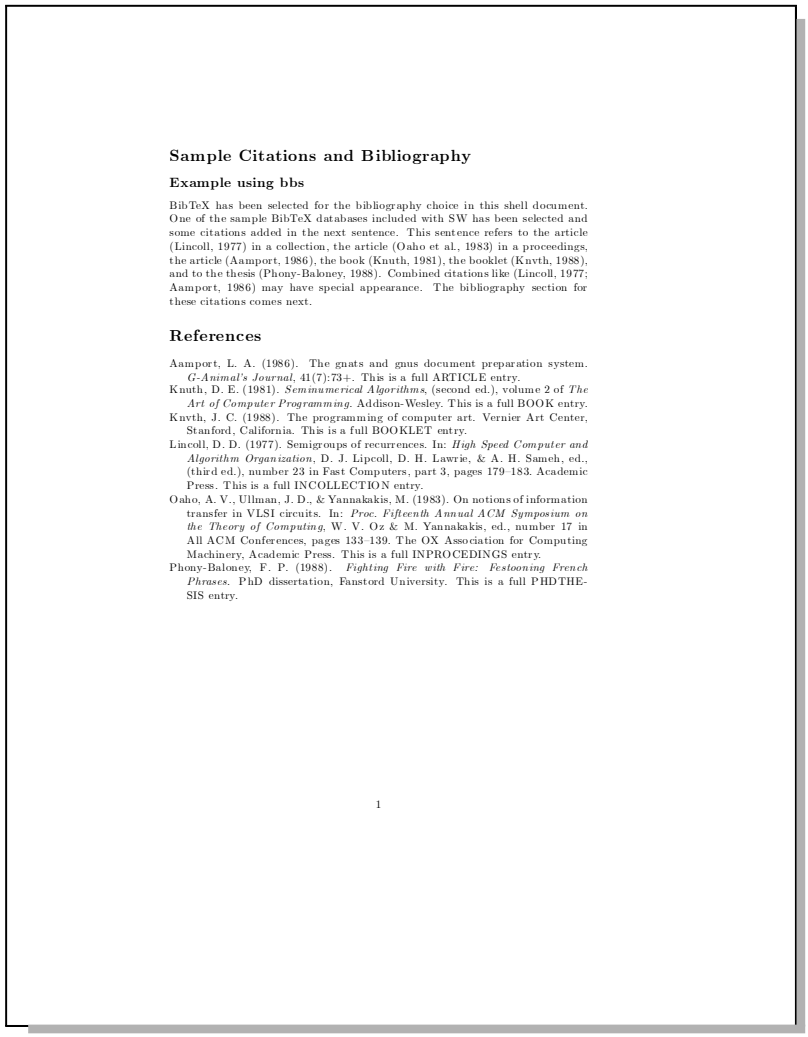
Phony-Baloney, F. Phidias. 1988 (June-Aug.). *Fighting fire with fire: Festooning French phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

bbs.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*astron* package
Directory	`TCITeX/BibTeX/bst/beebe`

The file produces bibliographies approximately in the format of *Behavioral and Brain Sciences.* It was adapted from `apalike.bst`, incorporating features of `astron.bst`. The style requires the *astron* package.



Sample Citations and Bibliography

Example using bbs

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

Knuth, D. E. (1981). *Seminumerical Algorithms*, (second ed.), volume 2 of *The Art of Computer Programming*. Addison-Wesley. This is a full BOOK entry.

Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977). Semigroups of recurrences. In: *High Speed Computer and Algorithm Organization*, D. J. Lipcoll, D. H. Lawrie, & A. H. Sameh, ed., (third ed.), number 23 in Fast Computers, part 3, pages 179–183. Academic Press. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., & Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In: *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, W. V. Oz & M. Yannakakis, ed., number 17 in All ACM Conferences, pages 133–139. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

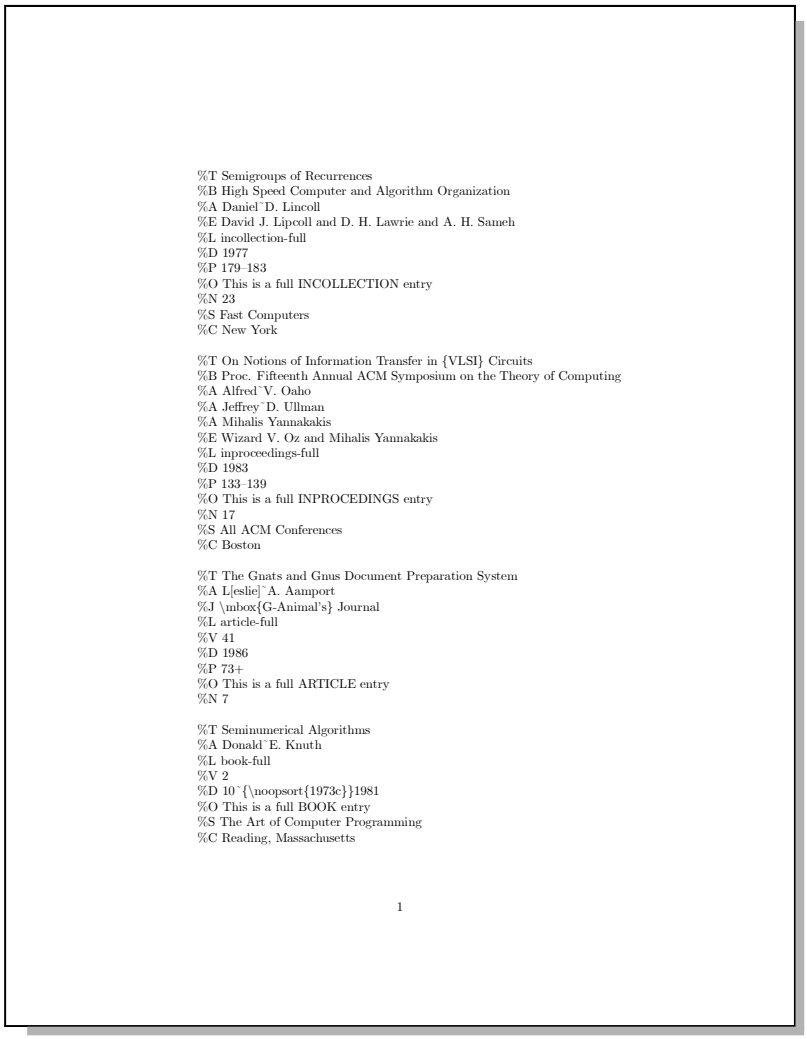
Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University. This is a full PHDTHESIS entry.

1

bibtoref.bst

Format of reference list label	None
Organization of reference list	In order of first citation
Format of citation	None
Directory	`TCITeX/BibTeX/bst/beebe`

This bibliography style translates BibTEX bibliography entries into the UNIX *refer* format. The style converts `\cite{`***key***`}` entries or the `\nocite{*}` command to UNIX and places the resulting bibliography in the corresponding `.bbl` file. The illustration below shows the `.bbl` file generated for a sample file.



```
%T Semigroups of Recurrences
%B High Speed Computer and Algorithm Organization
%A Daniel~D. Lincoll
%E David J. Lipcoll and D. H. Lawrie and A. H. Sameh
%L incollection-full
%D 1977
%P 179–183
%O This is a full INCOLLECTION entry
%N 23
%S Fast Computers
%C New York

%T On Notions of Information Transfer in {VLSI} Circuits
%B Proc. Fifteenth Annual ACM Symposium on the Theory of Computing
%A Alfred~V. Oaho
%A Jeffrey~D. Ullman
%A Mihalis Yannakakis
%E Wizard V. Oz and Mihalis Yannakakis
%L inproceedings-full
%D 1983
%P 133–139
%O This is a full INPROCEDINGS entry
%N 17
%S All ACM Conferences
%C Boston

%T The Gnats and Gnus Document Preparation System
%A L[eslie]~A. Aamport
%J \mbox{G-Animal's} Journal
%L article-full
%V 41
%D 1986
%P 73+
%O This is a full ARTICLE entry
%N 7

%T Seminumerical Algorithms
%A Donald~E. Knuth
%L book-full
%V 2
%D 10~{\noopsort{1973c}}1981
%O This is a full BOOK entry
%S The Art of Computer Programming
%C Reading, Massachusetts

1
```

birthday.bst

Format of reference list label	None
Organization of reference list	In order by month and day
Format of citation	[—]
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTEX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LATEX and BibTEX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTEX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

All styles associated with `directory` require the LATEX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TEX fields containing `\dir{`***key***`}` commands instead of standard citations, as described below. The styles support a `\nodir{`***key***`}` command, which creates a list with no citations in the text. With the `\nodir{`***key***`}` command, the `birthday.bst` style produces a reference list containing full birthdate information for all entries in the referenced database, as shown in the illustration that follows.

► **To enter a `\nodir` command in a TEX field**

1. Place the insertion point where you want the citation to appear.
2. From the Insert menu, choose Typeset Object and then choose TeX Field.
3. In the entry area, type **`\nodir{`*****key*****`}`** where ***key*** is the key for the database entry you want to cite.
4. Choose OK.

Sample Citations and Bibliography

Example using birthday

⋆ **29/1** Donald Ernest Knudson

⋆ **6/2/1973** Christophe Geuzaine

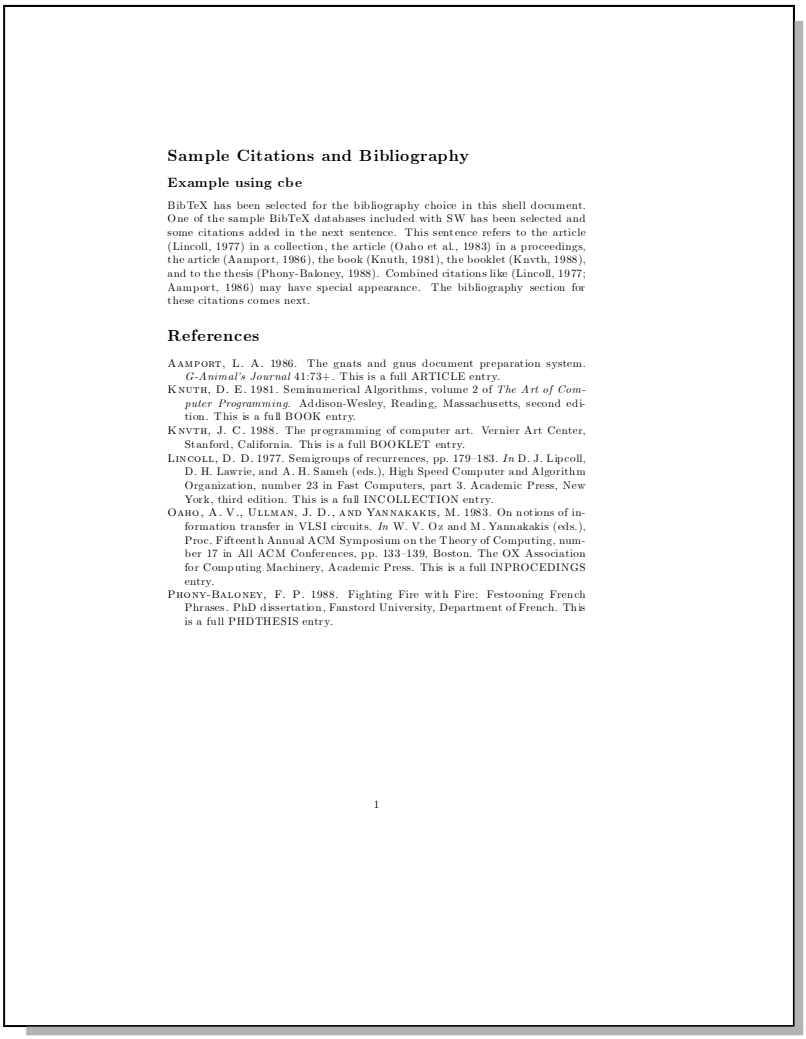
⋆ **10/2, 5/11 and 1/1** Daffy Duck Knudson, Bugs Bunny and Pluto

⋆ **27/2** Bip P. Knudson

cbe.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*astron* package
Directory	`TCITeX/BibTeX/bst/beebe`

The file produces bibliographies approximately in the Council of Biology Editors format, which is used by *Evolution, American Naturalist,* and many other journals. It was adapted from `apalike.bst`, incorporating features of `astron.bst`. In the reference list, authors' names are printed in small capitals. The style requires the *astron* package.



Sample Citations and Bibliography

Example using cbe

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. 1986. The gnats and gnus document preparation system. *G-Animal's Journal* 41-73+. This is a full ARTICLE entry.

Knuth, D. E. 1981. Seminumerical Algorithms, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

Knvth, J. C. 1988. The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. 1977. Semigroups of recurrences, pp. 179–183. *In* D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh (eds.), High Speed Computer and Algorithm Organization, number 23 in Fast Computers, part 3. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., and Yannakakis, M. 1983. On notions of information transfer in VLSI circuits. *In* W. V. Oz and M. Yannakakis (eds.), Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, number 17 in All ACM Conferences, pp. 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

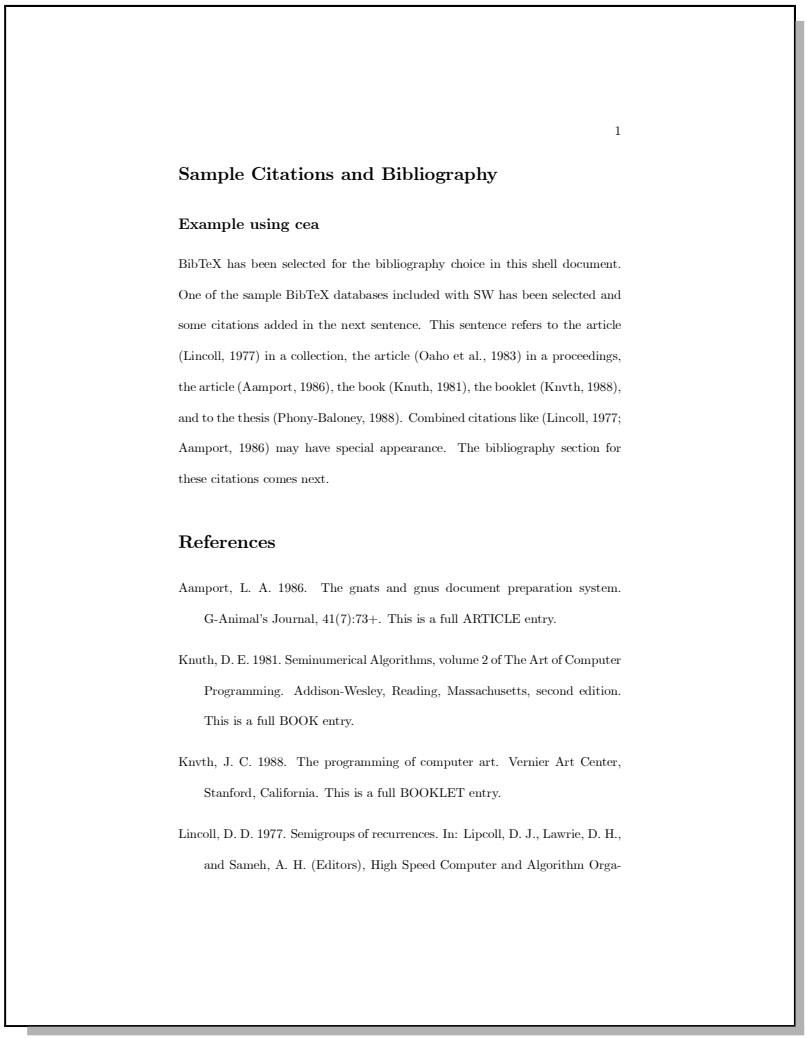
Phony-Baloney, F. P. 1988. Fighting Fire with Fire: Festooning French Phrases. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

cea.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*cea* package
Directory	`TCITeX/BibTeX/bst/beebe`

The style is the BibTeX style for *Computers and Electronics in Agriculture.* The reference list is double-spaced. For every entry, the style requires a 'year' field, and either an author (in some cases, an editor) field or a key field. The command `\cite` results in (Jones, 1986) in the text. The reference list has no labels but includes a date immediately after the author's name. Author (and editor) names appear last name first. The style is adapted from the bibliography style `apalike.bst` (24-Jan.-88 version). It requires the *cea* package.



1

Sample Citations and Bibliography

Example using cea

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. 1986. The gnats and gnus document preparation system. G-Animal's Journal, 41(7):73+. This is a full ARTICLE entry.

Knuth, D. E. 1981. Semimumerical Algorithms, volume 2 of The Art of Computer Programming. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

Knvth, J. C. 1988. The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. 1977. Semigroups of recurrences. In: Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H. (Editors), High Speed Computer and Algorithm Orga-

nization, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., and Yannakakis, M. 1983. On notions of information transfer in VLSI circuits. In: Oz, W. V. and Yannakakis, M. (Editors), Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, Boston. The OX Association for Computing Machinery, Academic Press, (17):133–139. This is a full INPROCEDINGS entry.

Phony-Baloney, F. P. 1988. Fighting Fire with Fire: Festooning French Phrases. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

cell.bst

Format of reference list label	[Author, date] [Author and Author, date] [Author et al., date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author and Author, date] [Author et al., date]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a modification of the bibliography style `jmb.bst`, which was designed to approximate the bibliography style of the *Journal of Molecular Biology* and *Journal of Theoretical Biology*. Bibliography entries for articles, books, and items in proceedings are formatted carefully. You can toggle between styles appropriate for the two journals by toggling the titles on and off. The *Journal of Theoretical Biology* requires titles; the *Journal of Molecular Biology* doesn't.

► To toggle the titles off

1. Choose or, from the Insert menu, choose Typeset Object and then choose TeX Field.
2. In the entry area, type **nocite{TitlesOn}** and choose OK.
3. Make sure the bibliography database contains a bibliography article with the same citation key.

Sample Citations and Bibliography

Example using cell

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho et al., 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). G-Animal's Journal 41 (7), 73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). Seminumerical Algorithms, volume 2 of The Art of Computer Programming. Reading, Massachusetts: Addison-Wesley, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). Vernier Art Center Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). In: High Speed Computer and Algorithm Organization, (Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., eds) number 23 in Fast Computers part 3, pp. 179–183. Academic Press New York third edition. This is a full INCOLLECTION entry.

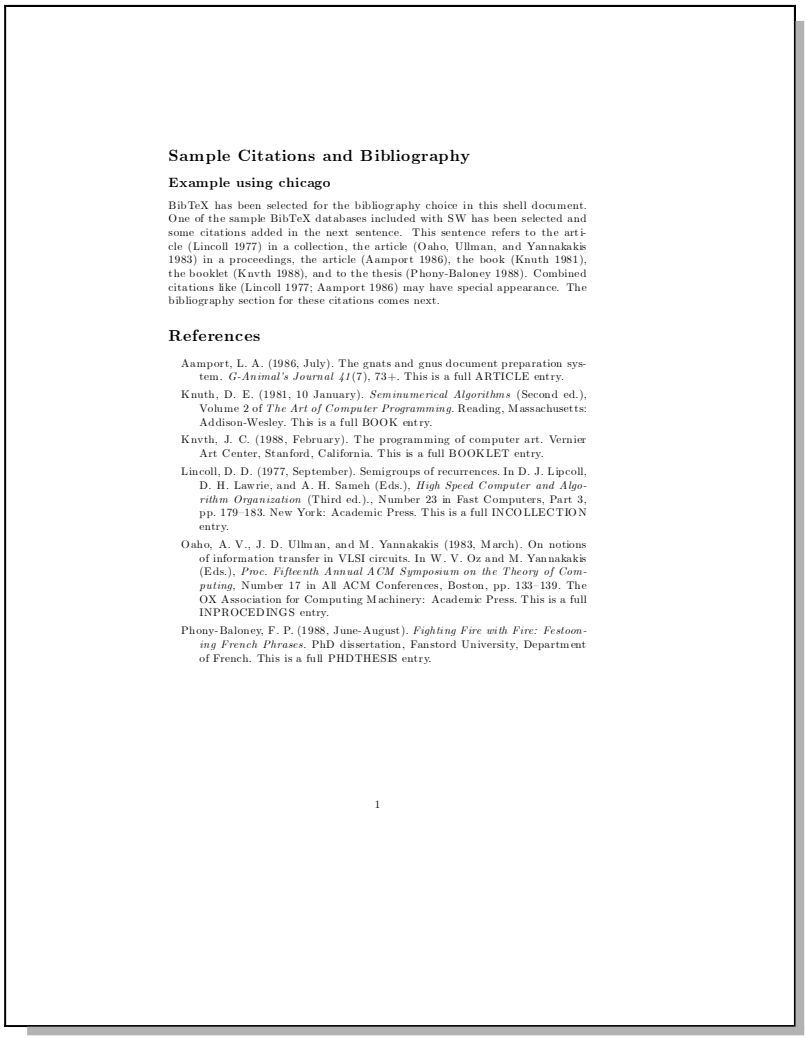
[Oaho et al., 1983] Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983). In: Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, (Oz, W. V. and Yannakakis, M., eds) number 17 in All ACM Conferences pp. 133–139, The OX Association for Computing Machinery Boston: Academic Press. This is a full INPROCEDINGS entry.

[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). Fighting Fire with Fire: Festooning French Phrases. PhD dissertation Fanstord University Department of French. This is a full PHDTHESIS entry.

chicago.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) and multiple other formats
Required files	*chicago* package
Directory	`TCITeX/BibTeX/bst/beebe`

This BibTEX bibliography style follows the 'B' reference style of the 13th Edition of *The Chicago Manual of Style.* The style, which must be used with the *chicago* package, supports a variety of citation formats.



Sample Citations and Bibliography

Example using chicago

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman, and Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977; Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986, July). The gnats and gnus document preparation system. *G-Animal's Journal 41*(7), 73+. This is a full ARTICLE entry.

Knuth, D. E. (1981, 10 January). *Seminumerical Algorithms* (Second ed.), Volume 2 of *The Art of Computer Programming*. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, J. C. (1988, February). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977, September). Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh (Eds.), *High Speed Computer and Algorithm Organization* (Third ed.)., Number 23 in Fast Computers, Part 3, pp. 179–183. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, A. V., J. D. Ullman, and M. Yannakakis (1983, March). On notions of information transfer in VLSI circuits. In W. V. Oz and M. Yannakakis (Eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Number 17 in All ACM Conferences, Boston, pp. 133–139. The OX Association for Computing Machinery: Academic Press. This is a full INPROCEDINGS entry.

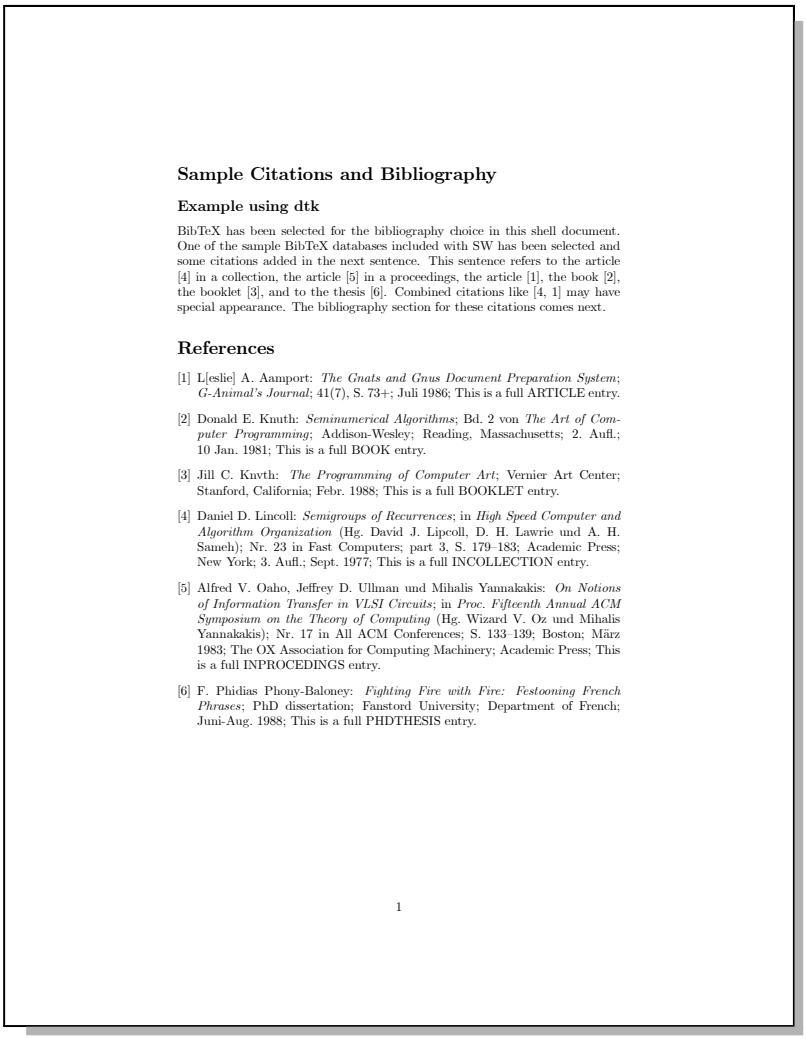
Phony-Baloney, F. P. (1988, June-August). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

dtk.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/dtk`
Sample BibTeX Databases	
`beispiel.bib`	
`dtk.bib`	

This bibliography style is intended for texts in German, particularly for use in *Die TeXnische Komoedie,* the communications of Dante e.V.



Sample Citations and Bibliography

Example using dtk

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport: *The Gnats and Gnus Document Preparation System*; *G-Animal's Journal*; 41(7), S. 73+; Juli 1986; This is a full ARTICLE entry.

[2] Donald E. Knuth: *Seminumerical Algorithms*; Bd. 2 von *The Art of Computer Programming*; Addison-Wesley; Reading, Massachusetts; 2. Aufl.; 10 Jan. 1981; This is a full BOOK entry.

[3] Jill C. Knvth: *The Programming of Computer Art*; Vernier Art Center; Stanford, California; Febr. 1988; This is a full BOOKLET entry.

[4] Daniel D. Lincoll: *Semigroups of Recurrences*; in *High Speed Computer and Algorithm Organization* (Hg. David J. Lipcoll, D. H. Lawrie und A. H. Sameh); Nr. 23 in Fast Computers; part 3, S. 179–183; Academic Press; New York; 3. Aufl.; Sept. 1977; This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman und Mihalis Yannakakis: *On Notions of Information Transfer in VLSI Circuits*; in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* (Hg. Wizard V. Oz und Mihalis Yannakakis); Nr. 17 in All ACM Conferences; S. 133–139; Boston; März 1983; The OX Association for Computing Machinery; Academic Press; This is a full INPROCEDINGS entry.

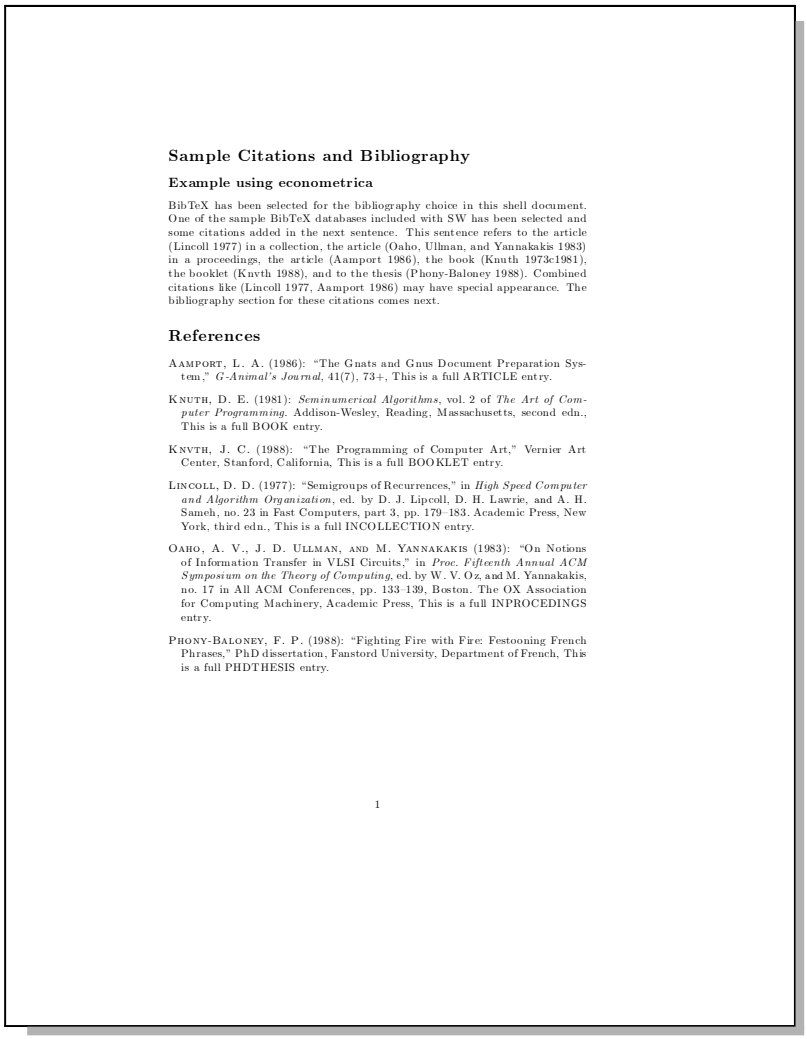
[6] F. Phidias Phony-Baloney: *Fighting Fire with Fire: Festooning French Phrases*; PhD dissertation; Fanstord University; Department of French; Juni-Aug. 1988; This is a full PHDTHESIS entry.

1

econometrica.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author and Author date) (Author, Author, and Author date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/beebe`

This BibTeX bibliography style was created for *Econometrica*. Authors' names in the reference list are produced in small capitals. The style must be used with the *harvard* package.



Sample Citations and Bibliography

Example using econometrica

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman, and Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1973c1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986): "The Gnats and Gnus Document Preparation System," *G-Animal's Journal*, 41(7), 73+, This is a full ARTICLE entry.

Knuth, D. E. (1981): *Seminumerical Algorithms*, vol. 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edn., This is a full BOOK entry.

Knvth, J. C. (1988): "The Programming of Computer Art," Vernier Art Center, Stanford, California, This is a full BOOKLET entry.

Lincoll, D. D. (1977): "Semigroups of Recurrences," in *High Speed Computer and Algorithm Organization*, ed. by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, no. 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third edn., This is a full INCOLLECTION entry.

Oaho, A. V., J. D. Ullman, and M. Yannakakis (1983): "On Notions of Information Transfer in VLSI Circuits," in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, ed. by W. V. Oz, and M. Yannakakis, no. 17 in All ACM Conferences, pp. 133–139, Boston. The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

Phony-Baloney, F. P. (1988): "Fighting Fire with Fire: Festooning French Phrases," PhD dissertation, Fanstord University, Department of French, This is a full PHDTHESIS entry.

1

email.bst

Format of reference list label	None or abbreviated name
Organization of reference list	Alphabetical by person
Format of citation	[—]
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTEX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described below. The styles support a `\nodir{`***key***`}` command, which creates a list with no citations in the text.

► To enter a `\dir` command in a TeX field

1. Place the insertion point where you want the citation to appear.
2. From the Insert menu, choose Typeset Object and then choose TeX Field.
3. In the entry area, type **\dir{*key*}** where ***key*** is the key for the database entry you want to cite.
4. Choose OK.

The `email.bst` style produces a reference list containing the email addresses corresponding to the cited keys. It prints a name at the citation point unless the `\nodir{`***key***`}` command is used. The first sample shown below illustrates an email address list created with `\dir{`***key***`}` commands in the text. The second sample illustrates an email address list created using a `\nodir{*}` command without any preceding text. The samples were created using the databases `business.bib` and `family.bib`.

Sample Citations and Bibliography

Example using email

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. The citations in this sentence have been created with TEX commands that replace standard citations. The list below contains an address for **Donald Ernest Knudson** and also for **Christophe Geuzaine**. It also contains listings for **Bip P. Knudson** and for **The Knudsoft Company** . The email list for these citations comes next.

Christophe Geuzaine *p* `Christophe.Geuzaine@advalvas.be` *w* `Christophe.Geuzaine@ulg.ac.be`

The Knudsoft Company `knud@knudsoft.com`

Bip P. Knudson *p* `bip_bip@free.prov.gnu`

Donald Ernest Knudson *p* `duck@novosi.uni.gnu`

Sample Citations and Bibliography

Example using email

Christophe Geuzaine *p* `Christophe.Geuzaine@advalvas.be` *w* `Christophe.Geuzaine@ulg.ac.be`

The Knudsoft Company `knud@knudsoft.com`

Bip P. Knudson *p* `bip_bip@free.prov.gnu`

Donald Ernest Knudson *p* `duck@novosi.uni.gnu`

email-html.bst

Format of reference list label	None or abbreviated name
Organization of reference list	Alphabetical by person
Format of citation	[—]
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTeX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

Similar to `email.bst`, `email-html.bst` produces an HTML file for a reference list containing full database information corresponding to the cited keys or to the `\nodir{`***key***`}` command. The style supports URL fields within the bibliographic information, so that entries in the list become links to the resources themselves. The resulting HTML file can stand alone or be incorporated into the HTML file for the document containing the citations. The style doesn't produce an automatic heading for the list.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described for `email.bst` on page 471. The styles support a `\nodir{`***key***`}` command, which creates an address book with no citations in the text.

To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and specify and generate a BibTeX address list. Then, use the resulting HTML file as it stands or incorporate it into your document, according to the instructions that follow.

► To incorporate the HTML bibliography into a document

1. Using an ASCII editor, open the `.bbl` file created for your document.
2. Delete the <HTML>, <TITLE>, and </HTML> commands.
3. Copy the contents of the file to the clipboard.
4. Open your document in *SWP* or *SW*.
5. Delete the [BIBTEX] instruction.
6. In its place, insert an HTML object:

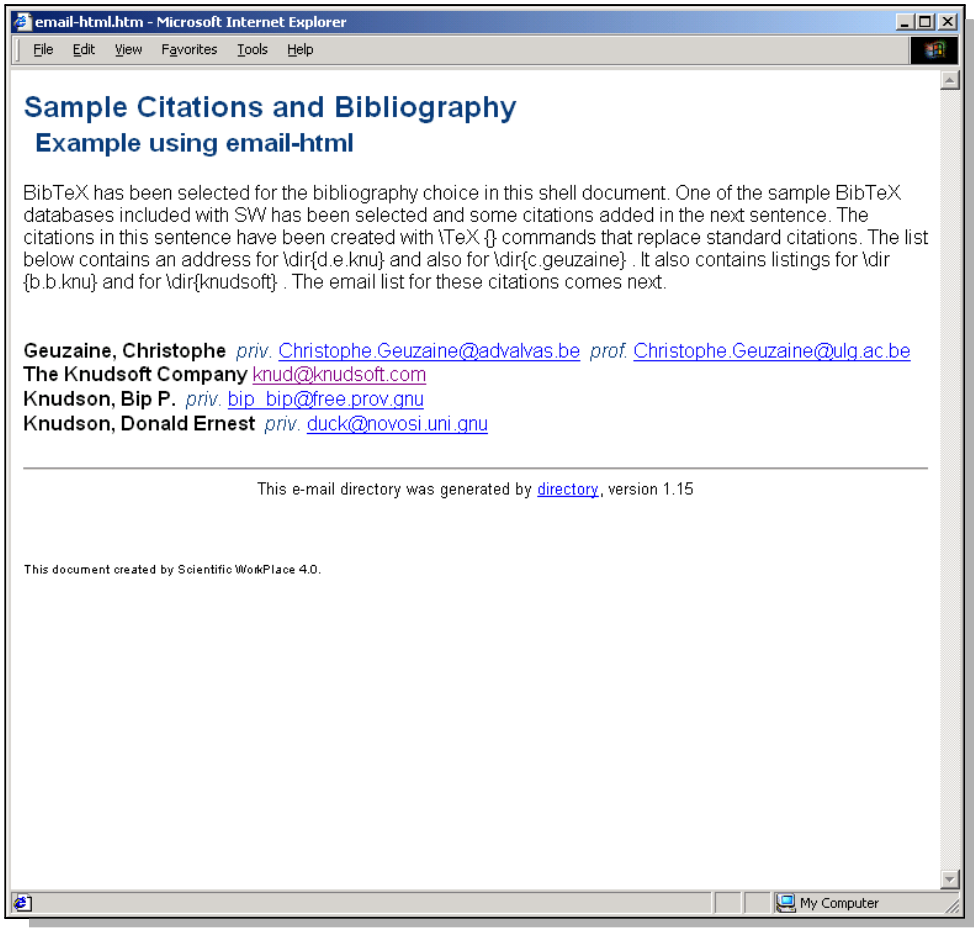
   a. From the Insert menu, choose HTML Field.

b. Paste the contents of the clipboard into the field.
c. Choose OK.

7. Export the file to HTML:

a. From the File menu, choose Export Document.
b. Select the document.
c. In the Save as type box, choose the HTML format you want.
d. Choose OK.

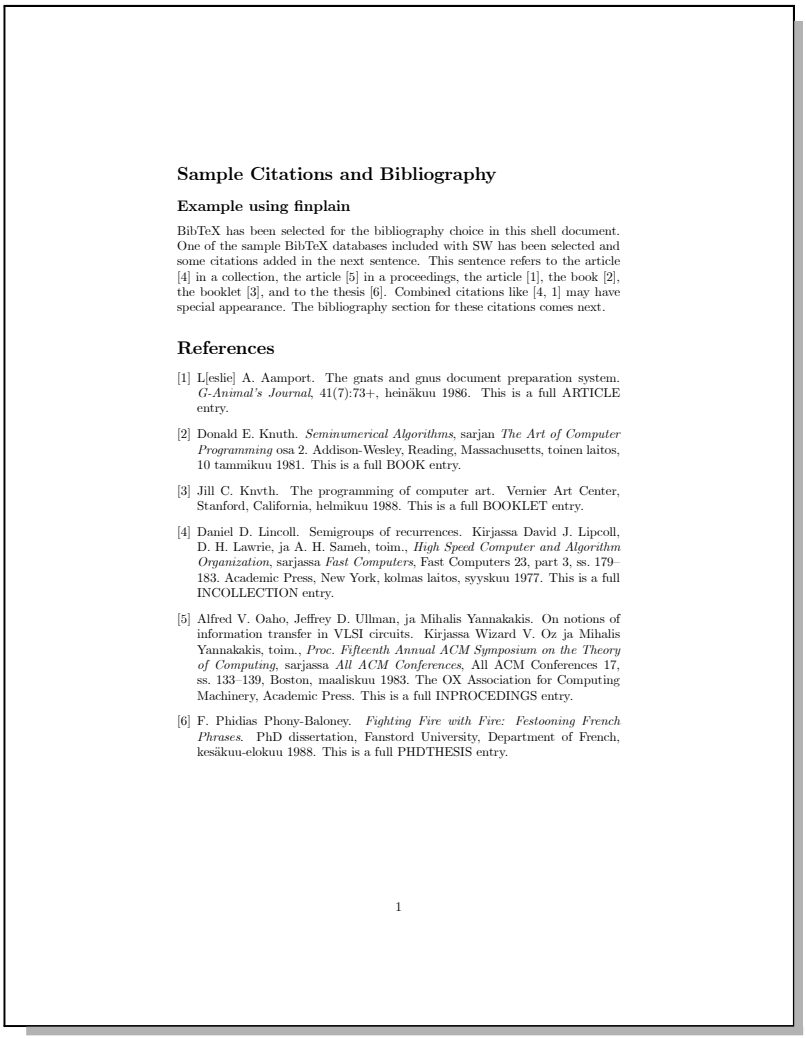
The sample .htm file shown here was created in *SWP* according to these instructions. the .tex file contains a \nodir{*} command that was deleted after the .htm file was created but before the document was exported to HTML. The sample was created using the databases business.bib and family.bib.



finplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/finbib`

This style is a translation into Finnish of the BibTeX standard bibliography style `plain.bst`, which sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using finplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, heinäkuu 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, sarjan *The Art of Computer Programming* osa 2. Addison-Wesley, Reading, Massachusetts, toinen laitos, 10 tammikuu 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, helmikuu 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. Kirjassa David J. Lipcoll, D. H. Lawrie, ja A. H. Sameh, toim., *High Speed Computer and Algorithm Organization*, sarjassa *Fast Computers*, Fast Computers 23, part 3, ss. 179–183. Academic Press, New York, kolmas laitos, syyskuu 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman, ja Mihalis Yannakakis. On notions of information transfer in VLSI circuits. Kirjassa Wizard V. Oz ja Mihalis Yannakakis, toim., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, sarjassa *All ACM Conferences*, All ACM Conferences 17, ss. 133–139, Boston, maaliskuu 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

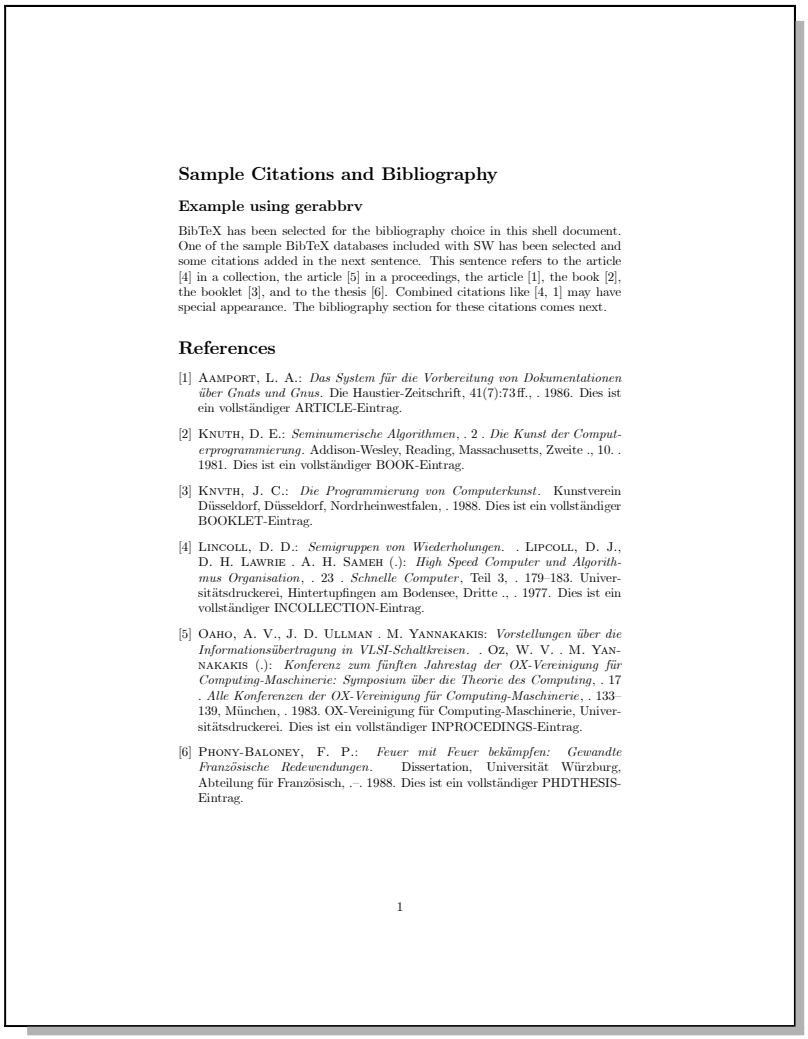
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, kesäkuu-elokuu 1988. This is a full PHDTHESIS entry.

1

gerabbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Required files	*bibgerm* package; *german*.or *ngerman* package
Directory	`TCITeX/BibTeX/bst/germbib`
Sample BibTeX Databases:	
`gerbibtx.bib`	
`gerxmple.bib`	

For use with either German or English, the styles in the `germbib` directory require the *bibgerm* package and either the *german* or *ngerman* package. The packages are available from CTAN at **http://www.ctan.org**. The style prints the authors' names in small capitals in the reference list. The sample was created using the database `gerbibtx.bib` and `gerxampl.bib`.



Sample Citations and Bibliography

Example using gerabbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] Aamport, L. A.: *Das System für die Vorbereitung von Dokumentationen über Gnats und Gnus*. Die Haustier-Zeitschrift, 41(7):73ff., . 1986. Dies ist ein vollständiger ARTICLE-Eintrag.

[2] Knuth, D. E.: *Seminumerische Algorithmen*, . 2 . *Die Kunst der Computerprogrammierung*. Addison-Wesley, Reading, Massachusetts, Zweite ., 10. . 1981. Dies ist ein vollständiger BOOK-Eintrag.

[3] Knvth, J. C.: *Die Programmierung von Computerkunst*. Kunstverein Düsseldorf, Düsseldorf, Nordrheinwestfalen, . 1988. Dies ist ein vollständiger BOOKLET-Eintrag.

[4] Lincoll, D. D.: *Semigruppen von Wiederholungen*. . Lipcoll, D. J., D. H. Lawrie . A. H. Sameh (.): *High Speed Computer und Algorithmus Organisation*, . 23 . *Schnelle Computer*, Teil 3, . 179–183. Universitätsdruckerei, Hintertupfingen am Bodensee, Dritte ., . 1977. Dies ist ein vollständiger INCOLLECTION-Eintrag.

[5] Oaho, A. V., J. D. Ullman . M. Yannakakis: *Vorstellungen über die Informationsübertragung in VLSI-Schaltkreisen*. . Oz, W. V. . M. Yannakakis (.): *Konferenz zum fünften Jahrestag der OX-Vereinigung für Computing-Maschinerie: Symposium über die Theorie des Computing*, . 17 . *Alle Konferenzen der OX-Vereinigung für Computing-Maschinerie*, . 133–139, München, . 1983. OX-Vereinigung für Computing-Maschinerie, Universitätsdruckerei. Dies ist ein vollständiger INPROCEDINGS-Eintrag.

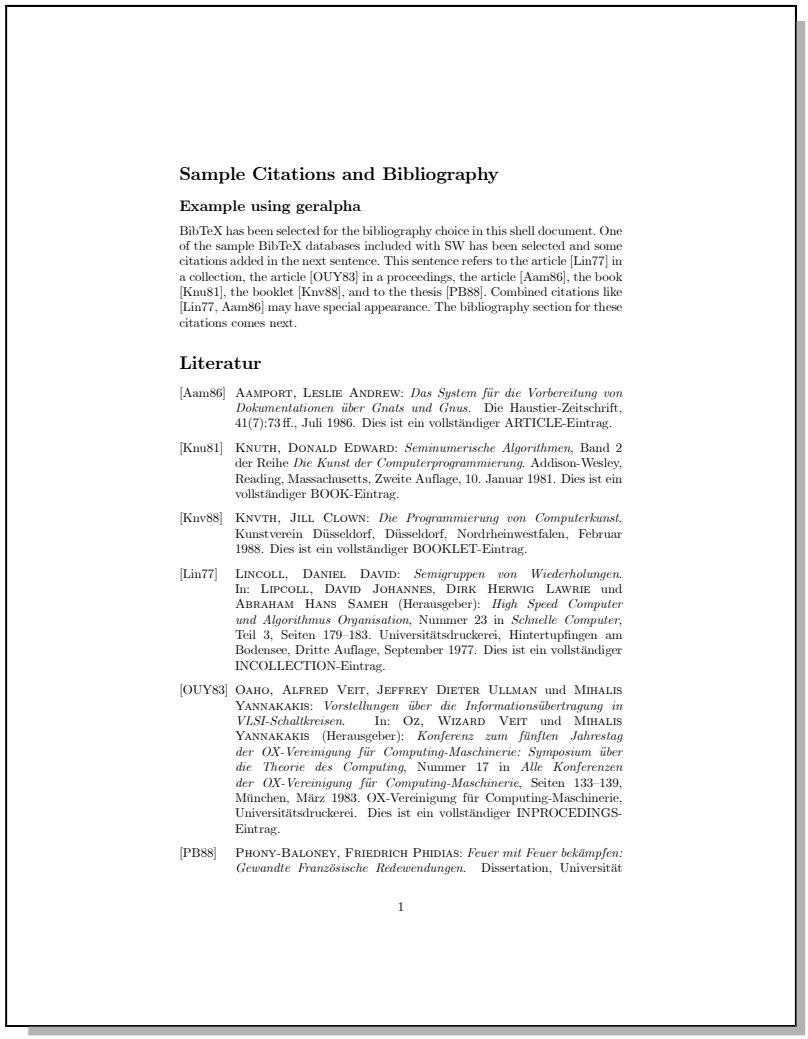
[6] Phony-Baloney, F. P.: *Feuer mit Feuer bekämpfen: Gewandte Französische Redewendungen*. Dissertation, Universität Würzburg, Abteilung für Französisch, .–. 1988. Dies ist ein vollständiger PHDTHESIS-Eintrag.

1

geralpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Required files	*bibgerm* package; *german*.or *ngerman* package
Directory	`TCITeX/BibTeX/bst/germbib`
Sample BibTEX Databases:	
`gerbibtx.bib`	
`gerxmple.bib`	

For use with either German or English, the styles in the `germbib` directory require the *bibgerm* package and either the *german* or *ngerman* package. The packages are available from CTAN at **http://www.ctan.org**. The style prints the authors' names in small capitals in the reference list. The `geralpha.bst` style uses source labels such as *Knu66,* formed from the author's name and the year of publication. The sample was created using the database `gerbibtx.bib` and `gerxampl.bib`.



Sample Citations and Bibliography

Example using geralpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

Literatur

[Aam86] Aamport, Leslie Andrew: *Das System für die Vorbereitung von Dokumentationen über Gnats und Gnus.* Die Haustier-Zeitschrift, 41(7):73 ff., Juli 1986. Dies ist ein vollständiger ARTICLE-Eintrag.

[Knu81] Knuth, Donald Edward: *Seminumerische Algorithmen*, Band 2 der Reihe *Die Kunst der Computerprogrammierung.* Addison-Wesley, Reading, Massachusetts, Zweite Auflage, 10. Januar 1981. Dies ist ein vollständiger BOOK-Eintrag.

[Knv88] Knvth, Jill Clown: *Die Programmierung von Computerkunst.* Kunstverein Düsseldorf, Düsseldorf, Nordrheinwestfalen, Februar 1988. Dies ist ein vollständiger BOOKLET-Eintrag.

[Lin77] Lincoll, Daniel David: *Semigruppen von Wiederholungen.* In: Lipcoll, David Johannes, Dirk Herwig Lawrie und Abraham Hans Sameh (Herausgeber): *High Speed Computer und Algorithmus Organisation*, Nummer 23 in *Schnelle Computer*, Teil 3, Seiten 179–183. Universitätsdruckerei, Hintertupfingen am Bodensee, Dritte Auflage, September 1977. Dies ist ein vollständiger INCOLLECTION-Eintrag.

[OUY83] Oaho, Alfred Veit, Jeffrey Dieter Ullman und Mihalis Yannakakis: *Vorstellungen über die Informationsübertragung in VLSI-Schaltkreisen.* In: Oz, Wizard Veit und Mihalis Yannakakis (Herausgeber): *Konferenz zum fünften Jahrestag der OX-Vereinigung für Computing-Maschinerie: Symposium über die Theorie des Computing*, Nummer 17 in *Alle Konferenzen der OX-Vereinigung für Computing-Maschinerie*, Seiten 133–139, München, März 1983. OX-Vereinigung für Computing-Maschinerie, Universitätsdruckerei. Dies ist ein vollständiger INPROCEEDINGS-Eintrag.

[PB88] Phony-Baloney, Friedrich Phidias: *Feuer mit Feuer bekämpfen: Gewandte Französische Redewendungen.* Dissertation, Universität

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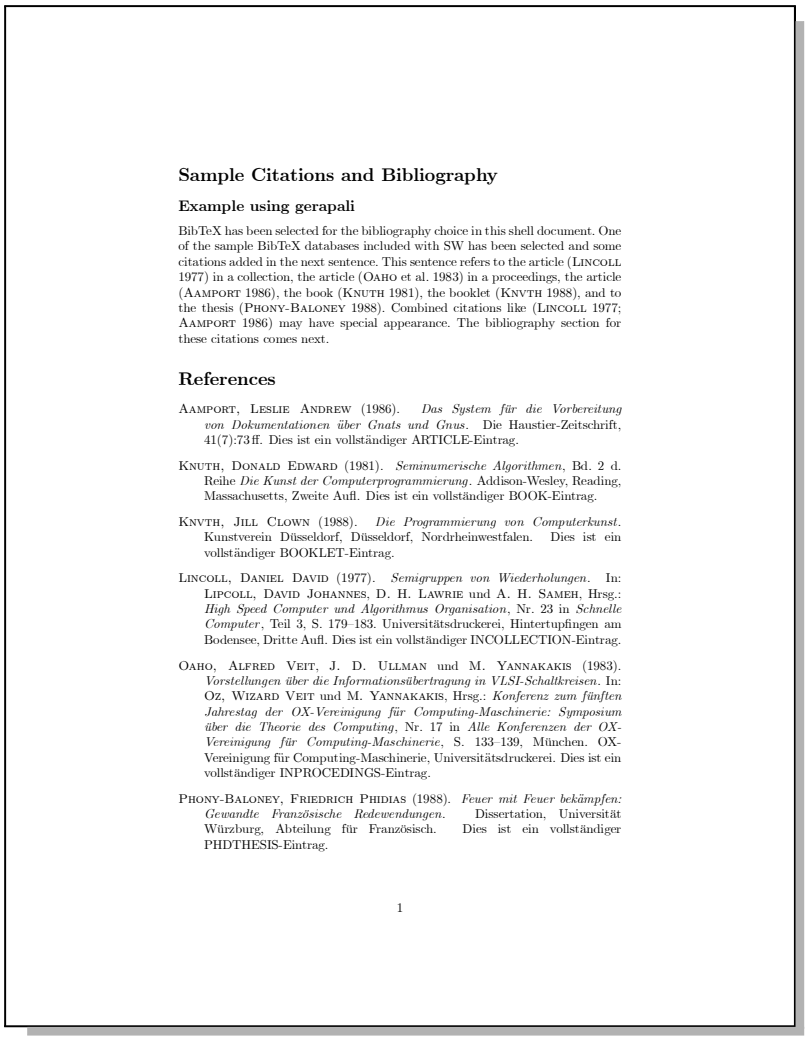
gerapali.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(AUTHOR date) (AUTHOR date, (AUTHOR date) (AUTHOR et al. date)
Required files	*apalike* package;*bibgerm* package; *german*.or *ngerman* package
Directory	`TCITeX/BibTeX/bst/germbib`
Sample BibTeX Databases:	
`gerbibtx.bib`	
`gerxmple.bib`	

For use with either German or English, the styles in the `germbib` directory require the *bibgerm* package and either the *german* or *ngerman* package. The packages are available from CTAN at **http://www.ctan.org**. The `gerapali.bst` style formats bibliography entries alphabetically by author, last name first. The style prints the authors' names in small capitals in the reference list. The sample was created using the database `gerbibtx.bib` and `gerxampl.bib`.



Sample Citations and Bibliography

Example using gerapali

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho et al. 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977; Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, Leslie Andrew (1986). *Das System für die Vorbereitung von Dokumentationen über Gnats und Gnus*. Die Haustier-Zeitschrift, 41(7):73 ff. Dies ist ein vollständiger ARTICLE-Eintrag.

Knuth, Donald Edward (1981). *Seminumerische Algorithmen*, Bd. 2 d. Reihe *Die Kunst der Computerprogrammierung*. Addison-Wesley, Reading, Massachusetts, Zweite Aufl. Dies ist ein vollständiger BOOK-Eintrag.

Knvth, Jill Clown (1988). *Die Programmierung von Computerkunst*. Kunstverein Düsseldorf, Düsseldorf, Nordrheinwestfalen. Dies ist ein vollständiger BOOKLET-Eintrag.

Lincoll, Daniel David (1977). *Semigruppen von Wiederholungen*. In: Lipcoll, David Johannes, D. H. Lawrie und A. H. Sameh, Hrsg.: *High Speed Computer und Algorithmus Organisation*, Nr. 23 in *Schnelle Computer*, Teil 3, S. 179–183. Universitätsdruckerei, Hintertupfingen am Bodensee, Dritte Aufl. Dies ist ein vollständiger INCOLLECTION-Eintrag.

Oaho, Alfred Veit, J. D. Ullman und M. Yannakakis (1983). *Vorstellungen über die Informationsübertragung in VLSI-Schaltkreisen*. In: Oz, Wizard Veit und M. Yannakakis, Hrsg.: *Konferenz zum fünften Jahrestag der OX-Vereinigung für Computing-Maschinerie: Symposium über die Theorie des Computing*, Nr. 17 in *Alle Konferenzen der OX-Vereinigung für Computing-Maschinerie*, S. 133–139, München. OX-Vereinigung für Computing-Maschinerie, Universitätsdruckerei. Dies ist ein vollständiger INPROCEDINGS-Eintrag.

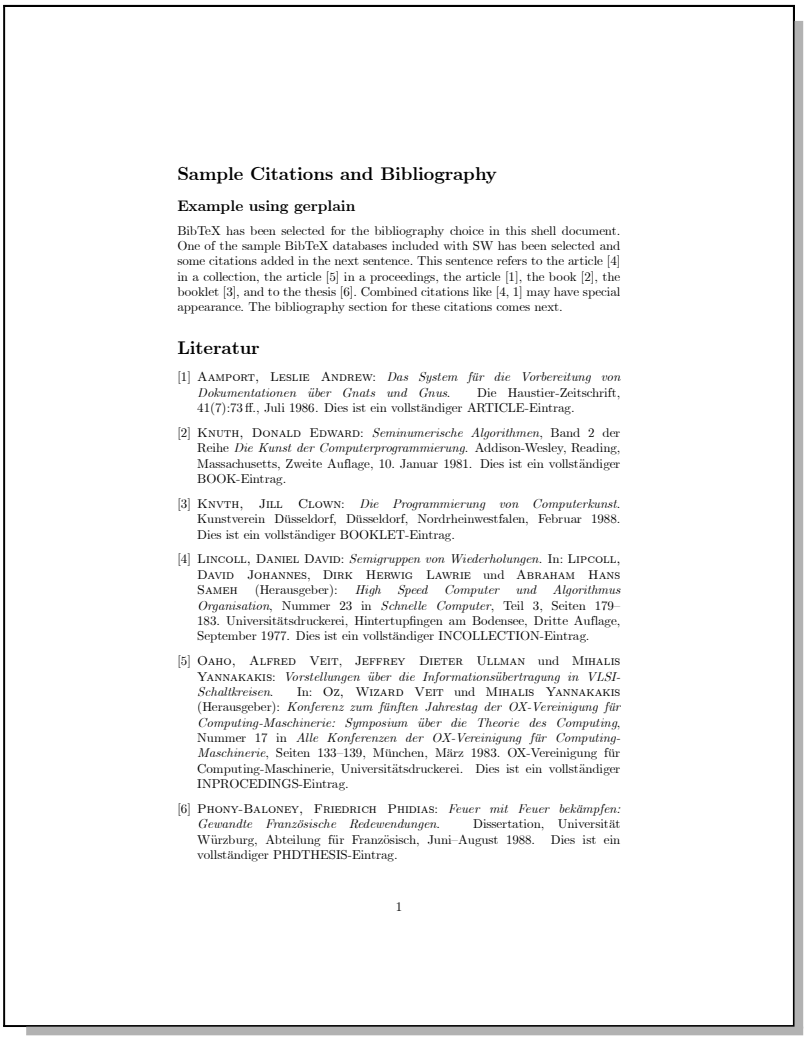
Phony-Baloney, Friedrich Phidias (1988). *Feuer mit Feuer bekämpfen: Gewandte Französische Redewendungen*. Dissertation, Universität Würzburg, Abteilung für Französisch. Dies ist ein vollständiger PHDTHESIS-Eintrag.

1

gerplain.bst

Format of reference list label	[Number]
Organization of reference list	Alphabetical by author
Format of citation	[Number]
Required files	*bibgerm* package; *german*.or *ngerman* package
Directory	`TCITeX/BibTeX/bst/germbib`
Sample BibTeX Databases:	
`gerbibtx.bib`	
`gerxmple.bib`	

For use with either German or English, the styles in the `germbib` directory require the *bibgerm* package and either the *german* or *ngerman* package. The packages are available from CTAN at **http://www.ctan.org**. The `gerplain.bst` style formats bibliography entries alphabetically by author, last name first. Like `plain.bst`, the style `gerplain.bst` prints the authors' names in small capitals in the reference list. The sample was created using the database `gerbibtx.bib` and `gerxampl.bib`.



Sample Citations and Bibliography

Example using gerplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

Literatur

[1] Aamport, Leslie Andrew: *Das System für die Vorbereitung von Dokumentationen über Gnats und Gnus.* Die Haustier-Zeitschrift, 41(7):73 ff., Juli 1986. Dies ist ein vollständiger ARTICLE-Eintrag.

[2] Knuth, Donald Edward: *Seminumerische Algorithmen*, Band 2 der Reihe *Die Kunst der Computerprogrammierung*. Addison-Wesley, Reading, Massachusetts, Zweite Auflage, 10. Januar 1981. Dies ist ein vollständiger BOOK-Eintrag.

[3] Knvth, Jill Clown: *Die Programmierung von Computerkunst.* Kunstverein Düsseldorf, Düsseldorf, Nordrheinwestfalen, Februar 1988. Dies ist ein vollständiger BOOKLET-Eintrag.

[4] Lincoll, Daniel David: *Semigruppen von Wiederholungen.* In: Lipcoll, David Johannes, Dirk Herwig Lawrie und Abraham Hans Sameh (Herausgeber): *High Speed Computer und Algorithmus Organisation*, Nummer 23 in *Schnelle Computer*, Teil 3, Seiten 179–183. Universitätsdruckerei, Hintertupfingen am Bodensee, Dritte Auflage, September 1977. Dies ist ein vollständiger INCOLLECTION-Eintrag.

[5] Oaho, Alfred Veit, Jeffrey Dieter Ullman und Mihalis Yannakakis: *Vorstellungen über die Informationsübertragung in VLSI-Schaltkreisen.* In: Oz, Wizard Veit und Mihalis Yannakakis (Herausgeber): *Konferenz zum fünften Jahrestag der OX-Vereinigung für Computing-Maschinerie: Symposium über die Theorie des Computing*, Nummer 17 in *Alle Konferenzen der OX-Vereinigung für Computing-Maschinerie*, Seiten 133–139, München, März 1983. OX-Vereinigung für Computing-Maschinerie, Universitätsdruckerei. Dies ist ein vollständiger INPROCEDINGS-Eintrag.

[6] Phony-Baloney, Friedrich Phidias: *Feuer mit Feuer bekämpfen: Gewandte Französische Redewendungen.* Dissertation, Universität Würzburg, Abteilung für Französisch, Juni–August 1988. Dies ist ein vollständiger PHDTHESIS-Eintrag.

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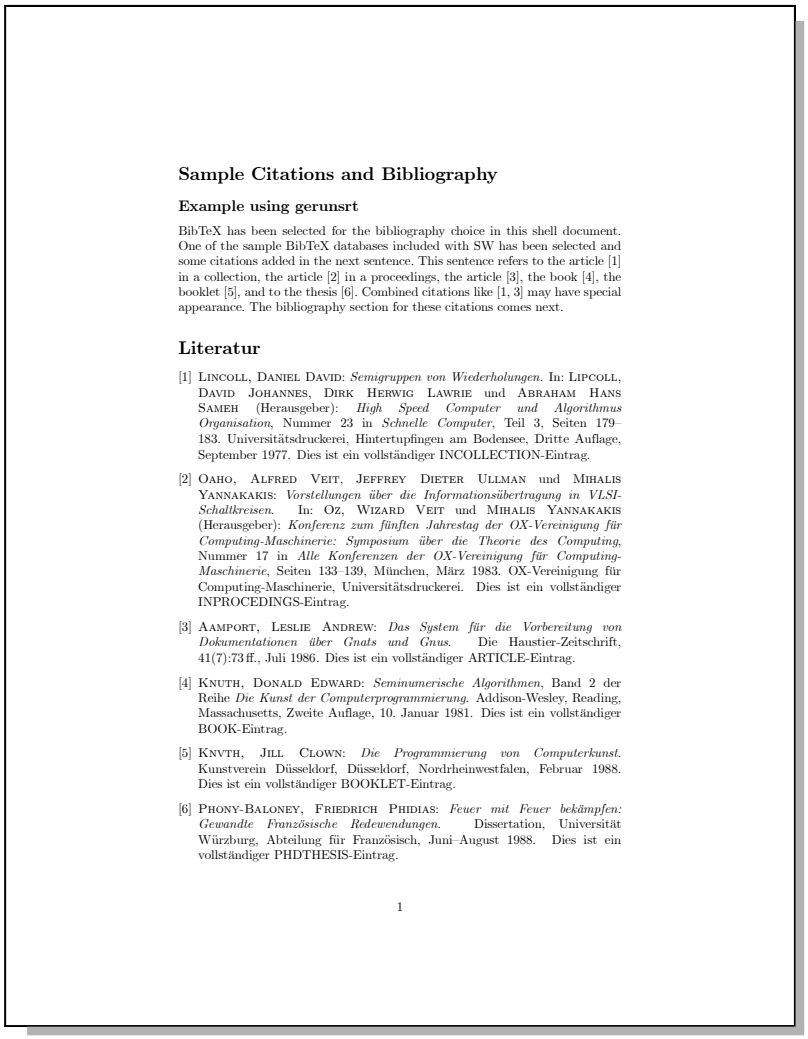
gerunsrt.bst

Format of reference list label	[Number]
Organization of reference list	In order of first citation
Format of citation	[Number]
Required files	*bibgerm* package; *german*.or *ngerman* package
Directory	`TCITeX/BibTeX/bst/germbib`
Sample BibTEX Databases:	
`gerbibtx.bib`	
`gerxmple.bib`	

For use with either German or English, the styles in the `germbib` directory require the *bibgerm* package and either the *german* or *ngerman* package. The packages are available from CTAN at **http://www.ctan.org**. Like `unsrt.bst`, the style `gerunsrt.bst` lists bibliography entries in the order of their first citation. The sample was created using the database `gerbibtx.bib` and `gerxampl.bib`.



Sample Citations and Bibliography

Example using gerunsrt

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

Literatur

[1] Lincoll, Daniel David: *Semigruppen von Wiederholungen*. In: Lipcoll, David Johannes, Dirk Herwig Lawrie und Abraham Hans Sameh (Herausgeber): *High Speed Computer und Algorithmus Organisation*, Nummer 23 in *Schnelle Computer*, Teil 3, Seiten 179–183. Universitätsdruckerei, Hintertupfingen am Bodensee, Dritte Auflage, September 1977. Dies ist ein vollständiger INCOLLECTION-Eintrag.

[2] Oaho, Alfred Veit, Jeffrey Dieter Ullman und Mihalis Yannakakis: *Vorstellungen über die Informationsübertragung in VLSI-Schaltkreisen*. In: Oz, Wizard Veit und Mihalis Yannakakis (Herausgeber): *Konferenz zum fünften Jahrestag der OX-Vereinigung für Computing-Maschinerie: Symposium über die Theorie des Computing*, Nummer 17 in *Alle Konferenzen der OX-Vereinigung für Computing-Maschinerie*, Seiten 133–139, München, März 1983. OX-Vereinigung für Computing-Maschinerie, Universitätsdruckerei. Dies ist ein vollständiger INPROCEDINGS-Eintrag.

[3] Aamport, Leslie Andrew: *Das System für die Vorbereitung von Dokumentationen über Gnats und Gnus*. Die Haustier-Zeitschrift, 41(7):73 ff., Juli 1986. Dies ist ein vollständiger ARTICLE-Eintrag.

[4] Knuth, Donald Edward: *Seminumerische Algorithmen*, Band 2 der Reihe *Die Kunst der Computerprogrammierung*. Addison-Wesley, Reading, Massachusetts, Zweite Auflage, 10. Januar 1981. Dies ist ein vollständiger BOOK-Eintrag.

[5] Knvth, Jill Clown: *Die Programmierung von Computerkunst*. Kunstverein Düsseldorf, Düsseldorf, Nordrheinwestfalen, Februar 1988. Dies ist ein vollständiger BOOKLET-Eintrag.

[6] Phony-Baloney, Friedrich Phidias: *Feuer mit Feuer bekämpfen: Gewandte Französische Redewendungen*. Dissertation, Universität Würzburg, Abteilung für Französisch, Juni–August 1988. Dies ist ein vollständiger PHDTHESIS-Eintrag.

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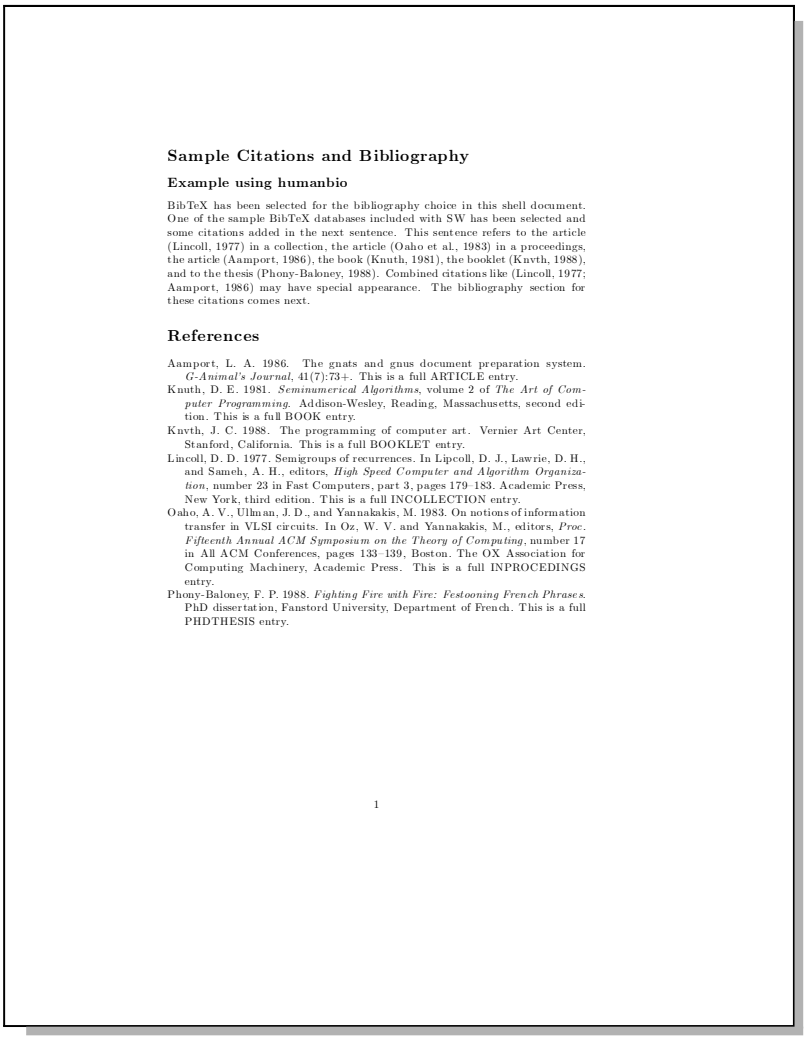
humanbio.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	***astron*** package
Directory	`TCITeX/BibTeX/bst/beebe`

The style produces bibliographies with a format similar to that used in *Human Biology.* The style was adapted from `apalike.bst`, incorporating features of `astron.bst` style. It must be used with the ***astron*** package.



Sample Citations and Bibliography

Example using humanbio

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. 1986. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

Knuth, D. E. 1981. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

Knvth, J. C. 1988. The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. 1977. Semigroups of recurrences. In Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D., and Yannakakis, M. 1983. On notions of information transfer in VLSI circuits. In Oz, W. V. and Yannakakis, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

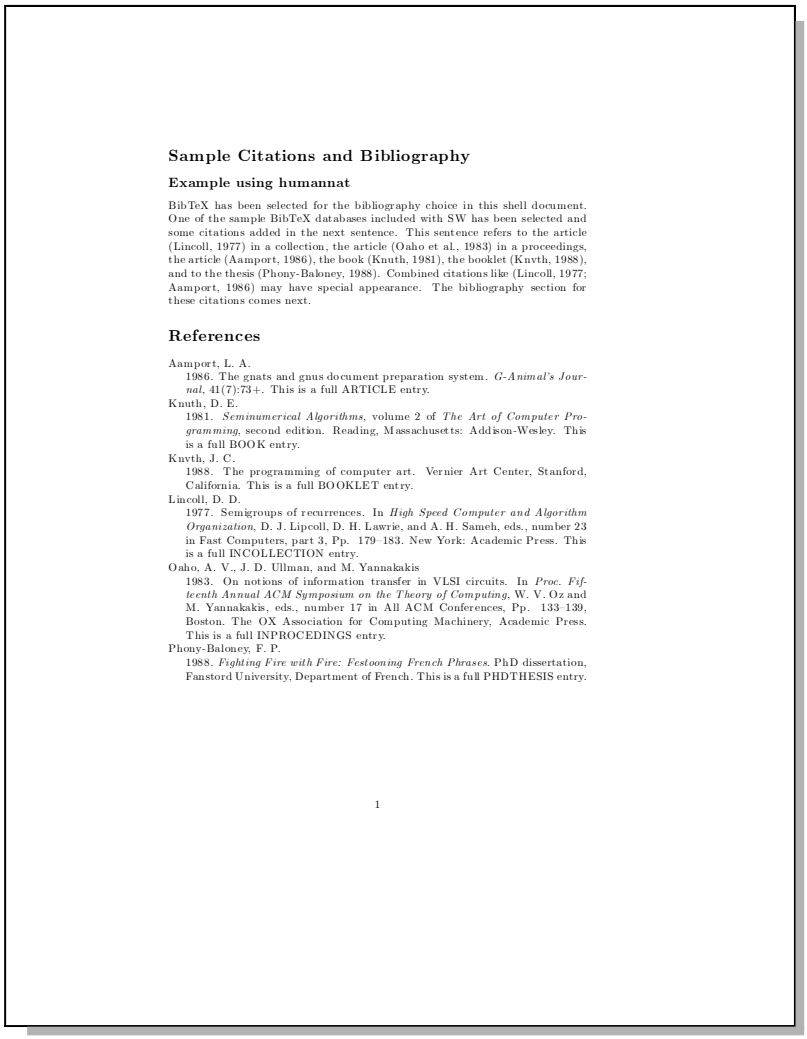
Phony-Baloney, F. P. 1988. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

humannat.bst

Format of reference list label	Author
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author and Author, date) (Author et al., date)
Required files	*astron* package
Directory	`TCITeX/BibTeX/bst/beebe`

The style produces bibliographies with a format similar to that used in *Human Nature* and *American Anthropologist*. The style was adapted from `apalike.bst`, incorporating features of `astron.bst` style. It must be used with the *astron* package.



Sample Citations and Bibliography

Example using humannat

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knyth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A.
1986. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

Knuth, D. E.
1981. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, second edition. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knyth, J. C.
1988. The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D.
1977. Semigroups of recurrences. In *High Speed Computer and Algorithm Organization*, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds., number 23 in Fast Computers, part 3, Pp. 179–183. New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, A. V., J. D. Ullman, and M. Yannakakis
1983. On notions of information transfer in VLSI circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, W. V. Oz and M. Yannakakis, eds., number 17 in All ACM Conferences, Pp. 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

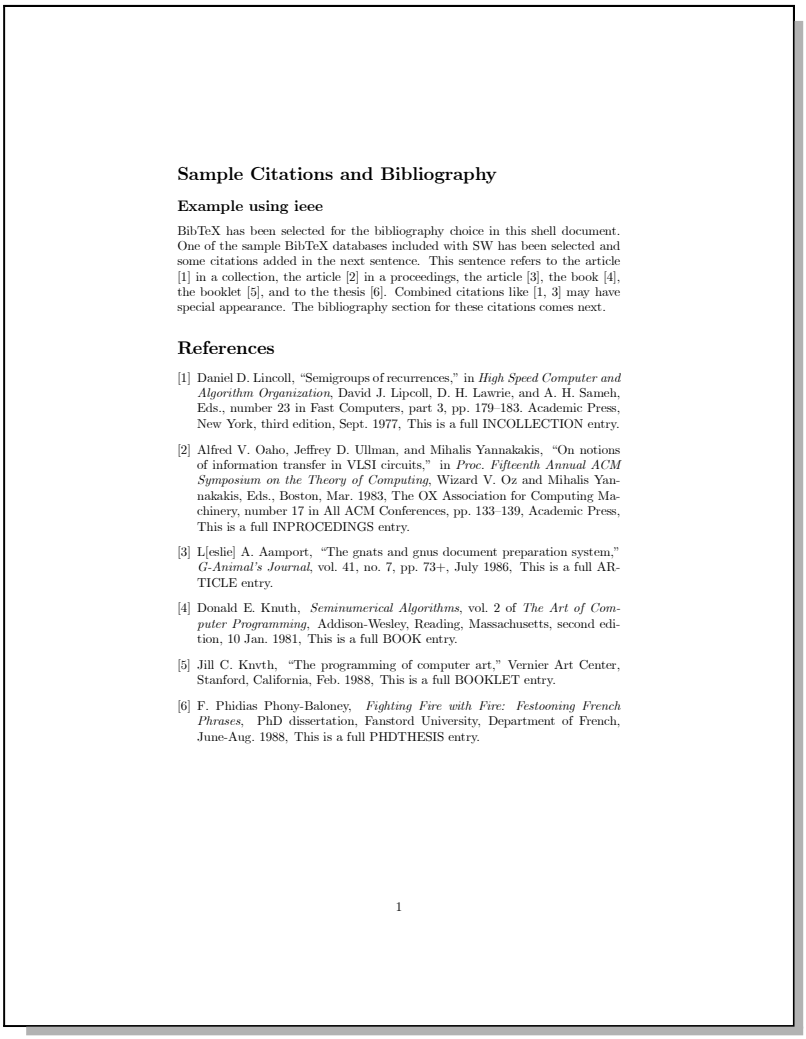
Phony-Baloney, F. P.
1988. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

ieee.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/ieeetran`

The style is a modification of `unsrt.bst`, which lists bibliography entries in the order of their first citation and labels entries with numbers.



Sample Citations and Bibliography

Example using ieee

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll, "Semigroups of recurrences," in *High Speed Computer and Algorithm Organization*, David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Eds., number 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third edition, Sept. 1977, This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis, "On notions of information transfer in VLSI circuits," in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Wizard V. Oz and Mihalis Yannakakis, Eds., Boston, Mar. 1983, The OX Association for Computing Machinery, number 17 in All ACM Conferences, pp. 133–139, Academic Press, This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport, "The gnats and gnus document preparation system," *G-Animal's Journal*, vol. 41, no. 7, pp. 73+, July 1986, This is a full ARTICLE entry.

[4] Donald E. Knuth, *Seminumerical Algorithms*, vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 Jan. 1981, This is a full BOOK entry.

[5] Jill C. Knvth, "The programming of computer art," Vernier Art Center, Stanford, California, Feb. 1988, This is a full BOOKLET entry.

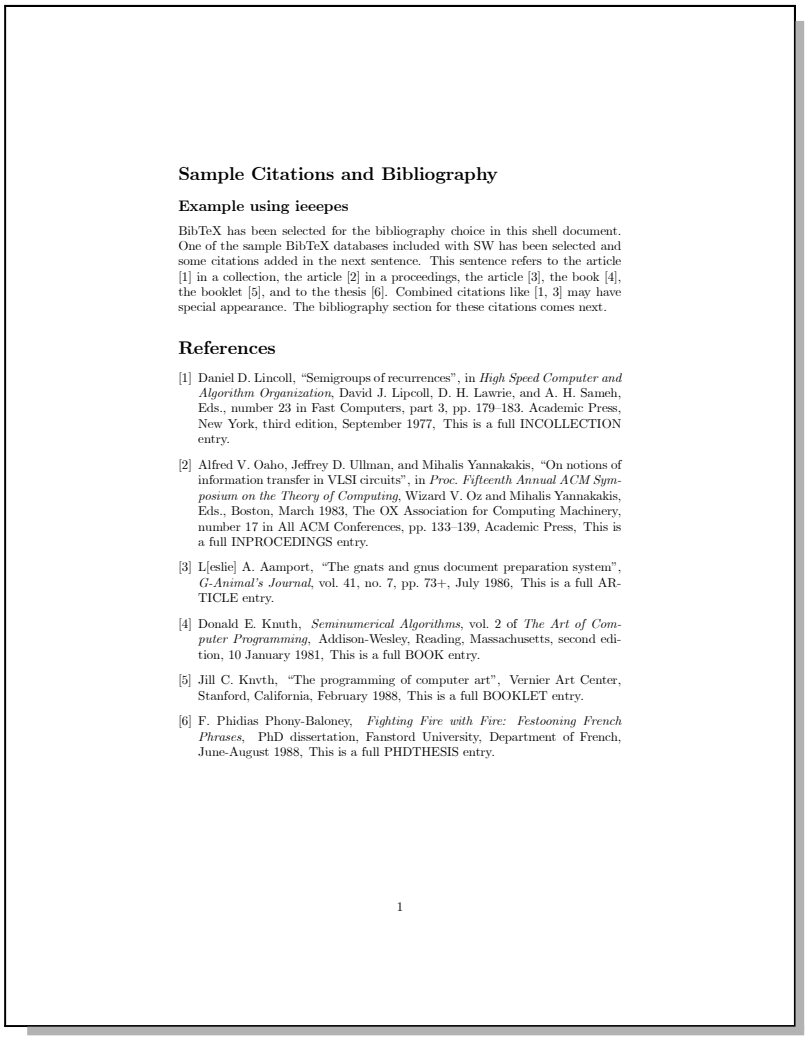
[6] F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988, This is a full PHDTHESIS entry.

1

ieeepes.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/ieeepes`
Sample BibTeX Database:	
`ieeepes`	
`check.bib`	

This style supports reference lists for articles according to IEEE instructions. It has been modified from BibTeX bibliography style `unsrt.bst`, which lists bibliography entries in the order of their first citation and labels entries with numbers. The style spells out the names of months in the reference list.



Sample Citations and Bibliography

Example using ieeepes

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll, "Semigroups of recurrences", in *High Speed Computer and Algorithm Organization*, David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Eds., number 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third edition, September 1977, This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis, "On notions of information transfer in VLSI circuits", in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Wizard V. Oz and Mihalis Yannakakis, Eds., Boston, March 1983, The OX Association for Computing Machinery, number 17 in All ACM Conferences, pp. 133–139, Academic Press, This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport, "The gnats and gnus document preparation system", *G-Animal's Journal*, vol. 41, no. 7, pp. 73+, July 1986, This is a full ARTICLE entry.

[4] Donald E. Knuth, *Seminumerical Algorithms*, vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981, This is a full BOOK entry.

[5] Jill C. Knvth, "The programming of computer art", Vernier Art Center, Stanford, California, February 1988, This is a full BOOKLET entry.

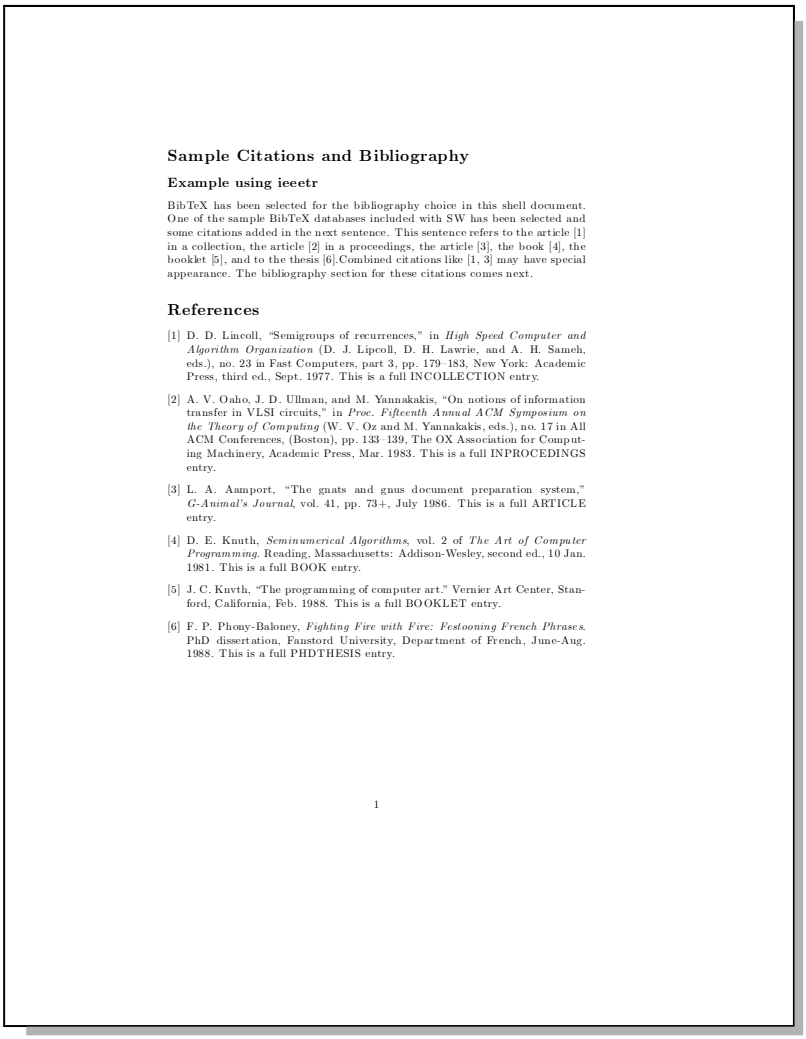
[6] F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-August 1988, This is a full PHDTHESIS entry.

1

ieeetr.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`

The *IEEE Transactions* bibliography style (29-Jan-88 version) produces bibliographies with numeric labels, IEEE abbreviations, quotation marks around article titles, and commas that separate all fields except after book titles and before notes. The reference list is presented in order of first citation. Otherwise, the style is much like the `plain` family of styles, from which it is adapted.



Sample Citations and Bibliography

Example using ieeetr

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6].Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll, "Semigroups of recurrences," in *High Speed Computer and Algorithm Organization* (D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds.), no. 23 in Fast Computers, part 3, pp. 179–183, New York: Academic Press, third ed., Sept. 1977. This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis, "On notions of information transfer in VLSI circuits," in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* (W. V. Oz and M. Yannakakis, eds.), no. 17 in All ACM Conferences, (Boston), pp. 133–139, The OX Association for Computing Machinery, Academic Press, Mar. 1983. This is a full INPROCEDINGS entry.

[3] L. A. Aamport, "The gnats and gnus document preparation system," *G-Animal's Journal*, vol. 41, pp. 73+, July 1986. This is a full ARTICLE entry.

[4] D. E. Knuth, *Seminumerical Algorithms*, vol. 2 of *The Art of Computer Programming*, Reading, Massachusetts: Addison-Wesley, second ed., 10 Jan. 1981. This is a full BOOK entry.

[5] J. C. Knvth, "The programming of computer art," Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

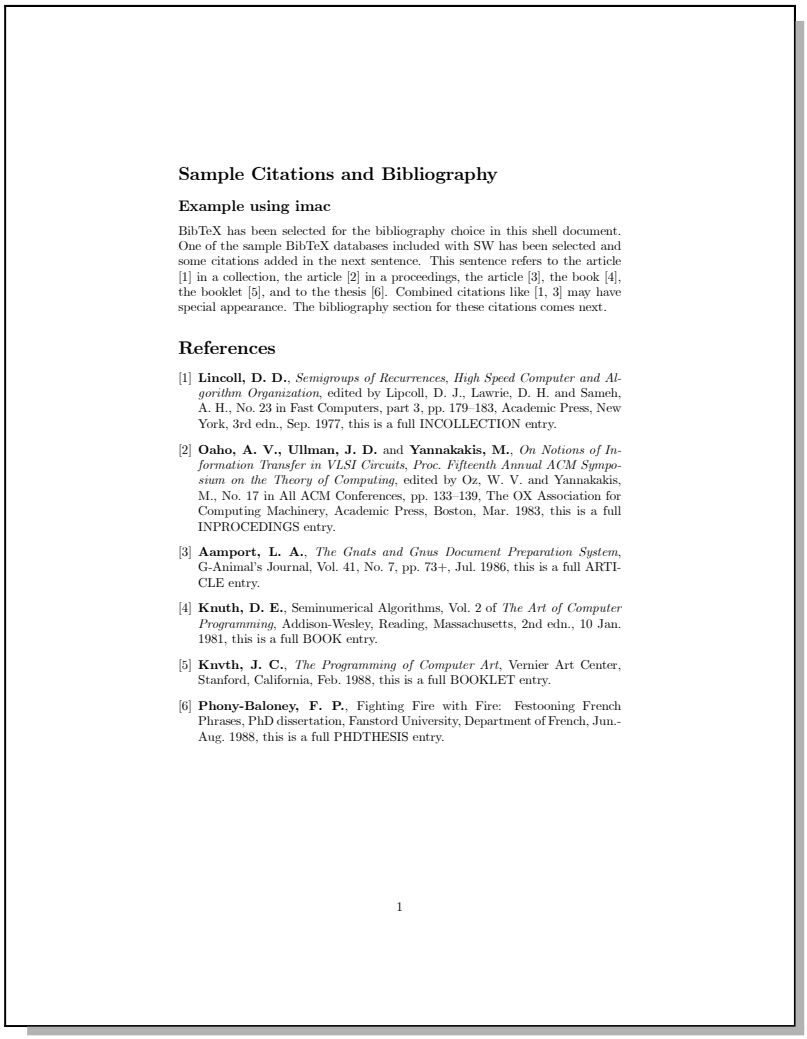
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

imac.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/imac`
Sample BibTeX Database: `imac.bib`	

This style supports the citation of chapters within reference list entries. Authors' names are printed in bold in the reference list.



Sample Citations and Bibliography

Example using imac

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] **Lincoll, D. D.**, *Semigroups of Recurrences, High Speed Computer and Algorithm Organization*, edited by Lipcoll, D. J., Lawrie, D. H. and Sameh, A. H., No. 23 in Fast Computers, part 3, pp. 179–183, Academic Press, New York, 3rd edn., Sep. 1977, this is a full INCOLLECTION entry.

[2] **Oaho, A. V., Ullman, J. D.** and **Yannakakis, M.**, *On Notions of Information Transfer in VLSI Circuits, Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by Oz, W. V. and Yannakakis, M., No. 17 in All ACM Conferences, pp. 133–139, The OX Association for Computing Machinery, Academic Press, Boston, Mar. 1983, this is a full INPROCEDINGS entry.

[3] **Aamport, L. A.**, *The Gnats and Gnus Document Preparation System*, G-Animal's Journal, Vol. 41, No. 7, pp. 73+, Jul. 1986, this is a full ARTICLE entry.

[4] **Knuth, D. E.**, Seminumerical Algorithms, Vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, 2nd edn., 10 Jan. 1981, this is a full BOOK entry.

[5] **Knvth, J. C.**, *The Programming of Computer Art*, Vernier Art Center, Stanford, California, Feb. 1988, this is a full BOOKLET entry.

[6] **Phony-Baloney, F. P.**, Fighting Fire with Fire: Festooning French Phrases, PhD dissertation, Fanstord University, Department of French, Jun.-Aug. 1988, this is a full PHDTHESIS entry.

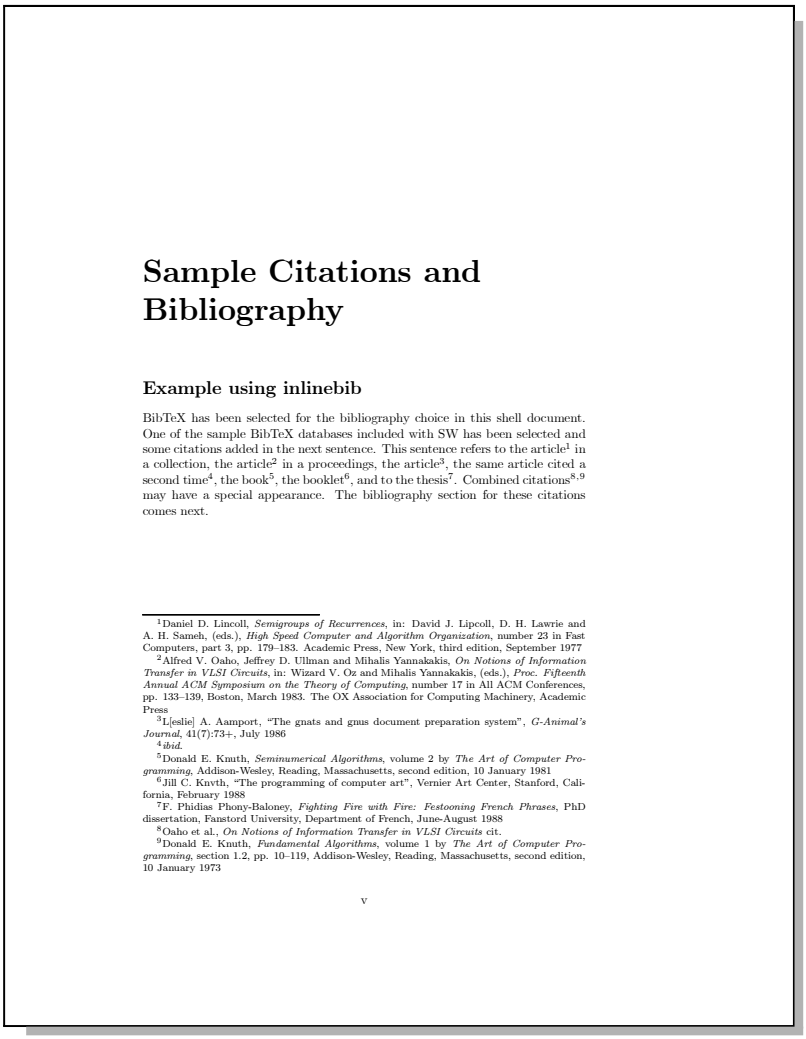
1

inlinebib.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of footnote label	Subscripted number
Format of citation	Subscripted number in text; full reference in numbered footnote
Required files	*inlinebib* package
Directory	`TCITeX/BibTeX/bst/inlinebib`

The style produces footnoted references in books and reports; that is, it creates superscripted numbers in the text that refer to footnotes containing the reference information. The style produces complete information the first time the reference is cited and abbreviated information thereafter. The style requires the *inlinebib* package. Instructions for creating footnoted references with `inlinebib.bst` appear on the next page.

The sample that follows was created with the Standard LaTeX Book shell. The reference list carries the title *Bibliography* and begins on a separate page.



Sample Citations and Bibliography

Example using inlinebib

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article[1] in a collection, the article[2] in a proceedings, the article[3], the same article cited a second time[4], the book[5], the booklet[6], and to the thesis[7]. Combined citations[8,9] may have a special appearance. The bibliography section for these citations comes next.

[1] Daniel D. Lincoll, *Semigroups of Recurrences*, in: David J. Lipcoll, D. H. Lawrie and A. H. Sameh, (eds.), *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third edition, September 1977

[2] Alfred V. Oaho, Jeffrey D. Ullman and Mihalis Yannakakis, *On Notions of Information Transfer in VLSI Circuits*, in: Wizard V. Oz and Mihalis Yannakakis, (eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pp. 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press

[3] L[eslie] A. Aamport, "The gnats and gnus document preparation system", *G-Animal's Journal*, 41(7):73+, July 1986

[4] *ibid.*

[5] Donald E. Knuth, *Seminumerical Algorithms*, volume 2 by *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981

[6] Jill C. Knvth, "The programming of computer art", Vernier Art Center, Stanford, California, February 1988

[7] F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-August 1988

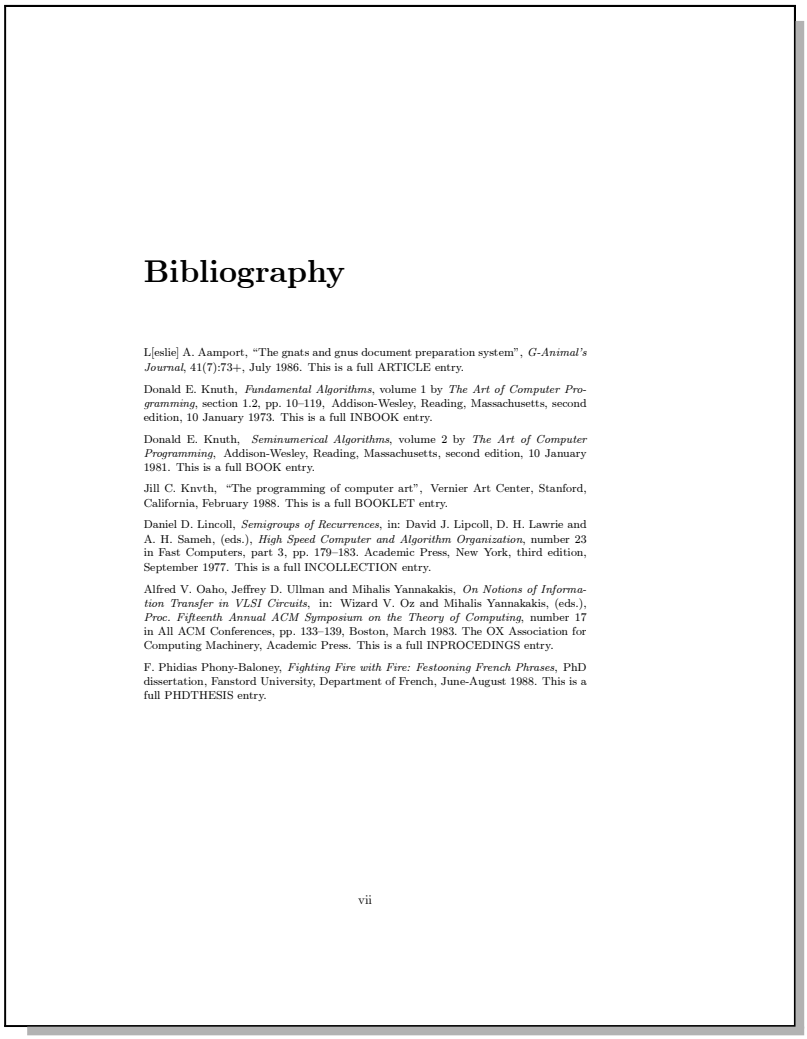
[8] Oaho et al., *On Notions of Information Transfer in VLSI Circuits* cit.

[9] Donald E. Knuth, *Fundamental Algorithms*, volume 1 by *The Art of Computer Programming*, section 1.2, pp. 10–119, Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1973

v

► **To create footnoted references**

1. Place the insertion point where you want the citation.
2. Choose or, from the Insert menu, choose Note.
3. In the Type of Note area, select footnote.
4. With the insertion point n the entry area, choose or, from the Insert menu, choose Typeset Object and then choose Citation.
5. Select the bibliography reference and choose OK.
6. Choose OK to return to your document.



Bibliography

L[eslie] A. Aamport, "The gnats and gnus document preparation system", *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

Donald E. Knuth, *Fundamental Algorithms*, volume 1 by *The Art of Computer Programming*, section 1.2, pp. 10–119, Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1973. This is a full INBOOK entry.

Donald E. Knuth, *Seminumerical Algorithms*, volume 2 by *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

Jill C. Knvth, "The programming of computer art", Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

Daniel D. Lincoll, *Semigroups of Recurrences*, in: David J. Lipcoll, D. H. Lawrie and A. H. Sameh, (eds.), *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pp. 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

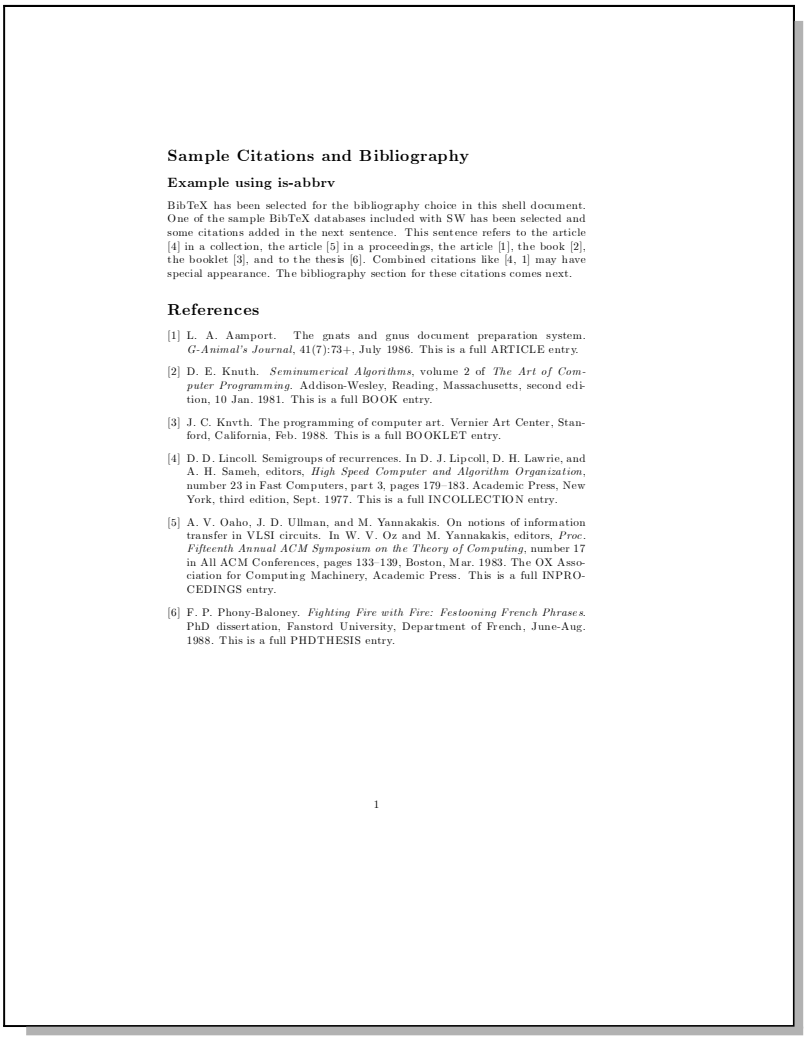
Alfred V. Oaho, Jeffrey D. Ullman and Mihalis Yannakakis, *On Notions of Information Transfer in VLSI Circuits*, in: Wizard V. Oz and Mihalis Yannakakis, (eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pp. 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

is-abbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a modification of the standard BibTeX style `abbrv.bst`, which creates compact entries by abbreviating first names, month names, and journal names. The style sorts entries alphabetically and labels them with numbers. It also contains optional added support for CODEN, ISBN, ISSN, LCCN, and PRICE fields; extended PAGES fields; the PERIODICAL entry; and extended citation label suffixing.



Sample Citations and Bibliography

Example using is-abbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[2] D. E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 Jan. 1981. This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll. Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, Sept. 1977. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis. On notions of information transfer in VLSI circuits. In W. V. Oz and M. Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, Mar. 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

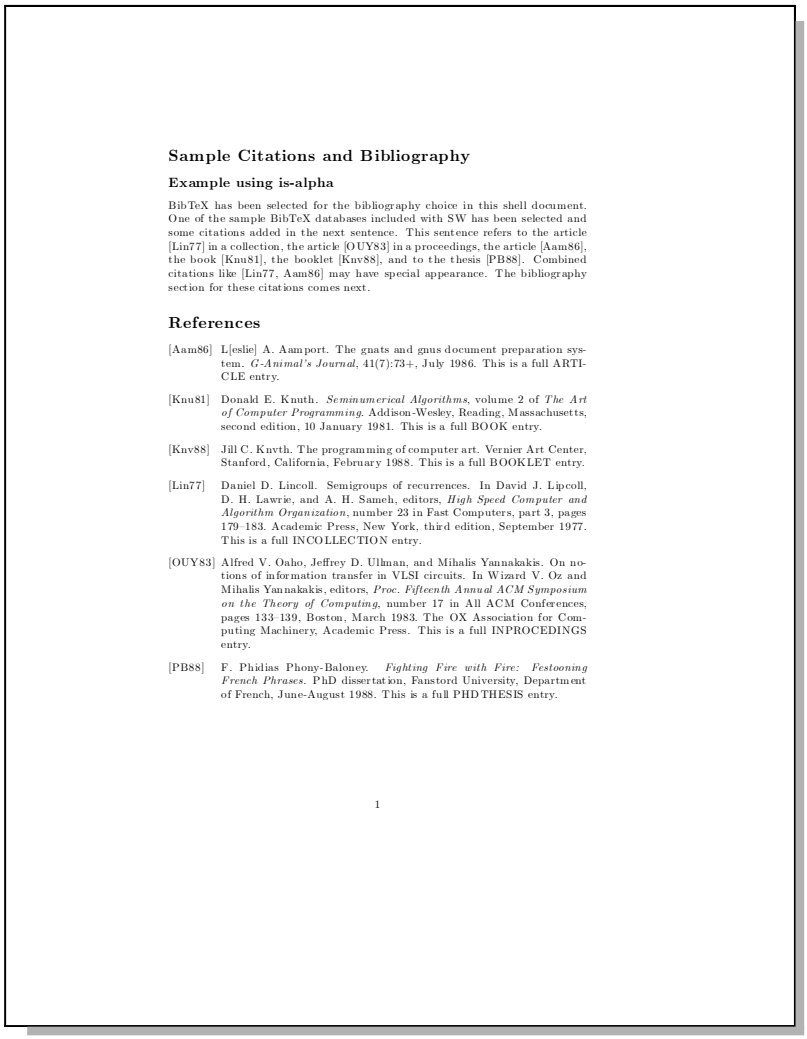
[6] F. P. Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

is-alpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a modification of the standard BibTeX style `alpha.bst`, which creates source labels such as *Knu66,* formed from the author's name and the year of publication. The style contains optional added support for CODEN, ISBN, ISSN, LCCN, and PRICE fields; extended PAGES fields; the PERIODICAL entry; and extended citation label suffixing.



Sample Citations and Bibliography

Example using is-alpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

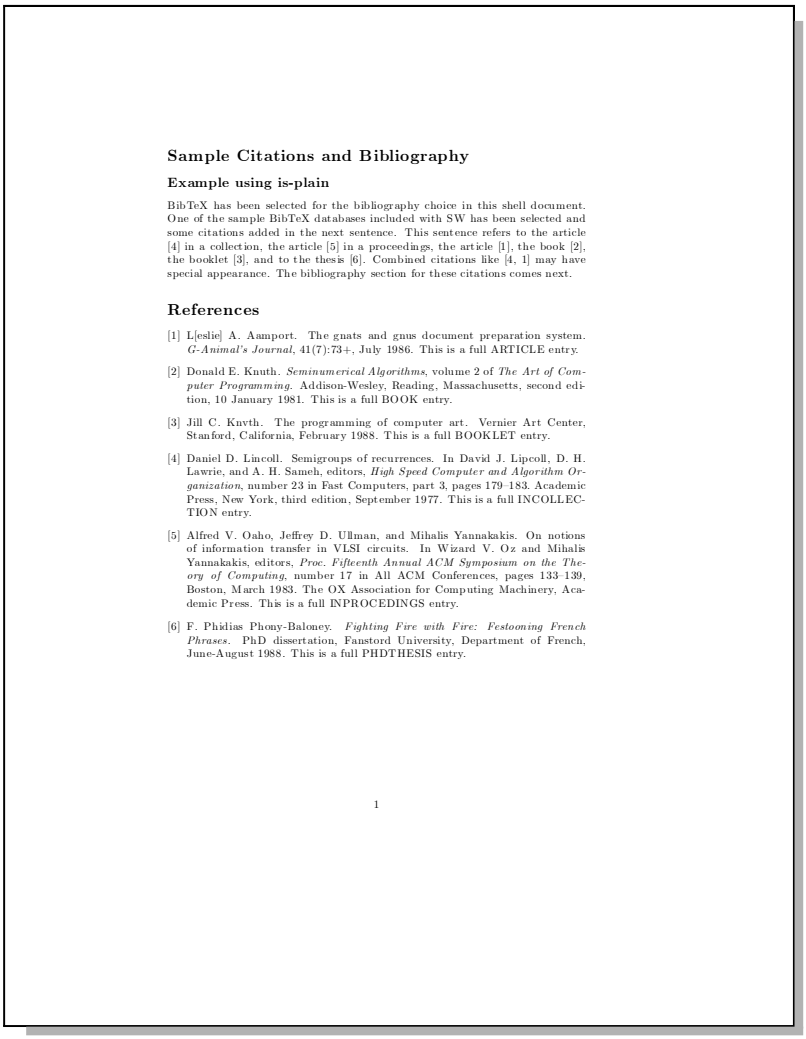
[PB88] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

is-plain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a modification of the standard BibTeX style `plain.bst`, which sorts entries alphabetically and labels them with numbers. The style contains optional added support for CODEN, ISBN, ISSN, LCCN, and PRICE fields; extended PAGES fields; the PERIODICAL entry; and extended citation label suffixing.



Sample Citations and Bibliography

Example using is-plain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

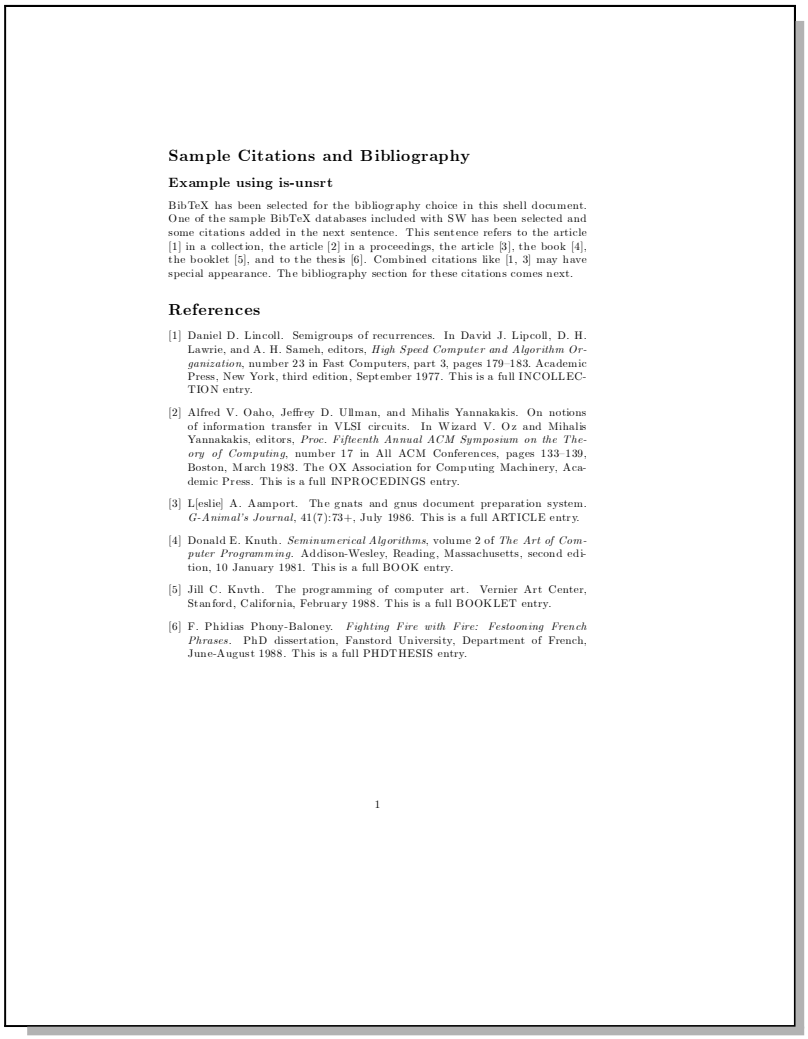
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

is-unsrt.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a modification of the standard BibTEX style `unsrt.bst`, which labels entries with numbers and lists them in order of their first citation. The style contains optional added support for CODEN, ISBN, ISSN, LCCN, and PRICE fields; extended PAGES fields; the PERIODICAL entry; and extended citation label suffixing.



Sample Citations and Bibliography

Example using is-unsrt

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[4] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[5] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

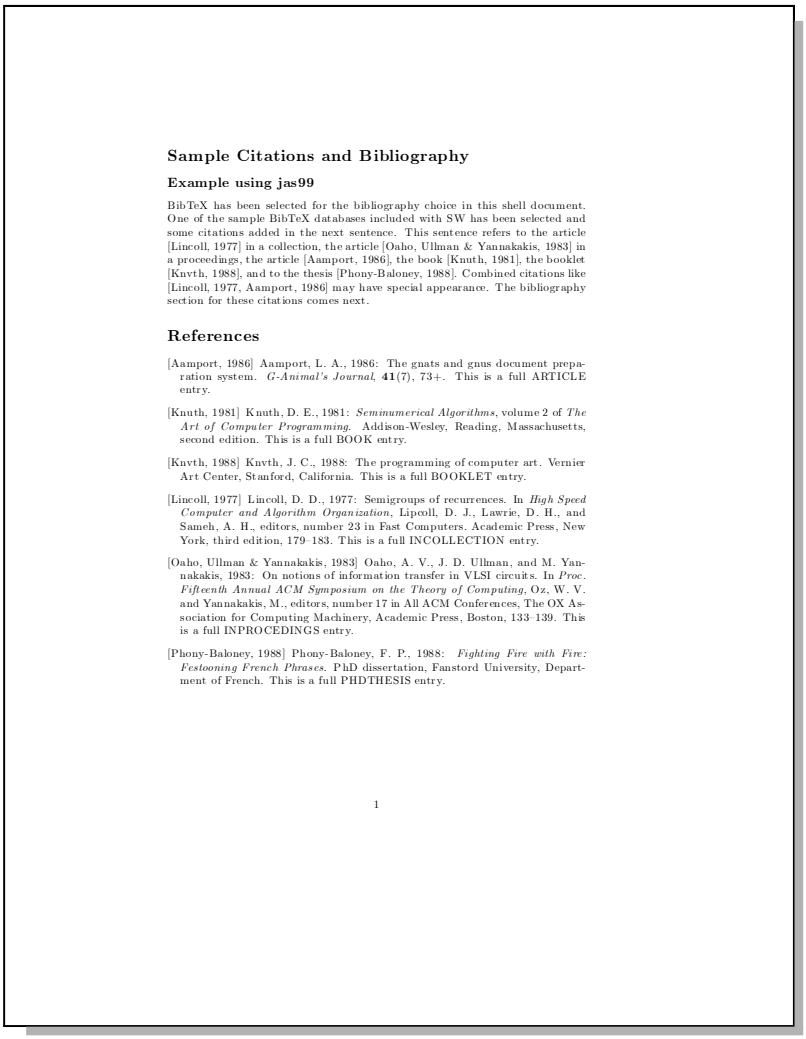
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

jas99.bst

Format of reference list label	[Author, date] [Author & Author, date] [Author, Author & Author, date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author & Author, date] [Author, Author & Author, date]
Required files	*newapa* package
Directory	`TCITeX/BibTeX/bst/beebe`

This is a BibTeX bibliography style for the *Journal of Atmospheric Science* and the *Journal of Applied Meteorology Monthly Weather Review*. The style is based on `newapa.bst` and requires the *newapa* package.



Sample Citations and Bibliography

Example using jas99

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho, Ullman & Yannakakis, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A., 1986: The gnats and gnus document preparation system. *G-Animal's Journal*, **41**(7), 73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E., 1981: *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C., 1988: The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D., 1977: Semigroups of recurrences. In *High Speed Computer and Algorithm Organization*, Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, number 23 in Fast Computers. Academic Press, New York, third edition, 179–183. This is a full INCOLLECTION entry.

[Oaho, Ullman & Yannakakis, 1983] Oaho, A. V., J. D. Ullman, and M. Yannakakis, 1983: On notions of information transfer in VLSI circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Oz, W. V. and Yannakakis, M., editors, number 17 in All ACM Conferences, The OX Association for Computing Machinery, Academic Press, Boston, 133–139. This is a full INPROCEDINGS entry.

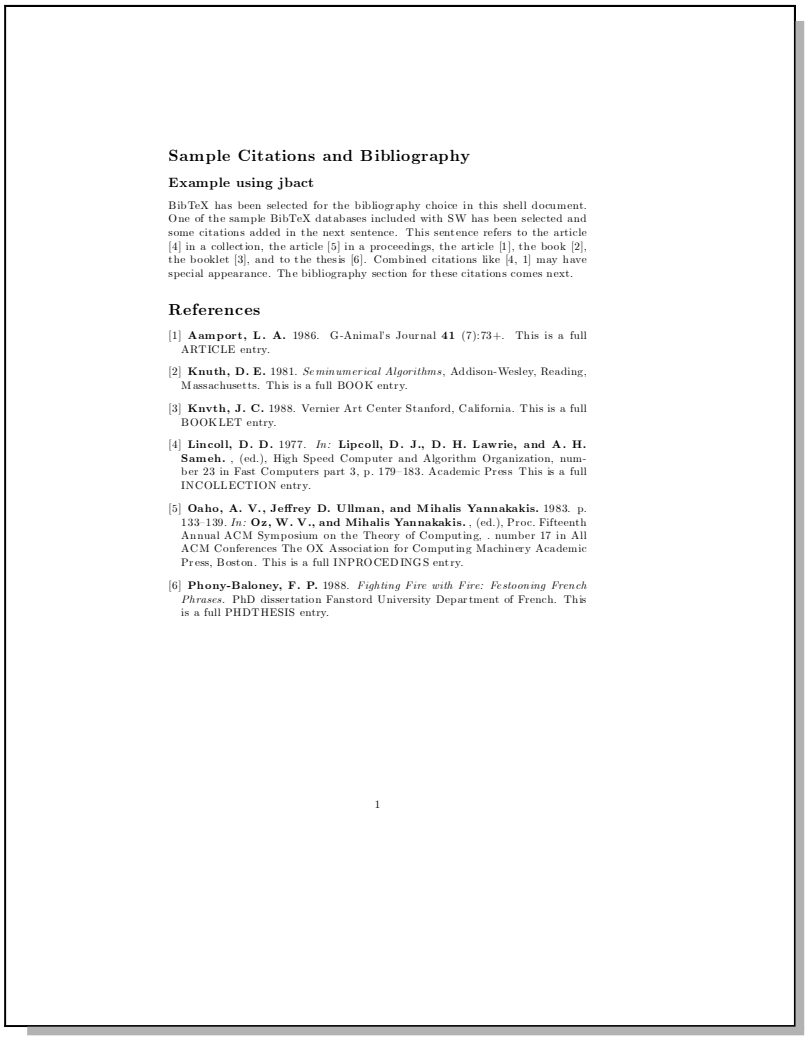
[Phony-Baloney, 1988] Phony-Baloney, F. P., 1988: *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

jbact.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

This is a BibTEX bibliography style for the *Journal of Bacteriology*. Authors' names appear in bold in the reference list.



Sample Citations and Bibliography

Example using jbact

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] **Aamport, L. A.** 1986. G-Animal's Journal **41** (7):73+. This is a full ARTICLE entry.

[2] **Knuth, D. E.** 1981. *Seminumerical Algorithms*, Addison-Wesley, Reading, Massachusetts. This is a full BOOK entry.

[3] **Knvth, J. C.** 1988. Vernier Art Center Stanford, California. This is a full BOOKLET entry.

[4] **Lincoll, D. D.** 1977. *In:* **Lipcoll, D. J., D. H. Lawrie, and A. H. Sameh.** , (ed.), High Speed Computer and Algorithm Organization, number 23 in Fast Computers part 3, p. 179–183. Academic Press This is a full INCOLLECTION entry.

[5] **Oaho, A. V., Jeffrey D. Ullman, and Mihalis Yannakakis.** 1983. p. 133–139. *In:* **Oz, W. V., and Mihalis Yannakakis.** , (ed.), Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, . number 17 in All ACM Conferences The OX Association for Computing Machinery Academic Press, Boston. This is a full INPROCEDINGS entry.

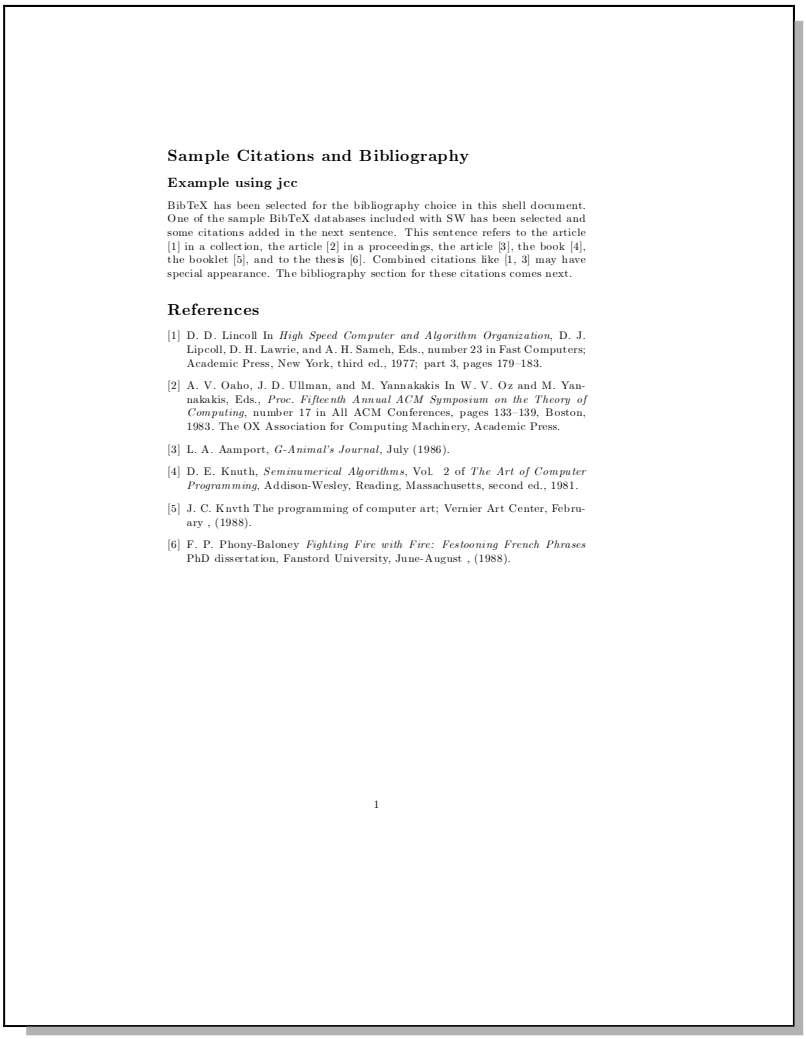
[6] **Phony-Baloney, F. P.** 1988. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation Fanstord University Department of French. This is a full PHDTHESIS entry.

1

jcc.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/chem-journal`

This is a BibTeX bibliography style for the *Journal of Computational Chemistry*. The style omits the title of entries classified as 'article', 'book', 'inbook', and 'incollection' and omits information coded as 'note' in all entries except those classified as 'unpublished'.



Sample Citations and Bibliography

Example using jcc

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll In *High Speed Computer and Algorithm Organization*, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Eds., number 23 in Fast Computers; Academic Press, New York, third ed., 1977; part 3, pages 179–183.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis In W. V. Oz and M. Yannakakis, Eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, 1983. The OX Association for Computing Machinery, Academic Press.

[3] L. A. Aamport, *G-Animal's Journal*, July (1986).

[4] D. E. Knuth, *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second ed., 1981.

[5] J. C. Knvth The programming of computer art; Vernier Art Center, February , (1988).

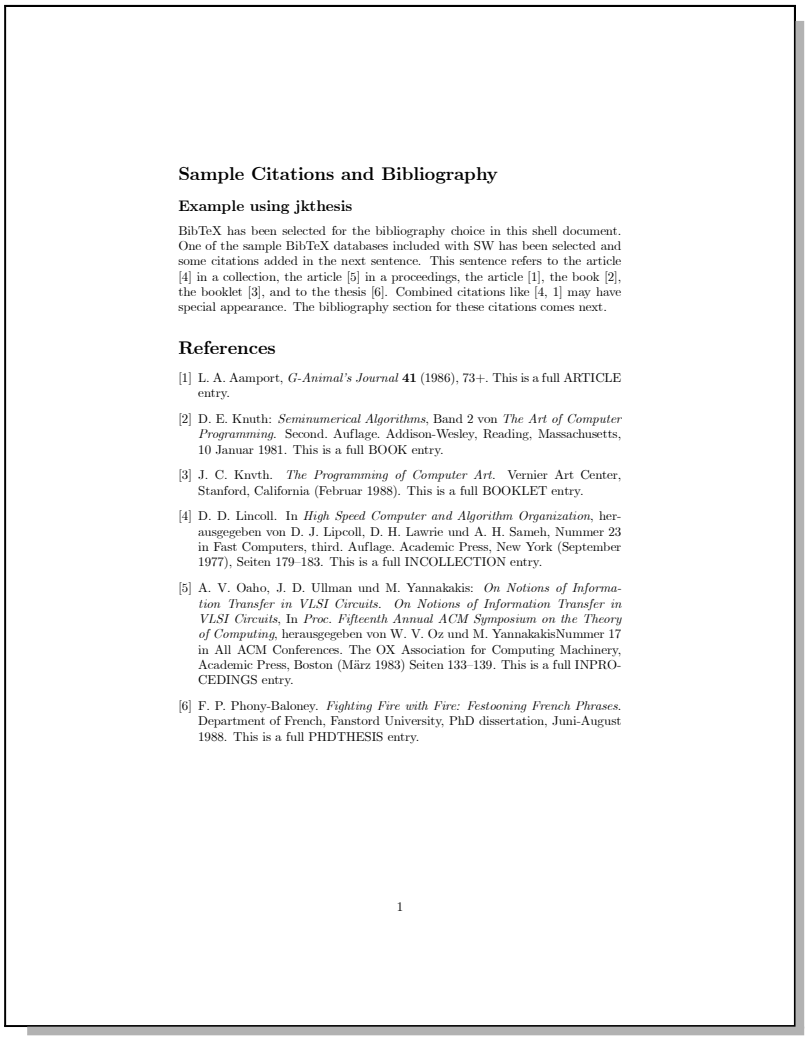
[6] F. P. Phony-Baloney *Fighting Fire with Fire: Festooning French Phrases* PhD dissertation, Fanstord University, June-August , (1988).

1

jkthesis.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/jkthesis`

The style is intended for texts in German and supports the abbreviation of numerous journal names.



Sample Citations and Bibliography

Example using jkthesis

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport, *G-Animal's Journal* **41** (1986), 73+. This is a full ARTICLE entry.

[2] D. E. Knuth: *Seminumerical Algorithms*, Band 2 von *The Art of Computer Programming*. Second. Auflage. Addison-Wesley, Reading, Massachusetts, 10 Januar 1981. This is a full BOOK entry.

[3] J. C. Knvth. *The Programming of Computer Art*. Vernier Art Center, Stanford, California (Februar 1988). This is a full BOOKLET entry.

[4] D. D. Lincoll. In *High Speed Computer and Algorithm Organization*, herausgegeben von D. J. Lipcoll, D. H. Lawrie und A. H. Sameh, Nummer 23 in Fast Computers, third. Auflage. Academic Press, New York (September 1977), Seiten 179–183. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman und M. Yannakakis: *On Notions of Information Transfer in VLSI Circuits. On Notions of Information Transfer in VLSI Circuits*, In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, herausgegeben von W. V. Oz und M. YannakakisNummer 17 in All ACM Conferences. The OX Association for Computing Machinery, Academic Press, Boston (März 1983) Seiten 133–139. This is a full INPROCEDINGS entry.

[6] F. P. Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. Department of French, Fanstord University, PhD dissertation, Juni-August 1988. This is a full PHDTHESIS entry.

1

jmb.bst

Format of reference list label	[Author, date] [Author & Author, date] [Author *et al.,* date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author & Author, date] [Author *et al.,* date]
Directory	`TCITeX/BibTeX/bst/beebe`

This bibliography style approximates the bibliography styles of the *Journal of Molecular Biology* and *Journal of Theoretical Biology.* Bibliography entries for articles, books, and items in proceedings are formatted carefully. Toggle between styles appropriate for the two journals by toggling the titles on and off. The *Journal of Theoretical Biology.*requires titles; the *Journal of Molecular Biology* doesn't.

► **To toggle the titles off**

1. Choose or, from the Insert menu, choose Typeset Object and then choose TeX Field.
2. In the entry area, type **nocite{TitlesOn}** and choose OK.
3. Make sure the bibliography database contains a bibliography article with the same citation key.

Sample Citations and Bibliography

Example using jmb

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho *et al.*, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). *G-Animal's Journal,* **41** (7), 73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Reading, Massachusetts: Addison-Wesley, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). Vernier Art Center Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). In: *High Speed Computer and Algorithm Organization*, (Lipcoll, D. J., Lawrie, D. H., & Sameh, A. H., eds) number 23 in Fast Computers part 3, pp. 179–183. Academic Press New York third edition. This is a full INCOLLECTION entry.

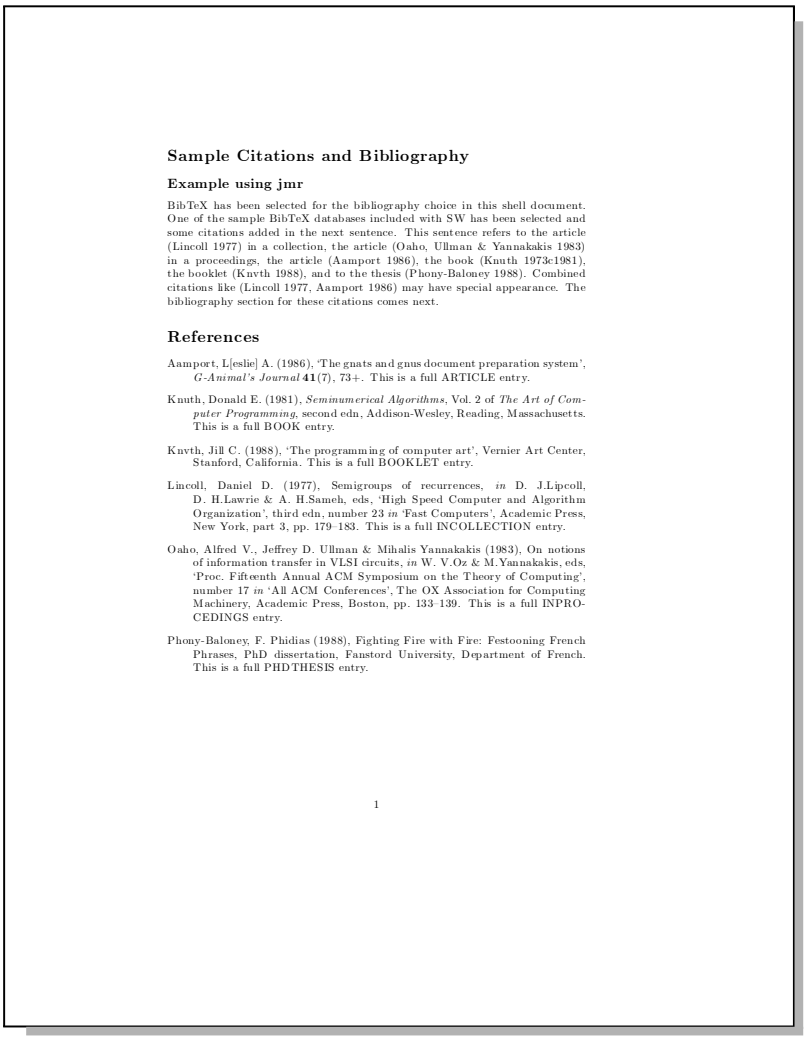
[Oaho *et al.*, 1983] Oaho, A. V., Ullman, J. D., & Yannakakis, M. (1983). In: *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, (Oz, W. V. & Yannakakis, M., eds) number 17 in All ACM Conferences pp. 133–139, The OX Association for Computing Machinery Boston: Academic Press. This is a full INPROCEDINGS entry.

[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation Fanstord University Department of French. This is a full PHDTHESIS entry.

jmr.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author date, Author date) (Author, Author & Author date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTeX Database:	
`harvard.bib`	Contains five entries.

The `jmr.bst` style is provided as part of the harvard family of BibTeX bibliography styles, which can also be used with manual bibliographies. The style is for the *Journal of Management Research*. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims . . .* or *The key result (Medd) . . .*, or as possessives, as in *Medd's (1999) proof . . . .* To avoid LaTeX errors when using the harvard styles, delete the BibTeX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using jmr

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman & Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1973c1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A. (1986), 'The gnats and gnus document preparation system', *G-Animal's Journal* **41**(7), 73+. This is a full ARTICLE entry.

Knuth, Donald E. (1981), *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, second edn, Addison-Wesley, Reading, Massachusetts. This is a full BOOK entry.

Knvth, Jill C. (1988), 'The programming of computer art', Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, Daniel D. (1977), Semigroups of recurrences, *in* D. J.Lipcoll, D. H.Lawrie & A. H.Sameh, eds, 'High Speed Computer and Algorithm Organization', third edn, number 23 *in* 'Fast Computers', Academic Press, New York, part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho, Alfred V., Jeffrey D. Ullman & Mihalis Yannakakis (1983), On notions of information transfer in VLSI circuits, *in* W. V.Oz & M.Yannakakis, eds, 'Proc. Fifteenth Annual ACM Symposium on the Theory of Computing', number 17 *in* 'All ACM Conferences', The OX Association for Computing Machinery, Academic Press, Boston, pp. 133–139. This is a full INPROCEDINGS entry.

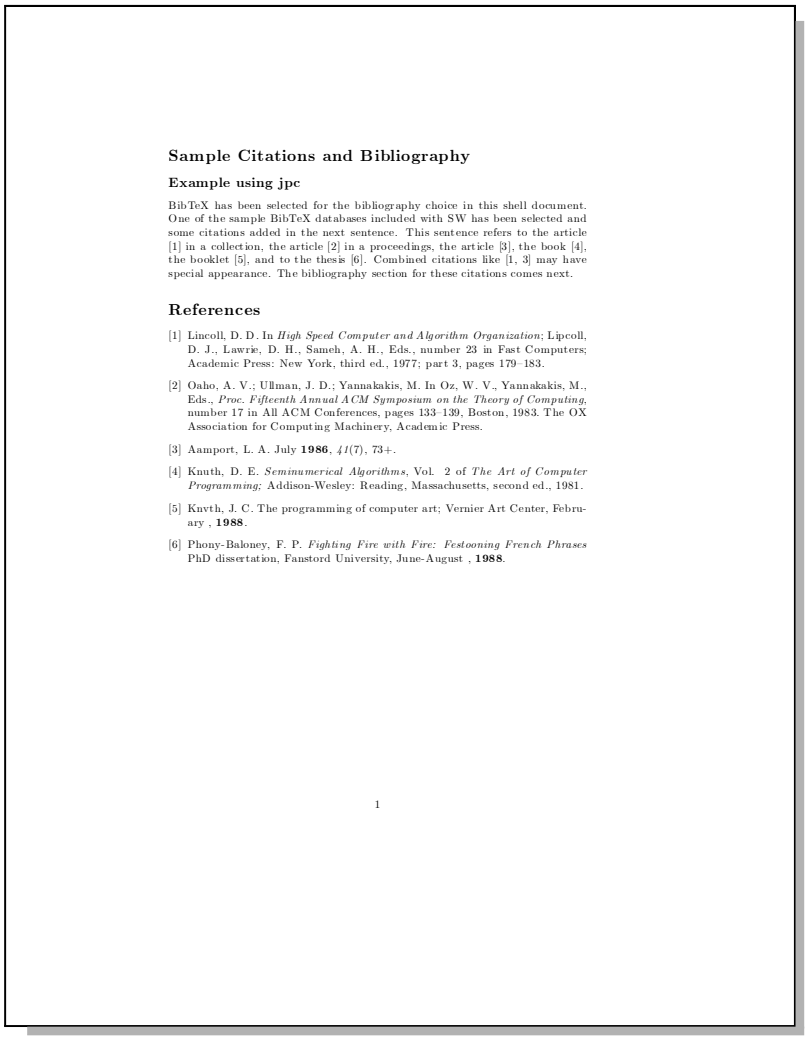
Phony-Baloney, F. Phidias (1988), Fighting Fire with Fire: Festooning French Phrases, PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

jpc.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/chem-journal`

This is a BibTeX bibliography style for the *Journal of Physical Chemistry.* The style omits the title of entries classified as 'article', 'book', 'inbook', and 'incollection' and omits information coded as 'note' in all entries except those classified as 'unpublished'.



Sample Citations and Bibliography

Example using jpc

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D. In *High Speed Computer and Algorithm Organization*; Lipcoll, D. J., Lawrie, D. H., Sameh, A. H., Eds., number 23 in Fast Computers; Academic Press: New York, third ed., 1977; part 3, pages 179–183.

[2] Oaho, A. V.; Ullman, J. D.; Yannakakis, M. In Oz, W. V., Yannakakis, M., Eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, 1983. The OX Association for Computing Machinery, Academic Press.

[3] Aamport, L. A. July **1986**, *41*(7), 73+.

[4] Knuth, D. E. *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming;* Addison-Wesley: Reading, Massachusetts, second ed., 1981.

[5] Knvth, J. C. The programming of computer art; Vernier Art Center, February , **1988**.

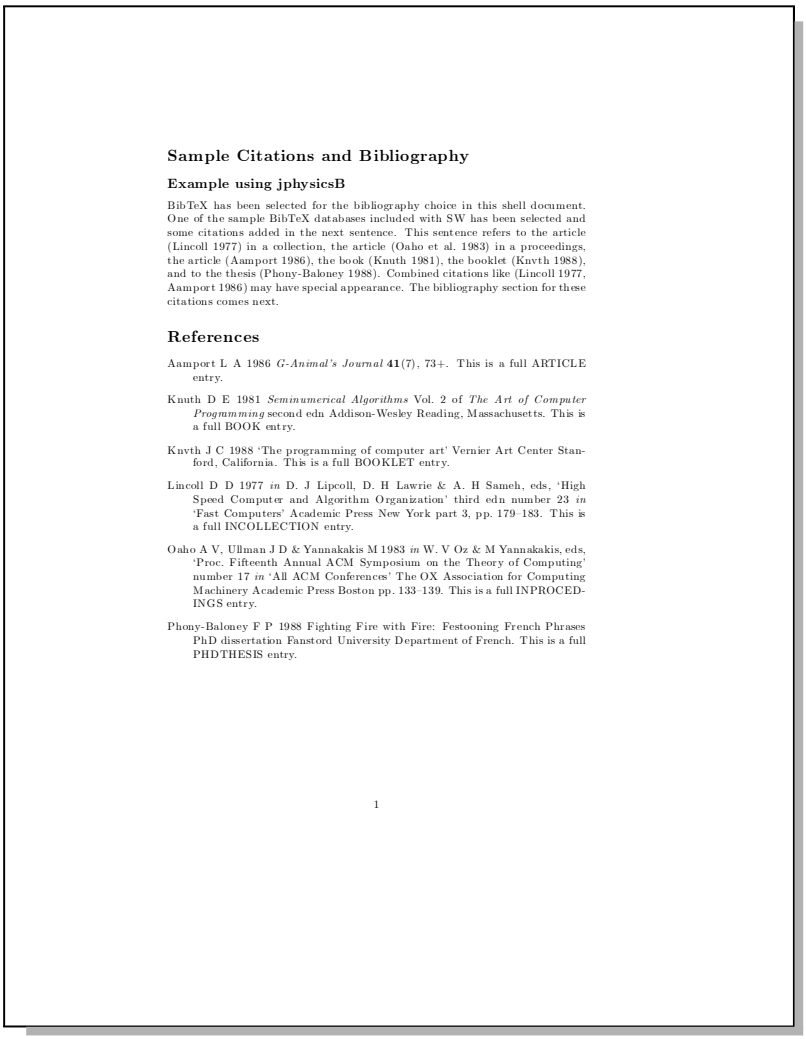
[6] Phony-Baloney, F. P. *Fighting Fire with Fire: Festooning French Phrases* PhD dissertation, Fanstord University, June-August , **1988**.

1

jphysicsB.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author date, Author date) (Author et al. date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTEX Database:	
`harvard.bib`	Contains five entries.

The `jphysicsB.bst` style is provided as part of the harvard family of BibTEX bibliography styles, which can also be used with manual bibliographies. The style is for the *Journal of Physics B*. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims . . .* or *The key result (Medd) . . .*, or as possessives, as in *Medd's (1999) proof . . .* . To avoid LATEX errors when using the harvard styles, delete the BibTEX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using jphysicsB

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho et al. 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport L A 1986 *G-Animal's Journal* **41**(7), 73+. This is a full ARTICLE entry.

Knuth D E 1981 *Seminumerical Algorithms* Vol. 2 of *The Art of Computer Progmmming* second edn Addison-Wesley Reading, Massachusetts. This is a full BOOK entry.

Knvth J C 1988 'The programming of computer art' Vernier Art Center Stanford, California. This is a full BOOKLET entry.

Lincoll D D 1977 *in* D. J Lipcoll, D. H Lawrie & A. H Sameh, eds, 'High Speed Computer and Algorithm Organization' third edn number 23 *in* 'Fast Computers' Academic Press New York part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho A V, Ullman J D & Yannakakis M 1983 *in* W. V Oz & M Yannakakis, eds, 'Proc. Fifteenth Annual ACM Symposium on the Theory of Computing' number 17 *in* 'All ACM Conferences' The OX Association for Computing Machinery Academic Press Boston pp. 133–139. This is a full INPROCEEDINGS entry.

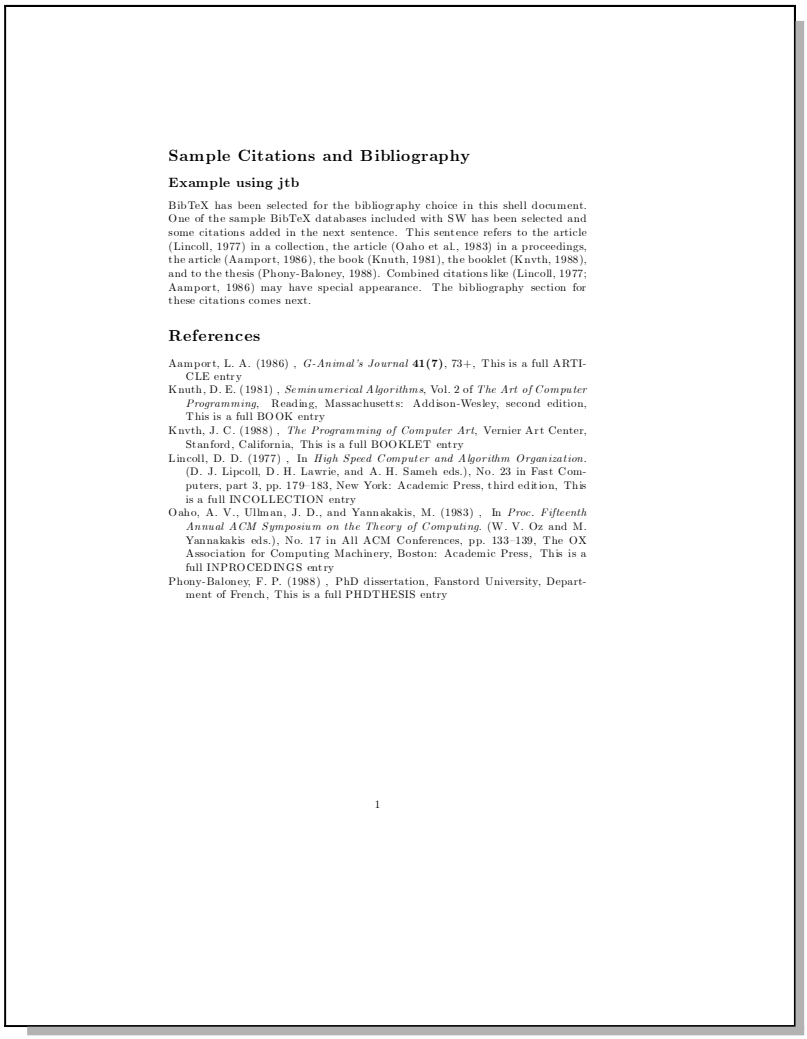
Phony-Baloney F P 1988 Fighting Fire with Fire: Festooning French Phrases PhD dissertation Fanstord University Department of French. This is a full PHDTHESIS entry.

1

jtb.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) or (date) (Author and Author, date) (Author et al., date)
Required files	*astron* package
Directory	`TCITeX/BibTeX/bst/beebe`

This style produces bibliographies based loosely on the format used in the *Journal of Theoretical Biology*. The style supports short citations in the form of *(date)*. It requires the *astron* package.



Sample Citations and Bibliography

Example using jtb

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho et al., 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knyth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986) , *G-Animal's Journal* **41(7)**, 73+, This is a full ARTICLE entry

Knuth, D. E. (1981) , *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, Reading, Massachusetts: Addison-Wesley, second edition, This is a full BOOK entry

Knyth, J. C. (1988) , *The Programming of Computer Art*, Vernier Art Center, Stanford, California, This is a full BOOKLET entry

Lincoll, D. D. (1977) , In *High Speed Computer and Algorithm Organization*. (D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh eds.), No. 23 in Fast Computers, part 3, pp. 179–183, New York: Academic Press, third edition, This is a full INCOLLECTION entry

Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983) , In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*. (W. V. Oz and M. Yannakakis eds.), No. 17 in All ACM Conferences, pp. 133–139, The OX Association for Computing Machinery, Boston: Academic Press, This is a full INPROCEDINGS entry

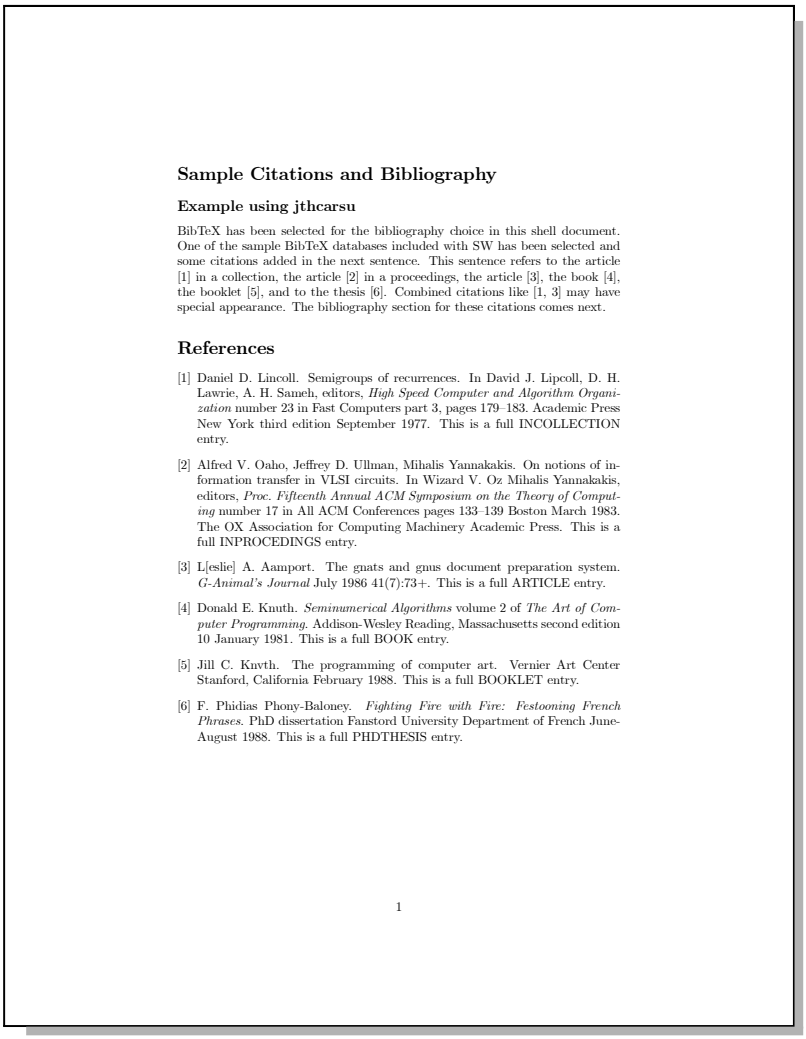
Phony-Baloney, F. P. (1988) , PhD dissertation, Fanstord University, Department of French, This is a full PHDTHESIS entry

1

jthcarsu.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

This style is a modification of the BibTeX standard bibliography style `unsrt.bst`, which lists bibliography entries in the order of their first citation and labels entries with numbers. It is named for the *Journal of Thoracic and Cardiovascular Surgery.*



Sample Citations and Bibliography

Example using jthcarsu

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, A. H. Sameh, editors, *High Speed Computer and Algorithm Organization* number 23 in Fast Computers part 3, pages 179–183. Academic Press New York third edition September 1977. This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* number 17 in All ACM Conferences pages 133–139 Boston March 1983. The OX Association for Computing Machinery Academic Press. This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal* July 1986 41(7):73+. This is a full ARTICLE entry.

[4] Donald E. Knuth. *Seminumerical Algorithms* volume 2 of *The Art of Computer Programming*. Addison-Wesley Reading, Massachusetts second edition 10 January 1981. This is a full BOOK entry.

[5] Jill C. Knvth. The programming of computer art. Vernier Art Center Stanford, California February 1988. This is a full BOOKLET entry.

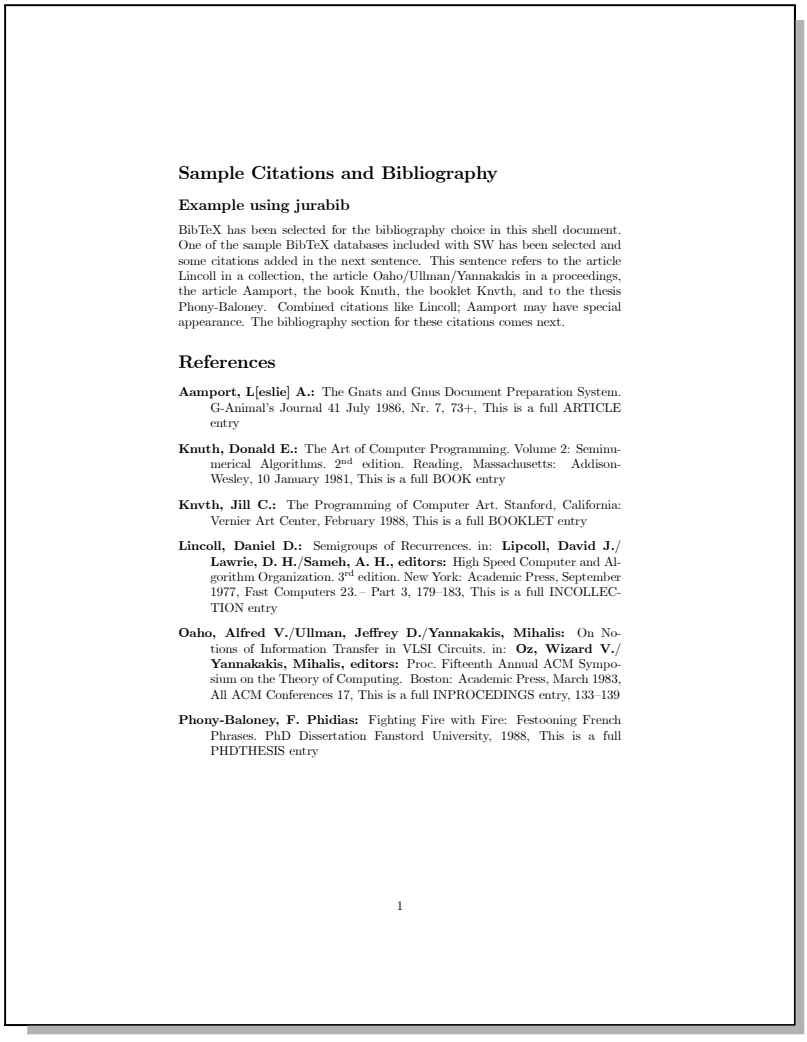
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation Fanstord University Department of French June-August 1988. This is a full PHDTHESIS entry.

1

jurabib.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	Author Abbreviated title Date
Required files	*jurabib* package
Directory	`TCITeX/BibTeX/bst/jurabib`
Sample BibTeX Databases:	
`jbtest.bib`	
`jbtesthu.bib`	

The `jurabib` package supports automated BibTeX citations for legal studies and the humanities. It provides simplified formatting of both the citation and the bibliography entry and supports short titles in citations and reference lists. The style produces the authors' names in bold in the reference list. The bibliography style `jurabib.bst` requires files from the `jurabib` package, available from **http://www.ctan.org**. The sample document was created with the sample databases `jbtest.bib` and `jbtesthu.bib`.



Sample Citations and Bibliography

Example using jurabib

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article Lincoll in a collection, the article Oaho/Ullman/Yannakakis in a proceedings, the article Aamport, the book Knuth, the booklet Knvth, and to the thesis Phony-Baloney. Combined citations like Lincoll; Aamport may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A.: The Gnats and Gnus Document Preparation System. G-Animal's Journal 41 July 1986, Nr. 7, 73+, This is a full ARTICLE entry

Knuth, Donald E.: The Art of Computer Programming. Volume 2: Seminumerical Algorithms. 2nd edition. Reading, Massachusetts: Addison-Wesley, 10 January 1981, This is a full BOOK entry

Knvth, Jill C.: The Programming of Computer Art. Stanford, California: Vernier Art Center, February 1988, This is a full BOOKLET entry

Lincoll, Daniel D.: Semigroups of Recurrences. in: **Lipcoll, David J./ Lawrie, D. H./Sameh, A. H., editors:** High Speed Computer and Algorithm Organization. 3rd edition. New York: Academic Press, September 1977, Fast Computers 23.– Part 3, 179–183, This is a full INCOLLECTION entry

Oaho, Alfred V./Ullman, Jeffrey D./Yannakakis, Mihalis: On Notions of Information Transfer in VLSI Circuits. in: **Oz, Wizard V./ Yannakakis, Mihalis, editors:** Proc. Fifteenth Annual ACM Symposium on the Theory of Computing. Boston: Academic Press, March 1983, All ACM Conferences 17, This is a full INPROCEDINGS entry, 133–139

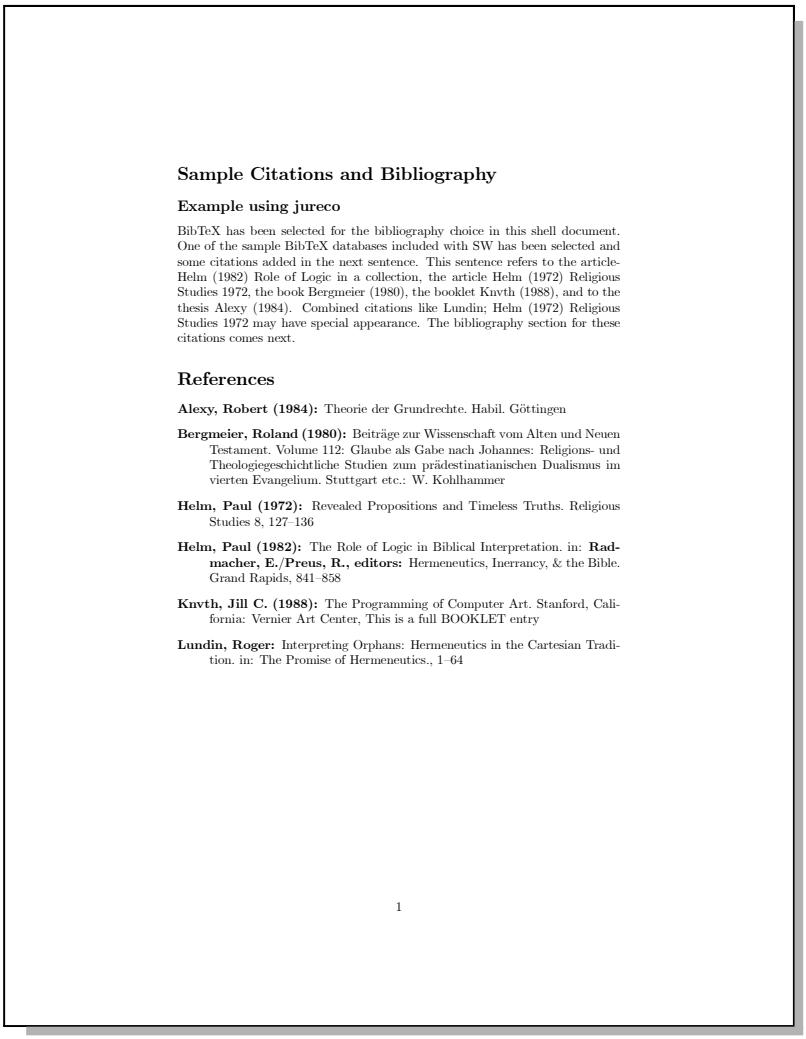
Phony-Baloney, F. Phidias: Fighting Fire with Fire: Festooning French Phrases. PhD Dissertation Fanstord University, 1988, This is a full PHDTHESIS entry

1

jureco.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	Author (date)
Required files	*jurabib* package
Directory	`TCITeX/BibTeX/bst/jurabib`
Sample BibTeX Databases:	
`jbtest.bib`	
`jbtesthu.bib`	

The `jurabib` package supports automated BibTeX citations for legal studies and the humanities. It provides simplified formatting of both the citation and the bibliography entry and supports short titles in citations and reference lists. The style produces the authors' names in bold in the reference list. The bibliography style `jureco.bst` requires files from the `jurabib` package, available from **http://www.ctan.org**.



Sample Citations and Bibliography

Example using jureco

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article-Helm (1982) Role of Logic in a collection, the article Helm (1972) Religious Studies 1972, the book Bergmeier (1980), the booklet Knvth (1988), and to the thesis Alexy (1984). Combined citations like Lundin; Helm (1972) Religious Studies 1972 may have special appearance. The bibliography section for these citations comes next.

References

Alexy, Robert (1984): Theorie der Grundrechte. Habil. Göttingen

Bergmeier, Roland (1980): Beiträge zur Wissenschaft vom Alten und Neuen Testament. Volume 112: Glaube als Gabe nach Johannes: Religions- und Theologiegeschichtliche Studien zum prädestinatianischen Dualismus im vierten Evangelium. Stuttgart etc.: W. Kohlhammer

Helm, Paul (1972): Revealed Propositions and Timeless Truths. Religious Studies 8, 127–136

Helm, Paul (1982): The Role of Logic in Biblical Interpretation. in: **Radmacher, E./Preus, R., editors:** Hermeneutics, Inerrancy, & the Bible. Grand Rapids, 841–858

Knvth, Jill C. (1988): The Programming of Computer Art. Stanford, California: Vernier Art Center, This is a full BOOKLET entry

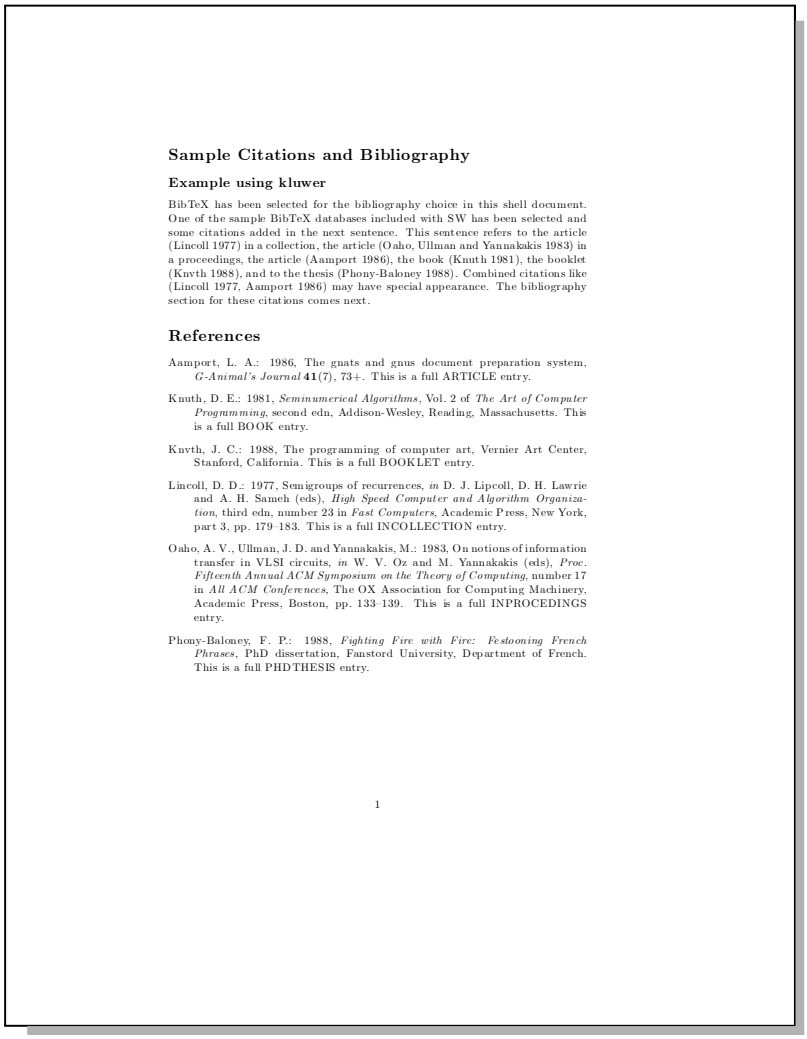
Lundin, Roger: Interpreting Orphans: Hermeneutics in the Cartesian Tradition. in: The Promise of Hermeneutics., 1–64

1

kluwer.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date)
	(Author date, Author date)
	(Author, Author and Author date)
Required files	*harvard* package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTeX Database:	
`harvard.bib`	Contains five entries.

The `kluwer.bst` style is provided as part of the harvard family of BibTeX bibliography styles, which can also be used with manual bibliographies. The style requires the *harvard* package. The style attempts to conform to the requirements of Kluwer Academic Publishers. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims* . . . or *The key result (Medd)* . . ., or as possessives, as in *Medd's (1999) proof* . . . . To avoid LaTeX errors when using the harvard styles, delete the BibTeX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using kluwer

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho, Ullman and Yannakakis 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A.: 1986, The gnats and gnus document preparation system, *G-Animal's Journal* **41**(7), 73+. This is a full ARTICLE entry.

Knuth, D. E.: 1981, *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, second edn, Addison-Wesley, Reading, Massachusetts. This is a full BOOK entry.

Knvth, J. C.: 1988, The programming of computer art, Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D.: 1977, Semigroups of recurrences, *in* D. J. Lipcoll, D. H. Lawrie and A. H. Sameh (eds), *High Speed Computer and Algorithm Organization*, third edn, number 23 in *Fast Computers*, Academic Press, New York, part 3, pp. 179–183. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D. and Yannakakis, M.: 1983, On notions of information transfer in VLSI circuits, *in* W. V. Oz and M. Yannakakis (eds), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in *All ACM Conferences*, The OX Association for Computing Machinery, Academic Press, Boston, pp. 133–139. This is a full INPROCEDINGS entry.

Phony-Baloney, F. P.: 1988, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

letter.bst

Format of reference list label	No list generated
Organization of reference list	No list generated
Format of citation	[name] or [name with address]
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTeX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

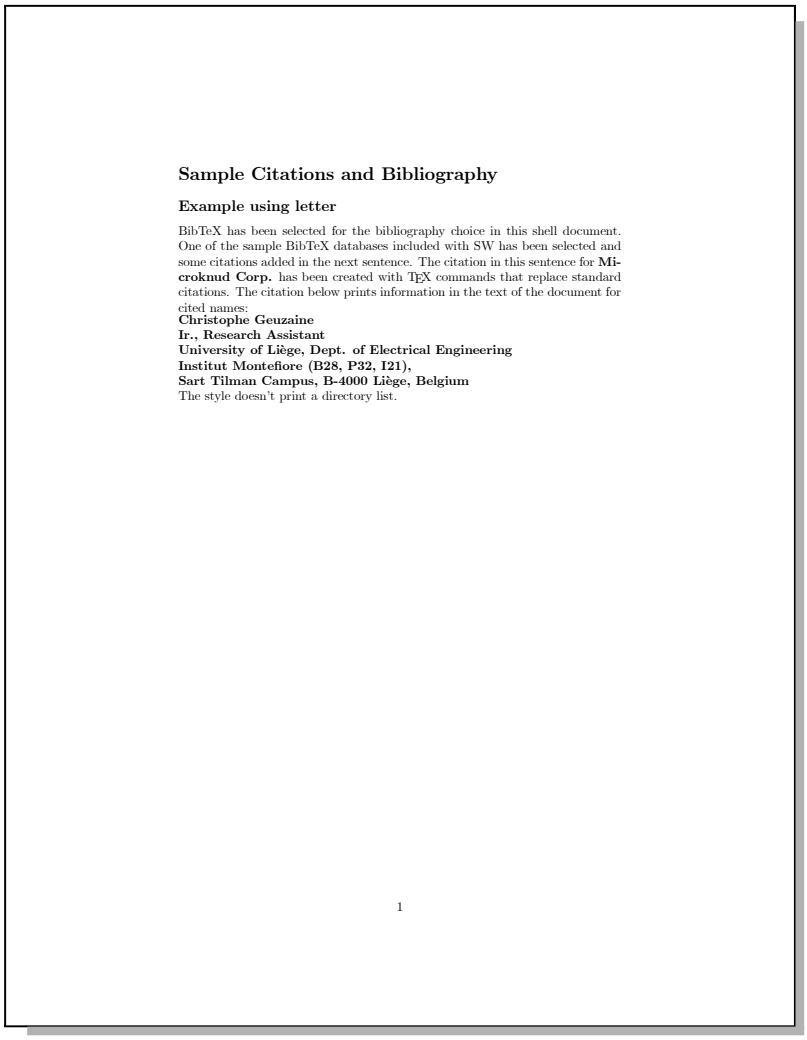
The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described below.

The `letter.bst` style, which operates differently from other styles in the package, doesn't produce a directory list. Instead, it prints the name or name and address corresponding to the cited key at the point of the citation.

► **To enter a `\dir` command in a TeX field**

1. Place the insertion point where you want the citation to appear.
2. From the Insert menu, choose Typeset Object and then choose TeX Field.
3. In the entry area, type **\dir{*key*}** where ***key*** is the key for the database entry you want to cite.
4. Choose OK.

The sample was created using the databases `business.bib` and `family.bib`.



Sample Citations and Bibliography

Example using letter

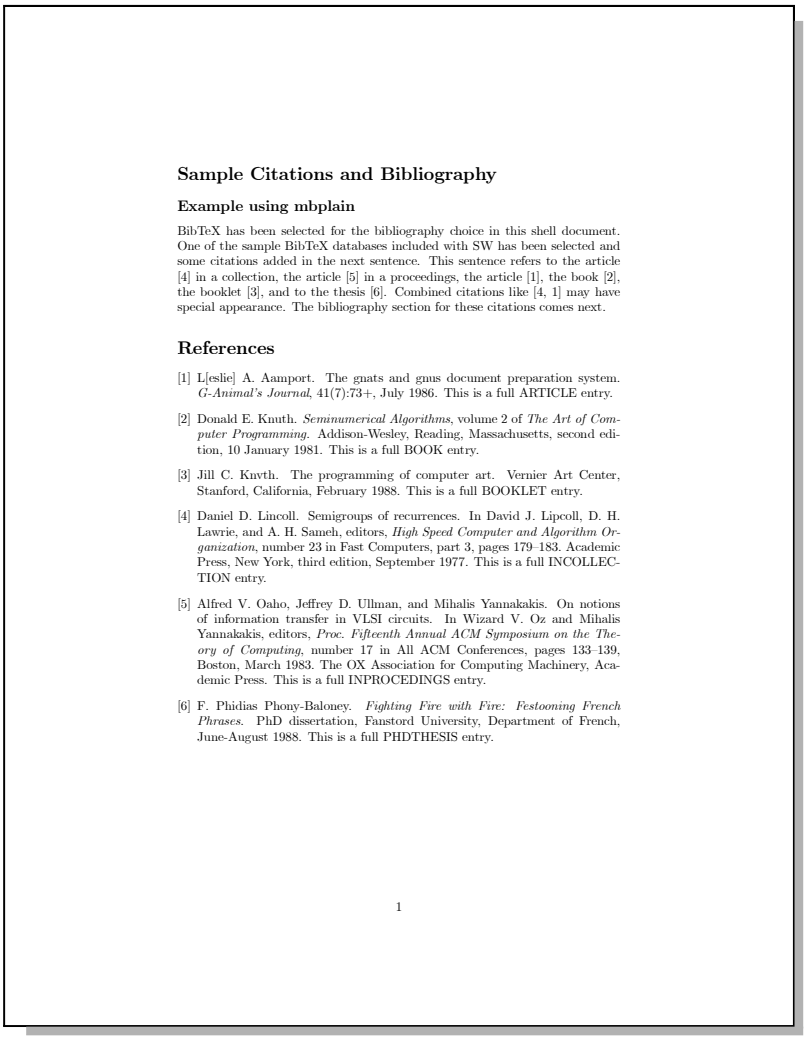
BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. The citation in this sentence for **Microknud Corp.** has been created with TEX commands that replace standard citations. The citation below prints information in the text of the document for cited names:
Christophe Geuzaine
Ir., Research Assistant
University of Liège, Dept. of Electrical Engineering
Institut Montefiore (B28, P32, I21),
Sart Tilman Campus, B-4000 Liège, Belgium
The style doesn't print a directory list.

1

mbplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/multibib`

The BibTEX bibliography style `mbplain.bst` allows references to multiple bibliographies within a single document. It is a modification of the style `plain.bst`, which sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using mbplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

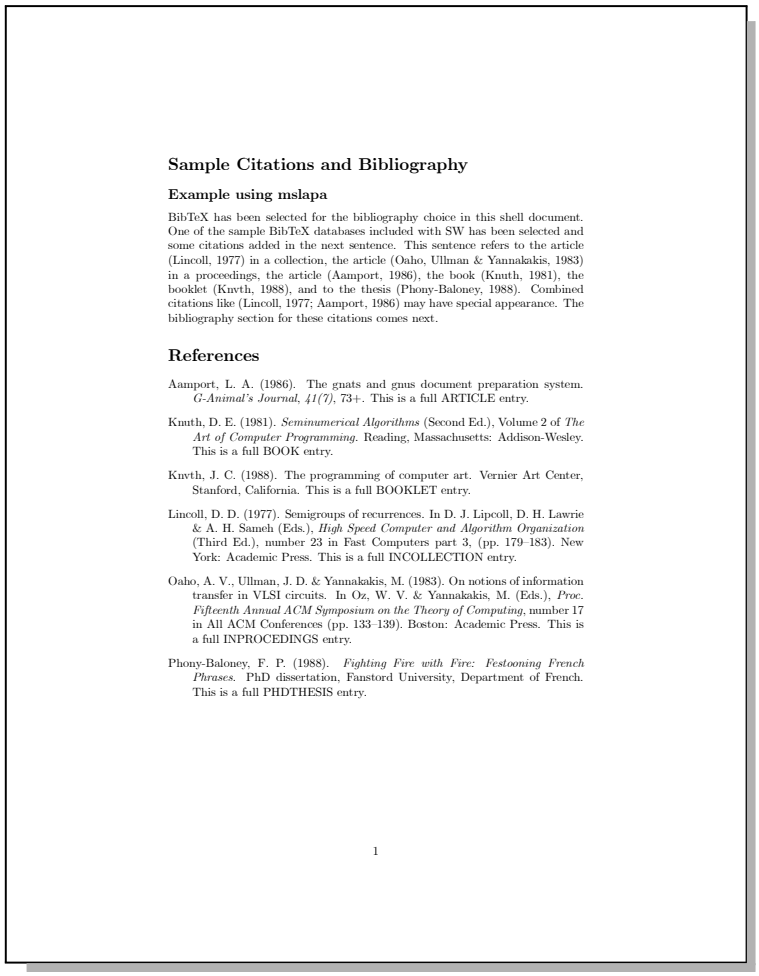
1

mslapa.bst

Format of reference list label	[None]
Organization of reference list	Alphabetical by author
Format of citation	(Author, date) (Author, date; Author, date) (Author, Author & Author, date)
Required files	*mslapa* package
Directory	`TCITeX/BibTeX/bst/mslapa`

The bibliography style file `mslapa.bst` automates the formatting of bibliographies and citations according to the American Psychological Association (APA) style. It supports many author-date citation formats, including (date), (e.g.author, date), and (author, datea,b). The style was based on `plain.bst`, which sorts entries alphabetically, and on `named.bst` and `apalike.bst`. It requires the *mslapa* package, which is available from CTAN at **http://www.ctan.org**.

Note that the style doesn't automatically alphabetize citations in the text. Because the style produces citations in the order you enter them, you must enter references in alphabetical order to have them appear alphabetically within a citation. Note too that APA style specifies that full author order be used the first time a multi-author reference is cited and *et al.* be used thereafter. To adhere to the specification, use the `\cite`, `\citeyear`, and `\shortcite` commands appropriately.



Sample Citations and Bibliography

Example using mslapa

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll, 1977) in a collection, the article (Oaho, Ullman & Yannakakis, 1983) in a proceedings, the article (Aamport, 1986), the book (Knuth, 1981), the booklet (Knvth, 1988), and to the thesis (Phony-Baloney, 1988). Combined citations like (Lincoll, 1977; Aamport, 1986) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal, 41(7)*, 73+. This is a full ARTICLE entry.

Knuth, D. E. (1981). *Seminumerical Algorithms* (Second Ed.), Volume 2 of *The Art of Computer Programming*. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Lincoll, D. D. (1977). Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie & A. H. Sameh (Eds.), *High Speed Computer and Algorithm Organization* (Third Ed.), number 23 in Fast Computers part 3, (pp. 179–183). New York: Academic Press. This is a full INCOLLECTION entry.

Oaho, A. V., Ullman, J. D. & Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In Oz, W. V. & Yannakakis, M. (Eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences (pp. 133–139). Boston: Academic Press. This is a full INPROCEDINGS entry.

Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

named.bst

Format of reference list label	[Author, date] [Author *et al.,* date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] or [date] [Author and Author, date] or [date] [Author *et al.,* date] or [date]
Required files	***named*** package
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports year-only citations. The style orders the reference list alphabetically by author or by whatever passes for author in the absence of an author. The style must be used with the ***named*** package.

Sample Citations and Bibliography

Example using named

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho *et al.*, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1973c1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[Knuth, 1973c1981] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[Knvth, 1988] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[Lincoll, 1977] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[Oaho *et al.*, 1983] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

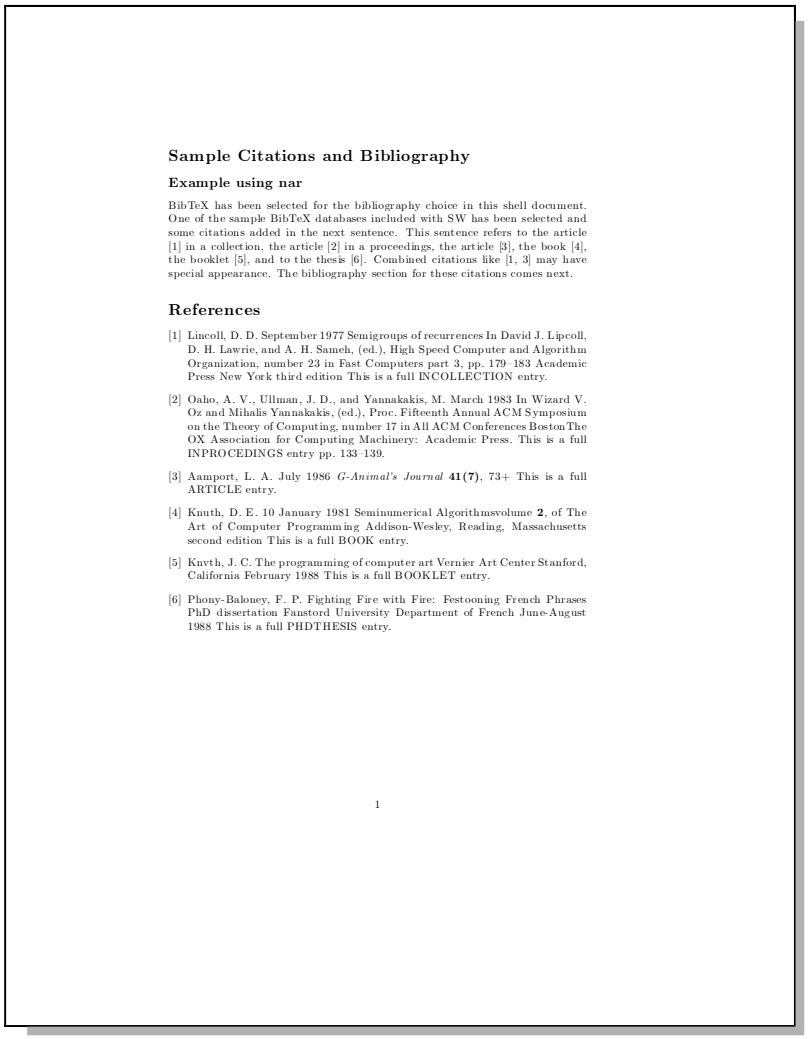
[Phony-Baloney, 1988] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

nar.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports bibliographies for the journal *Nucleic Acid Research*. It was adapted from the standard BibTeX style `unsrt.bst`, which organizes the reference list in order of first citation.



Sample Citations and Bibliography

Example using nar

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D. September 1977 Semigroups of recurrences In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, (ed.), High Speed Computer and Algorithm Organization, number 23 in Fast Computers part 3, pp. 179–183 Academic Press New York third edition This is a full INCOLLECTION entry.

[2] Oaho, A. V., Ullman, J. D., and Yannakakis, M. March 1983 In Wizard V. Oz and Mihalis Yannakakis, (ed.), Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, number 17 in All ACM Conferences BostonThe OX Association for Computing Machinery: Academic Press. This is a full INPROCEDINGS entry pp. 133–139.

[3] Aamport, L. A. July 1986 *G-Animal's Journal* **41(7)**, 73+ This is a full ARTICLE entry.

[4] Knuth, D. E. 10 January 1981 Seminumerical Algorithmsvolume **2**, of The Art of Computer Programming Addison-Wesley, Reading, Massachusetts second edition This is a full BOOK entry.

[5] Knvth, J. C. The programming of computer art Vernier Art Center Stanford, California February 1988 This is a full BOOKLET entry.

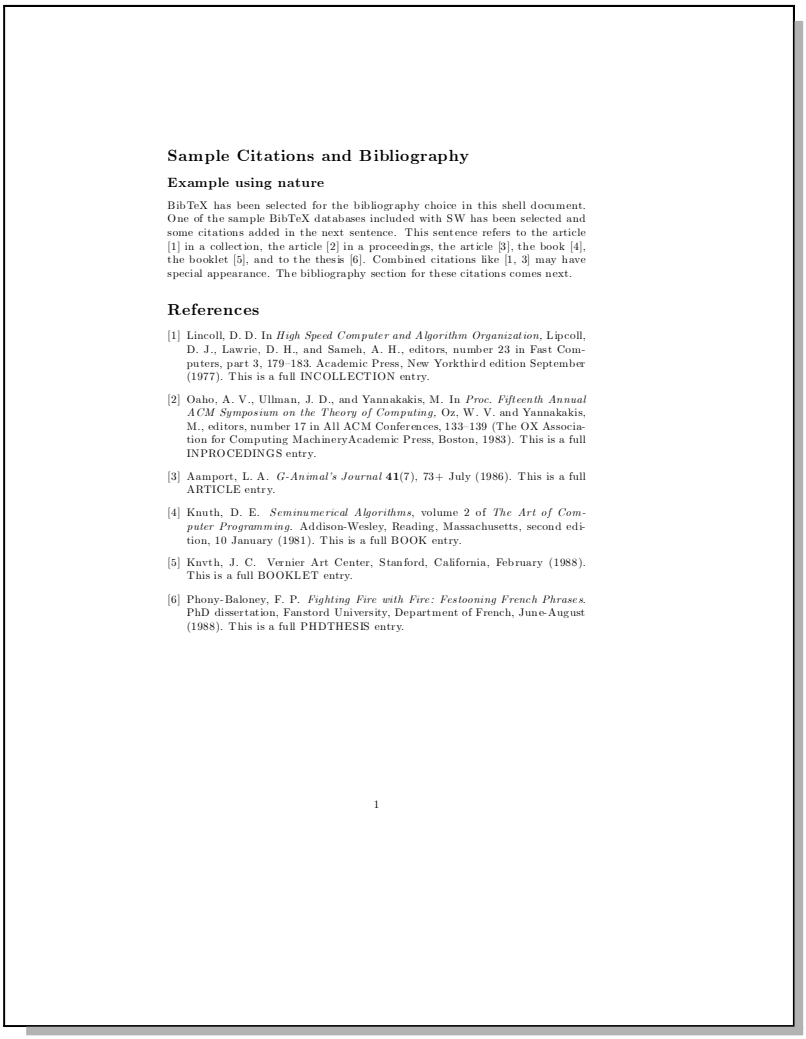
[6] Phony-Baloney, F. P. Fighting Fire with Fire: Festooning French Phrases PhD dissertation Fanstord University Department of French June-August 1988 This is a full PHDTHESIS entry.

1

nature.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

This BibTEX bibliography style is similar to that used in *Nature*.



Sample Citations and Bibliography

Example using nature

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D. In *High Speed Computer and Algorithm Organization*, Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, number 23 in Fast Computers, part 3, 179–183. Academic Press, New Yorkthird edition September (1977). This is a full INCOLLECTION entry.

[2] Oaho, A. V., Ullman, J. D., and Yannakakis, M. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Oz, W. V. and Yannakakis, M., editors, number 17 in All ACM Conferences, 133–139 (The OX Association for Computing MachineryAcademic Press, Boston, 1983). This is a full INPROCEDINGS entry.

[3] Aamport, L. A. *G-Animal's Journal* **41**(7), 73+ July (1986). This is a full ARTICLE entry.

[4] Knuth, D. E. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January (1981). This is a full BOOK entry.

[5] Knvth, J. C. Vernier Art Center, Stanford, California, February (1988). This is a full BOOKLET entry.

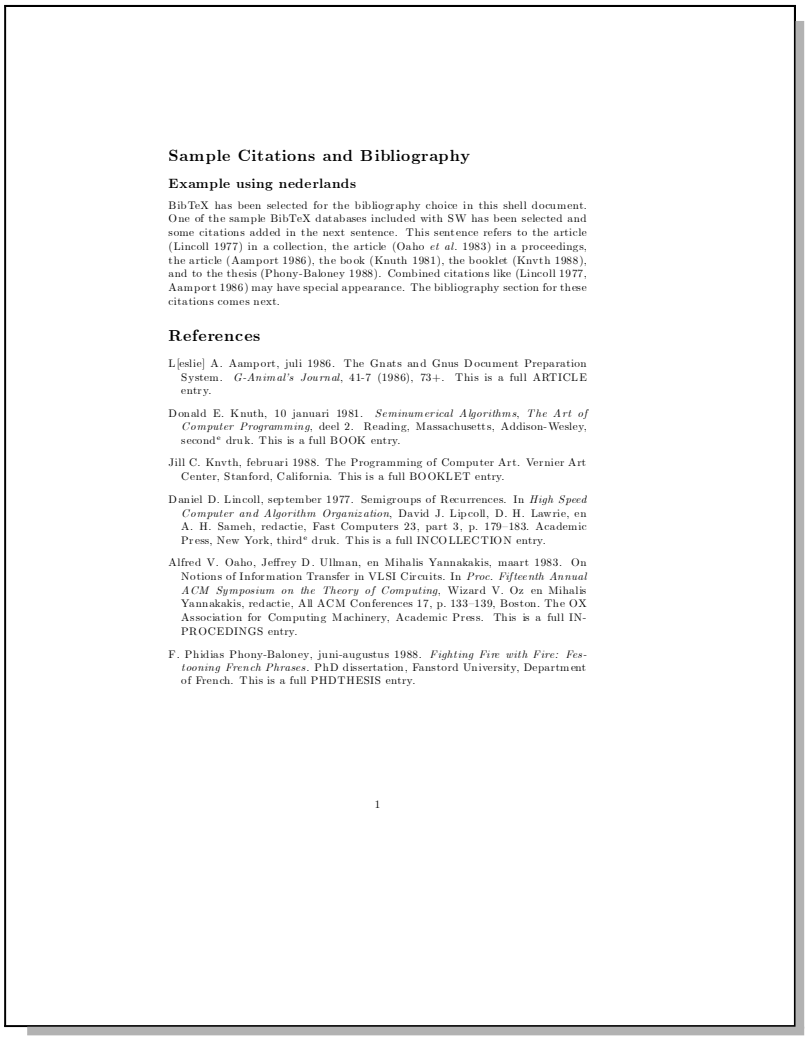
[6] Phony-Baloney, F. P. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August (1988). This is a full PHDTHESIS entry.

1

nederlands.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Author date) (Author and Author date) (Author *et al.* date)
Required files	***harvard*** package
Directory	`TCITeX/BibTeX/bst/harvard`
Sample BibTEX Database:	
`harvard.bib`	Contains five entries.

The `nederlands.bst` style is provided as part of the harvard family of BibTEX bibliography styles, which can also be used with manual bibliographies. The style, which requires the ***harvard*** package, conforms to Dutch conventions. Complete citations are in standard parenthetical form. Incomplete citations can be used as nouns, as in *Medd (1999) claims . . .* or *The key result (Medd) . . .,* or as possessives, as in *Medd's (1999) proof . . . .* To avoid LATEX errors when using the harvard styles, delete the BibTEX style files in the `bst\beebe` directory.



Sample Citations and Bibliography

Example using nederlands

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Lincoll 1977) in a collection, the article (Oaho *et al.* 1983) in a proceedings, the article (Aamport 1986), the book (Knuth 1981), the booklet (Knvth 1988), and to the thesis (Phony-Baloney 1988). Combined citations like (Lincoll 1977, Aamport 1986) may have special appearance. The bibliography section for these citations comes next.

References

L[eslie] A. Aamport, juli 1986. The Gnats and Gnus Document Preparation System. *G-Animal's Journal*, 41-7 (1986), 73+. This is a full ARTICLE entry.

Donald E. Knuth, 10 januari 1981. *Seminumerical Algorithms, The Art of Computer Programming*, deel 2. Reading, Massachusetts, Addison-Wesley, second^e druk. This is a full BOOK entry.

Jill C. Knvth, februari 1988. The Programming of Computer Art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

Daniel D. Lincoll, september 1977. Semigroups of Recurrences. In *High Speed Computer and Algorithm Organization*, David J. Lipcoll, D. H. Lawrie, en A. H. Sameh, redactie, Fast Computers 23, part 3, p. 179–183. Academic Press, New York, third^e druk. This is a full INCOLLECTION entry.

Alfred V. Oaho, Jeffrey D. Ullman, en Mihalis Yannakakis, maart 1983. On Notions of Information Transfer in VLSI Circuits. In *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, Wizard V. Oz en Mihalis Yannakakis, redactie, All ACM Conferences 17, p. 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

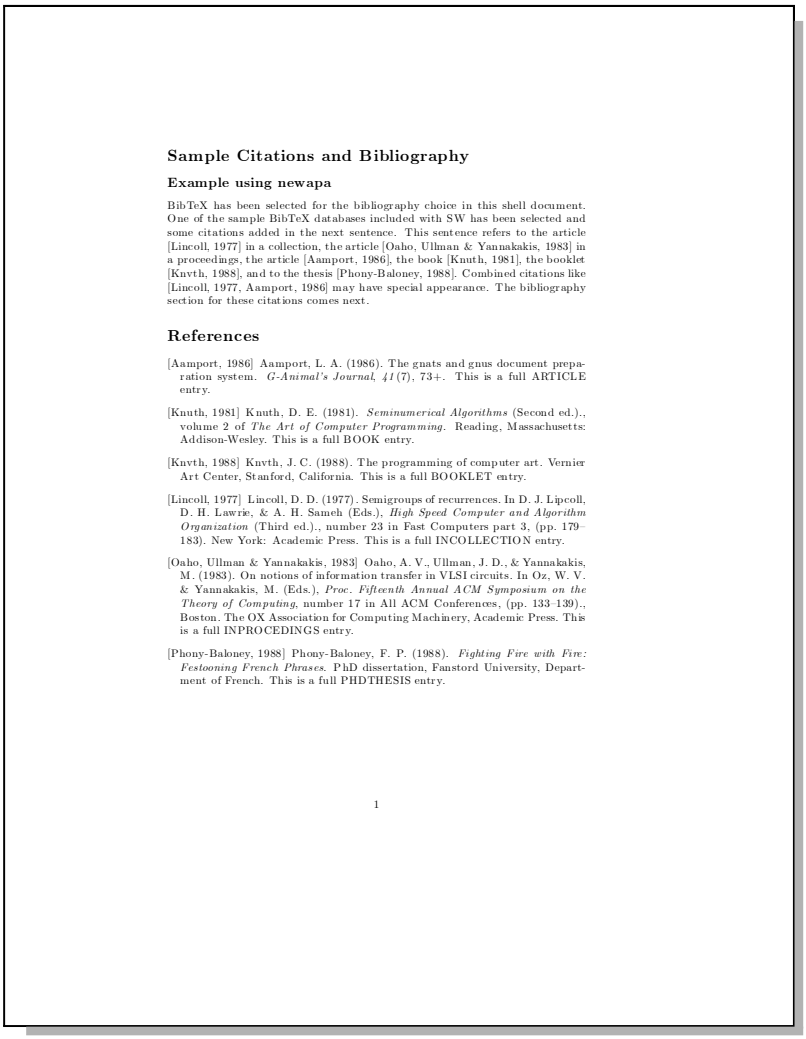
F. Phidias Phony-Baloney, juni-augustus 1988. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

newapa.bst

Format of reference list label	[Author, date] [Author, Author & Author, date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author, date, Author, date] [Author, Author & Author, date]
Required files	*newapa* package
Directory	`TCITeX/BibTeX/bst/beebe`

This BibTEX bibliography style was adapted from `plain.bst`, `named.bst`, and `apalike.bst`. It approximates APA style. It requires the *newapa* package.



Sample Citations and Bibliography

Example using newapa

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho, Ullman & Yannakakis, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, *41*(7), 73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). *Seminumerical Algorithms* (Second ed.)., volume 2 of *The Art of Computer Programming*. Reading, Massachusetts: Addison-Wesley. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). Semigroups of recurrences. In D. J. Lipcoll, D. H. Lawrie, & A. H. Sameh (Eds.), *High Speed Computer and Algorithm Organization* (Third ed.)., number 23 in Fast Computers part 3, (pp. 179–183). New York: Academic Press. This is a full INCOLLECTION entry.

[Oaho, Ullman & Yannakakis, 1983] Oaho, A. V., Ullman, J. D., & Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In Oz, W. V. & Yannakakis, M. (Eds.), *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, (pp. 133–139)., Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

oxford-en.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Full reference at first citation; abbreviated thereafter)
Required files	*oxford* package
Directory	`TCITeX/BibTeX/bst/oxford`

The style is one of several styles based on the harvard family of BibTeX bibliography styles. The first time a reference is cited, the style produces a full reference in the text at the point of the citation. Subsequent citations for that reference are abbreviated. The in-text citation *ibid* is used when the current citation is the same as the last. The style `oxford-en.bst` is for entries in English. It requires the *oxford* package. The sample below was created using a modification of the `xampl.bib` database.

Sample Citations and Bibliography

Example using oxford-en

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Daniel D. Lincoll, 'Semigroups of Recurrences', in David J. Lipcoll, D. H. Lawrie & A. H. Sameh eds., *High Speed Computer and Algorithm Organization*, no. 23 in Fast Computers, 3rd edn., part 3, pp. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977)) in a collection, the article(Alfred V. Oaho, Jeffrey D. Ullman & Mihalis Yannakakis, 'On Notions of Information Transfer in VLSI Circuits', in Wizard V. Oz & Mihalis Yannakakis eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, no. 17 in All ACM Conferences, pp. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983)) in a proceedings, the article (L[eslie] A. Aamport, 'The Gnats and Gnus Document Preparation System', *G-Animal's Journal*, vol. 41, no. 7, 73+ (1986), This is a full ARTICLE entry), the book (Donald E. Knuth, *Fundamental Algorithms*, vol. 1 of *The Art of Computer Programming*, section 1.2, pp. 10–119, 2nd edn., This is a full INBOOK entry (Reading, Massachusetts: Addison-Wesley, 1973)), the booklet (Jill C. Knvth, 'The Programming of Computer Art', Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988)), and to the thesis (F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988)). Combined citations like (Lincoll, Aamport) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A., 'The Gnats and Gnus Document Preparation System', *G-Animal's Journal*, vol. 41, no. 7, 73+ (1986), This is a full ARTICLE entry.

Knuth, Donald E., *Fundamental Algorithms*, vol. 1 of *The Art of Computer Programming*, section 1.2, pp. 10–119, 2nd edn., This is a full INBOOK entry (Reading, Massachusetts: Addison-Wesley, 1973).

Knvth, Jill C., 'The Programming of Computer Art', Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988).

Lincoll, Daniel D., 'Semigroups of Recurrences', in Lipcoll, David J., Lawrie, D. H. & Sameh, A. H. eds., *High Speed Computer and Algorithm Organization*, no. 23 in Fast Computers, 3rd edn., part 3, pp. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977).

1

Oaho, Alfred V., Ullman, Jeffrey D. & Yannakakis, Mihalis, 'On Notions of Information Transfer in VLSI Circuits', in Oz, Wizard V. & Yannakakis, Mihalis eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, no. 17 in All ACM Conferences, pp. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983).

Phony-Baloney, F. Phidias, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988).

oxford-in.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Full reference at first citation; abbreviated thereafter)
Required files	*oxford* package
Directory	`TCITeX/BibTeX/bst/oxford`

The style is one of several styles based on the harvard family of BibTEX bibliography styles. The first time a reference is cited, the style produces a full reference in the text at the point of the citation. Subsequent citations for that reference are abbreviated. The in-text citation *ibid* is used when the current citation is the same as the last. The style `oxford-in.bst` is for entries in English. It requires the *oxford* package. The sample below was created using a modification of the `xampl.bib` database.

Sample Citations and Bibliography

Example using oxford-in

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Daniel D. Lincoll, 'Semigroups of Recurrences', in David J. Lipcoll, D. H. Lawrie & A. H. Sameh eds., *High Speed Computer and Algorithm Organization*, no. 23 in Fast Computers, 3rd edn., part 3, pp. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977)) in a collection, the article(Alfred V. Oaho, Jeffrey D. Ullman & Mihalis Yannakakis, 'On Notions of Information Transfer in VLSI Circuits', in Wizard V. Oz & Mihalis Yannakakis eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, no. 17 in All ACM Conferences, pp. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983)) in a proceedings, the article (L[eslie] A. Aamport, 'The Gnats and Gnus Document Preparation System', *G-Animal's Journal*, vol. 41, no. 7, 73+ (1986), This is a full ARTICLE entry), the book (Donald E. Knuth, *Fundamental Algorithms*, vol. 1 of *The Art of Computer Programming*, section 1.2, pp. 10–119, 2nd edn., This is a full INBOOK entry (Reading, Massachusetts: Addison-Wesley, 1973)), the booklet (Jill C. Knvth, 'The Programming of Computer Art', Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988)), and to the thesis (F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988)). Combined citations like (Lincoll, Aamport) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A., 'The Gnats and Gnus Document Preparation System', *G-Animal's Journal*, vol. 41, no. 7, 73+ (1986), This is a full ARTICLE entry.

Knuth, Donald E., *Fundamental Algorithms*, vol. 1 of *The Art of Computer Programming*, section 1.2, pp. 10–119, 2nd edn., This is a full INBOOK entry (Reading, Massachusetts: Addison-Wesley, 1973).

Knvth, Jill C., 'The Programming of Computer Art', Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988).

Lincoll, Daniel D., 'Semigroups of Recurrences', in Lipcoll, David J., Lawrie, D. H. & Sameh, A. H. eds., *High Speed Computer and Algorithm Organization*, no. 23 in Fast Computers, 3rd edn., part 3, pp. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977).

1

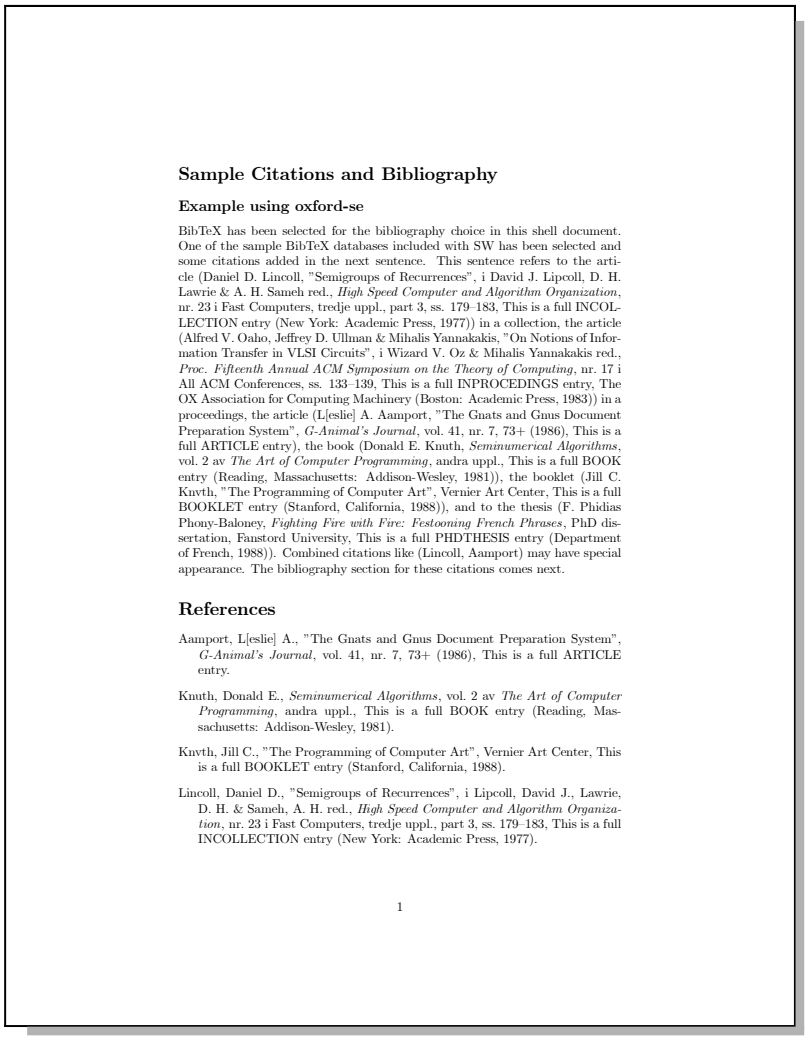
Oaho, Alfred V., Ullman, Jeffrey D. & Yannakakis, Mihalis, 'On Notions of Information Transfer in VLSI Circuits', in Oz, Wizard V. & Yannakakis, Mihalis eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, no. 17 in All ACM Conferences, pp. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983).

Phony-Baloney, F. Phidias, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988).

oxford-se.bst

Format of reference list label	None
Organization of reference list	Alphabetical by author
Format of citation	(Full reference at first citation; abbreviated thereafter)
Required files	***oxford*** package
Directory	`TCITeX/BibTeX/bst/oxford`

The style is one of several styles based on the harvard family of BibTeX bibliography styles. The first time a reference is cited, the style produces a full reference in the text at the point of the citation. Subsequent citations for that reference are abbreviated. The in-text citation *ibid* is used when the current citation is the same as the last. The style `oxford-se.bst` is for entries in Swedish, with English words such as *editor* translated to Swedish by the bibliography style. It requires the ***oxford*** package. The sample below was created using a modification of the `xampl.bib` database.



Sample Citations and Bibliography

Example using oxford-se

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article (Daniel D. Lincoll, "Semigroups of Recurrences", i David J. Lipcoll, D. H. Lawrie & A. H. Sameh red., *High Speed Computer and Algorithm Organization*, nr. 23 i Fast Computers, tredje uppl., part 3, ss. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977)) in a collection, the article (Alfred V. Oaho, Jeffrey D. Ullman & Mihalis Yannakakis, "On Notions of Information Transfer in VLSI Circuits", i Wizard V. Oz & Mihalis Yannakakis red., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, nr. 17 i All ACM Conferences, ss. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983)) in a proceedings, the article (L[eslie] A. Aamport, "The Gnats and Gnus Document Preparation System", *G-Animal's Journal*, vol. 41, nr. 7, 73+ (1986), This is a full ARTICLE entry), the book (Donald E. Knuth, *Seminumerical Algorithms*, vol. 2 av *The Art of Computer Programming*, andra uppl., This is a full BOOK entry (Reading, Massachusetts: Addison-Wesley, 1981)), the booklet (Jill C. Knvth, "The Programming of Computer Art", Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988)), and to the thesis (F. Phidias Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988)). Combined citations like (Lincoll, Aamport) may have special appearance. The bibliography section for these citations comes next.

References

Aamport, L[eslie] A., "The Gnats and Gnus Document Preparation System", *G-Animal's Journal*, vol. 41, nr. 7, 73+ (1986), This is a full ARTICLE entry.

Knuth, Donald E., *Seminumerical Algorithms*, vol. 2 av *The Art of Computer Programming*, andra uppl., This is a full BOOK entry (Reading, Massachusetts: Addison-Wesley, 1981).

Knvth, Jill C., "The Programming of Computer Art", Vernier Art Center, This is a full BOOKLET entry (Stanford, California, 1988).

Lincoll, Daniel D., "Semigroups of Recurrences", i Lipcoll, David J., Lawrie, D. H. & Sameh, A. H. red., *High Speed Computer and Algorithm Organization*, nr. 23 i Fast Computers, tredje uppl., part 3, ss. 179–183, This is a full INCOLLECTION entry (New York: Academic Press, 1977).

1

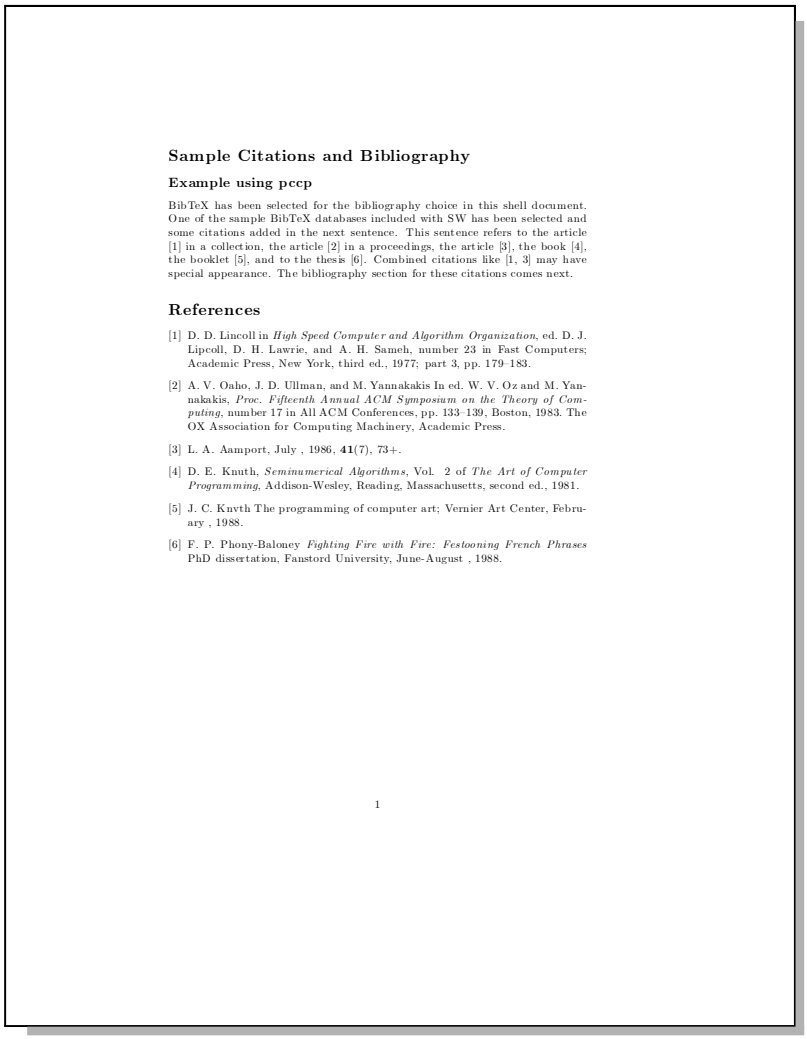
Oaho, Alfred V., Ullman, Jeffrey D. & Yannakakis, Mihalis, "On Notions of Information Transfer in VLSI Circuits", i Oz, Wizard V. & Yannakakis, Mihalis red., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, nr. 17 i All ACM Conferences, ss. 133–139, This is a full INPROCEDINGS entry, The OX Association for Computing Machinery (Boston: Academic Press, 1983).

Phony-Baloney, F. Phidias, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, This is a full PHDTHESIS entry (Department of French, 1988).

pccp.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/chem-journal`

This is a BibTeX bibliography style for *Physical Chemistry Chemical Physics*. The style omits the title of entries classified as 'article', 'book', 'inbook', and 'incollection' and omits information coded as 'note' in all entries except those classified as 'unpublished'.



Sample Citations and Bibliography

Example using pccp

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll in *High Speed Computer and Algorithm Organization*, ed. D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers; Academic Press, New York, third ed., 1977; part 3, pp. 179–183.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis In ed. W. V. Oz and M. Yannakakis, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pp. 133–139, Boston, 1983. The OX Association for Computing Machinery, Academic Press.

[3] L. A. Aamport, July , 1986, **41**(7), 73+.

[4] D. E. Knuth, *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second ed., 1981.

[5] J. C. Knvth The programming of computer art; Vernier Art Center, February , 1988.

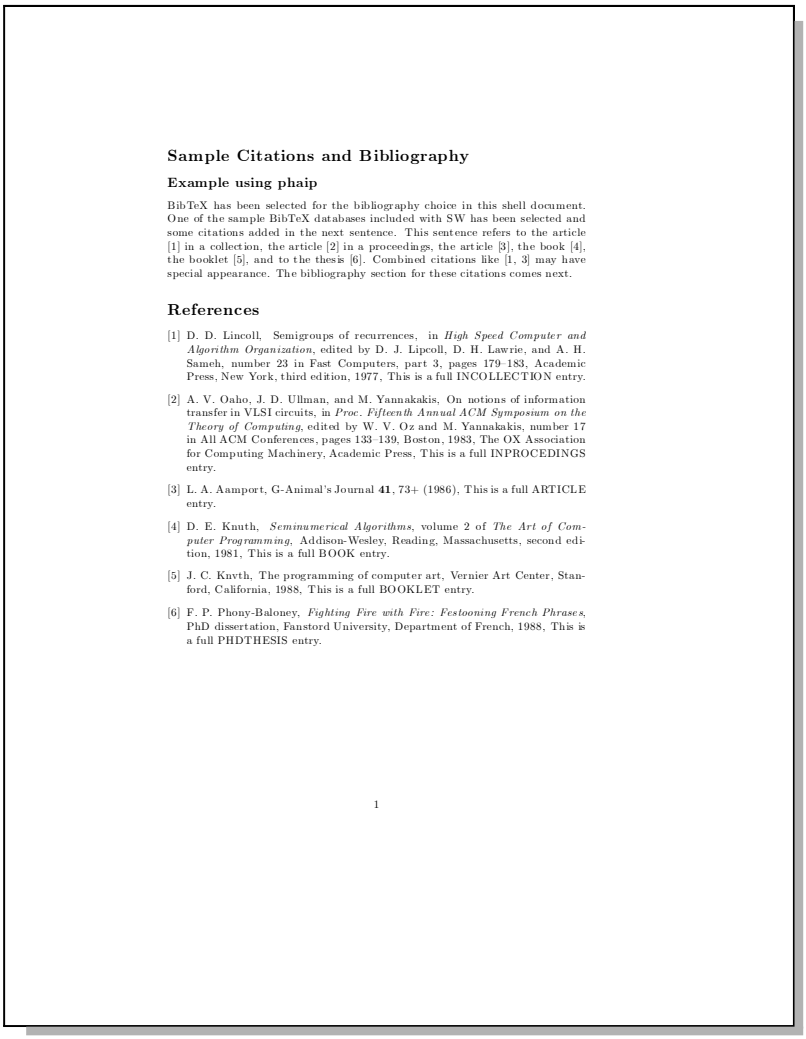
[6] F. P. Phony-Baloney *Fighting Fire with Fire: Festooning French Phrases* PhD dissertation, Fanstord University, June-August , 1988.

1

phaip.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

This BibTEX bibliography style supports the requirements of the American Institute of Physics journals.



Sample Citations and Bibliography

Example using phaip

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll, Semigroups of recurrences, in *High Speed Computer and Algorithm Organization*, edited by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers, part 3, pages 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis, On notions of information transfer in VLSI circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by W. V. Oz and M. Yannakakis, number 17 in All ACM Conferences, pages 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] L. A. Aamport, G-Animal's Journal **41**, 73+ (1986), This is a full ARTICLE entry.

[4] D. E. Knuth, *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] J. C. Knvth, The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

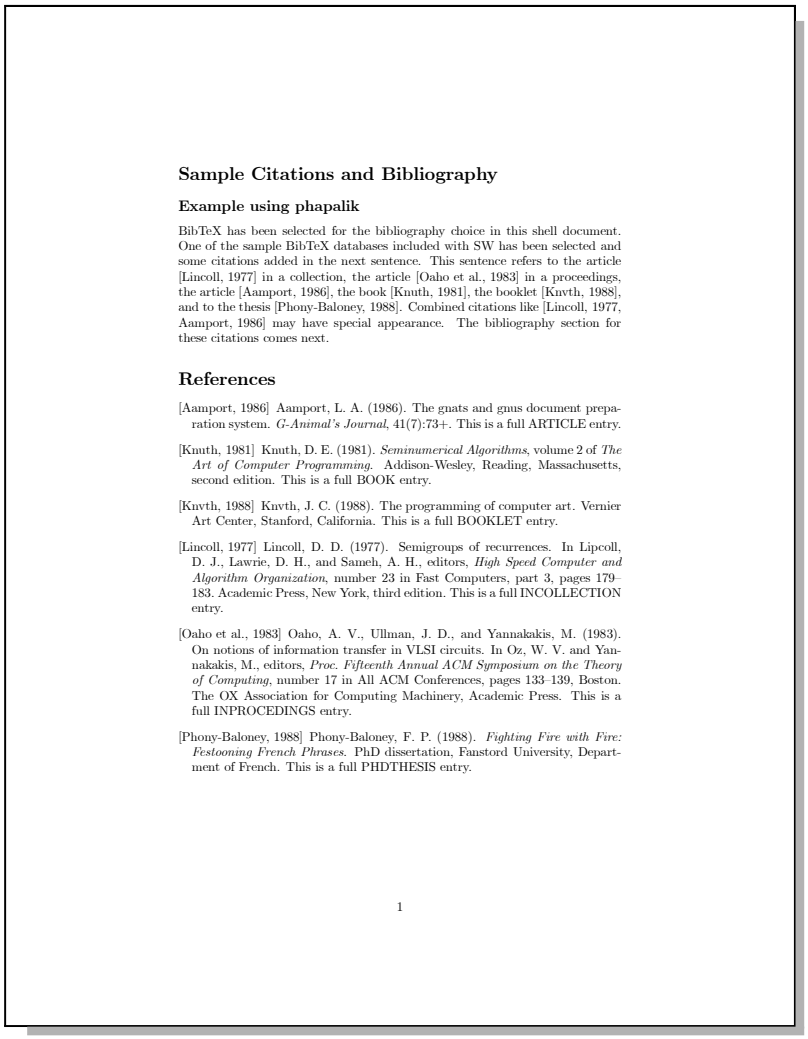
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phapalik.bst

Format of reference list label	[Author, date] [Author and Author, date] [Author et al., date]
Organization of reference list	Alphabetical by author
Format of citation	[Author, date] [Author and Author, date] [Author et al., date]
Required files	*apalike* package
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports bibliographies in the style of the American Psychological Association for various physics journals. It requires the *apalike* package.



Sample Citations and Bibliography

Example using phapalik

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho et al., 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). The programming of computer art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). Semigroups of recurrences. In Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

[Oaho et al., 1983] Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983). On notions of information transfer in VLSI circuits. In Oz, W. V. and Yannakakis, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

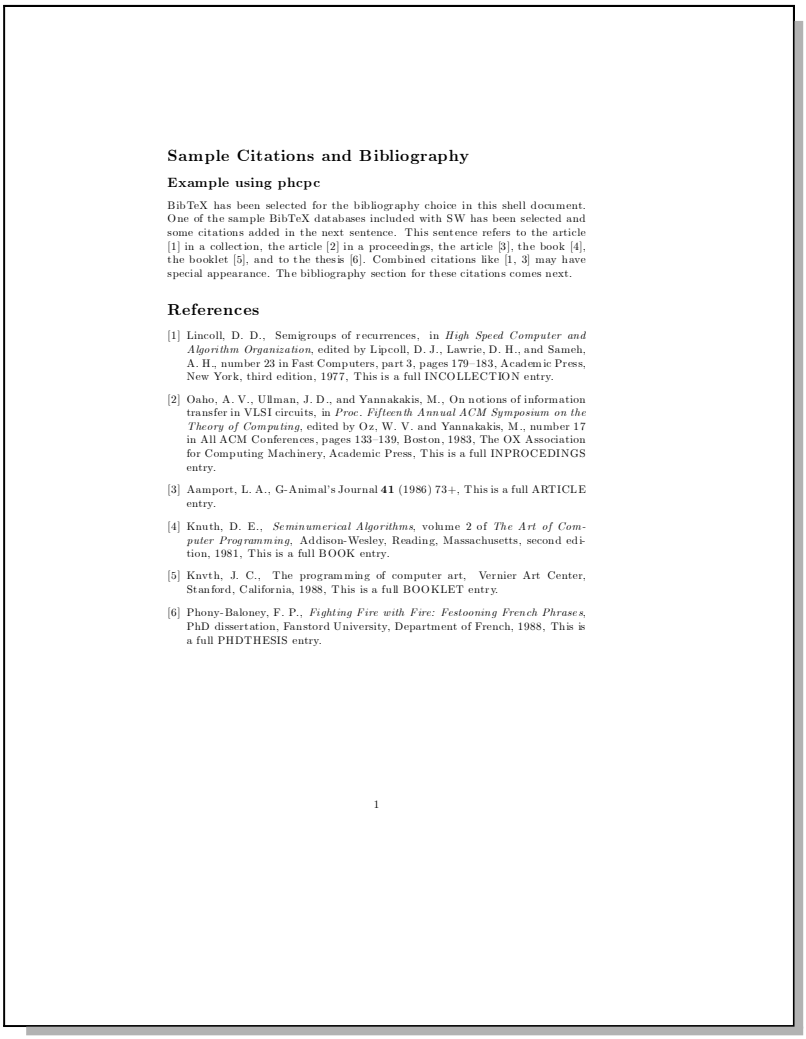
[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

phcpc.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports bibliographies for the *Computer Physics Communications*. It is similar to the style used in American Institute of Physics journals.



Sample Citations and Bibliography

Example using phcpc

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Lincoll, D. D., Semigroups of recurrences, in *High Speed Computer and Algorithm Organization*, edited by Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., number 23 in Fast Computers, part 3, pages 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] Oaho, A. V., Ullman, J. D., and Yannakakis, M., On notions of information transfer in VLSI circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by Oz, W. V. and Yannakakis, M., number 17 in All ACM Conferences, pages 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] Aamport, L. A., G-Animal's Journal **41** (1986) 73+, This is a full ARTICLE entry.

[4] Knuth, D. E., *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] Knyth, J. C., The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

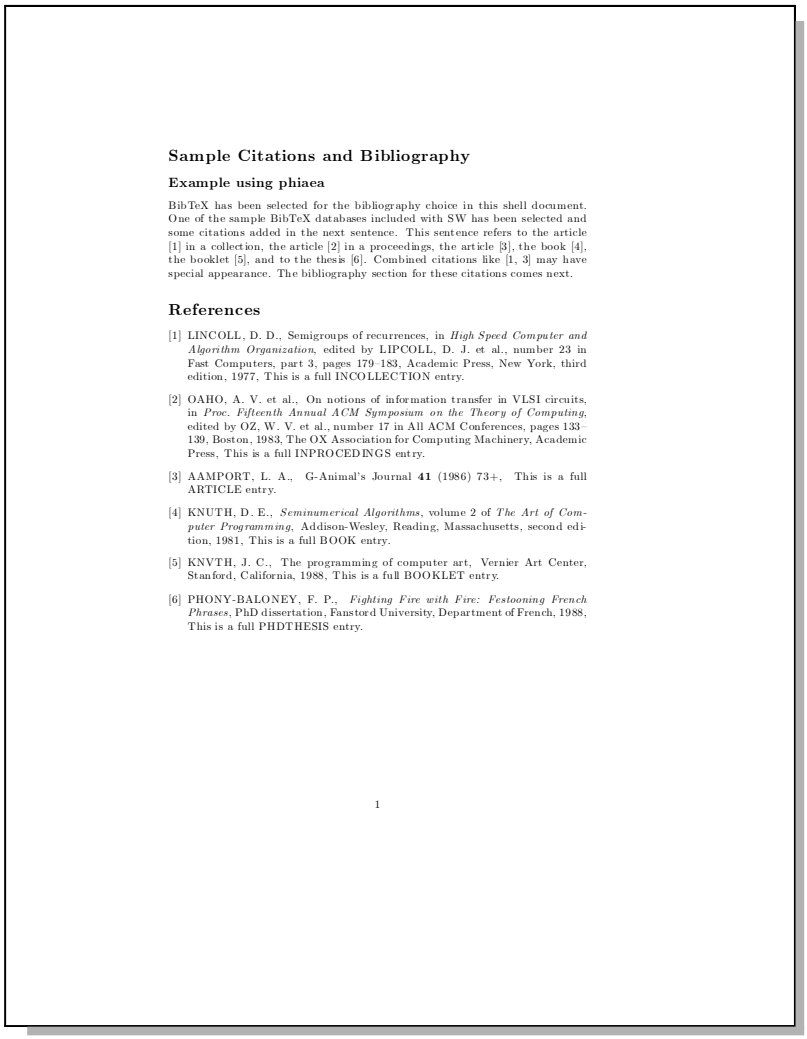
[6] Phony-Baloney, F. P., *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phiaea.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports bibliographies for physics conferences. In the reference list, authors' names are printed in capital letters.



Sample Citations and Bibliography

Example using phiaea

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] LINCOLL, D. D., Semigroups of recurrences, in *High Speed Computer and Algorithm Organization*, edited by LIPCOLL, D. J. et al., number 23 in Fast Computers, part 3, pages 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] OAHO, A. V. et al., On notions of information transfer in VLSI circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by OZ, W. V. et al., number 17 in All ACM Conferences, pages 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] AAMPORT, L. A., G-Animal's Journal **41** (1986) 73+, This is a full ARTICLE entry.

[4] KNUTH, D. E., *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] KNVTH, J. C., The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

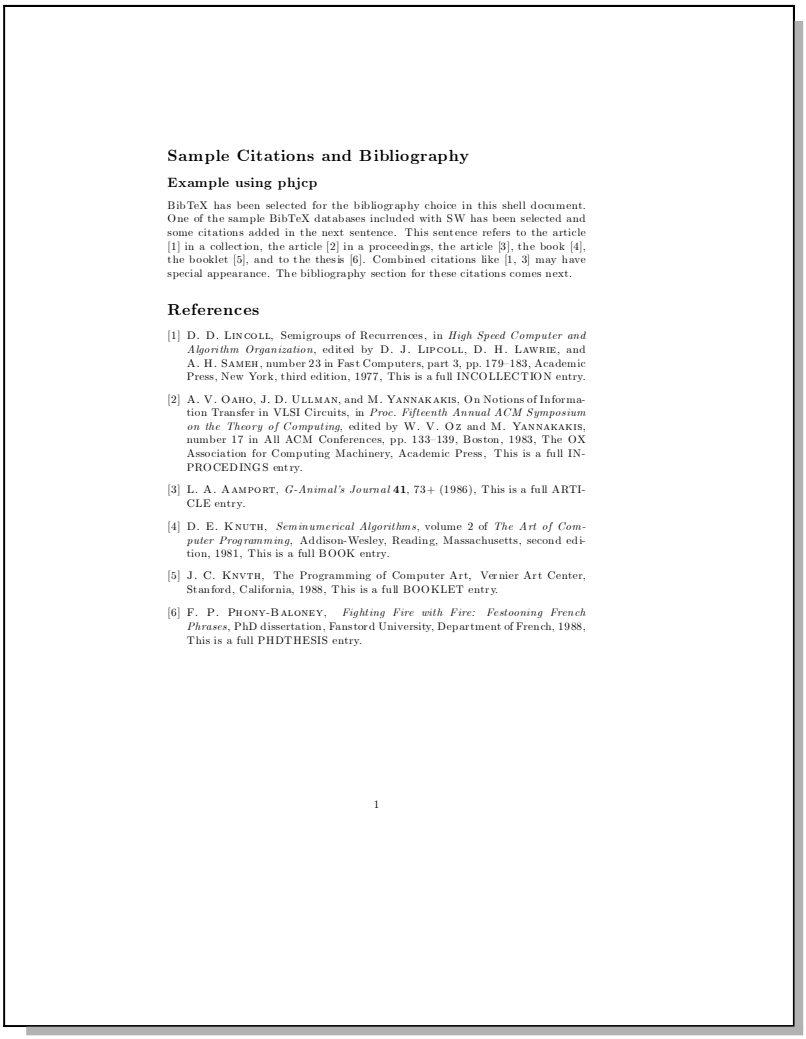
[6] PHONY-BALONEY, F. P., *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phjcp.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is for the *Journal of Computational Physics.*



Sample Citations and Bibliography

Example using phjcp

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll, Semigroups of Recurrences, in *High Speed Computer and Algorithm Organization*, edited by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers, part 3, pp. 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis, On Notions of Information Transfer in VLSI Circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by W. V. Oz and M. Yannakakis, number 17 in All ACM Conferences, pp. 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] L. A. Aamport, *G-Animal's Journal* **41**, 73+ (1986), This is a full ARTICLE entry.

[4] D. E. Knuth, *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] J. C. Knvth, The Programming of Computer Art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

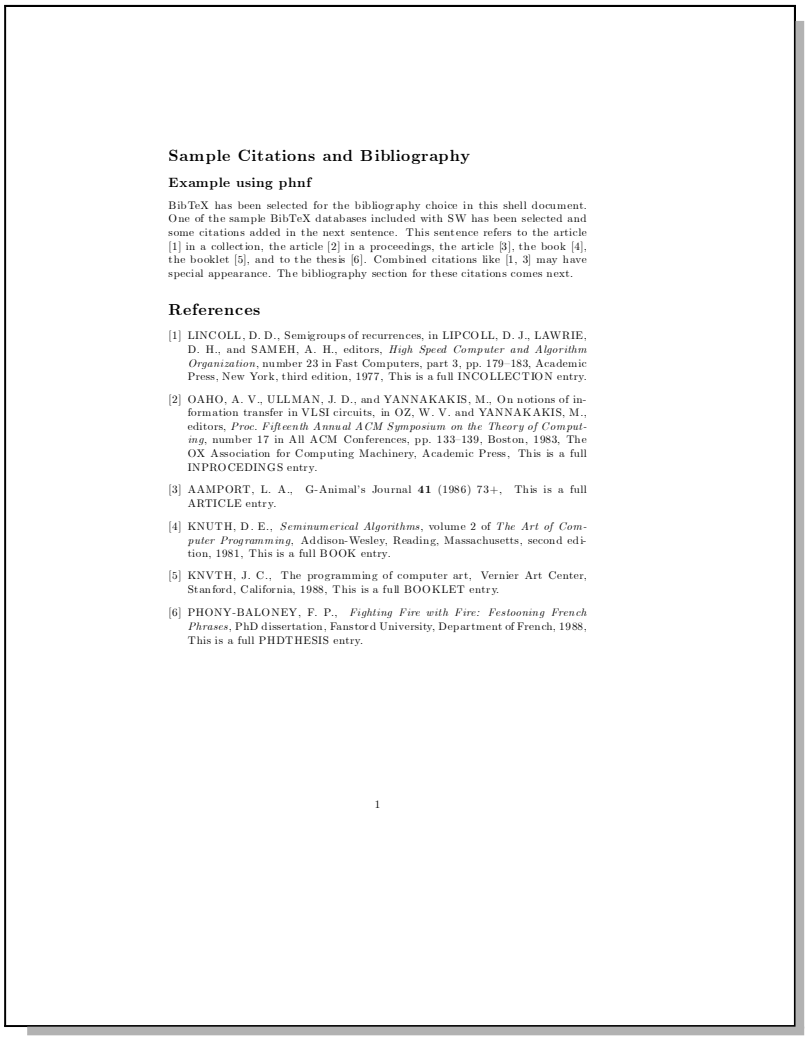
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phnf.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is for *Nuclear Fusion.* In the reference list, the style prints authors' names in capital letters. The style restricts the number of authors that can be listed for multiauthor publications.



Sample Citations and Bibliography

Example using phnf

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] LINCOLL, D. D., Semigroups of recurrences, in LIPCOLL, D. J., LAWRIE, D. H., and SAMEH, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pp. 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] OAHO, A. V., ULLMAN, J. D., and YANNAKAKIS, M., On notions of information transfer in VLSI circuits, in OZ, W. V. and YANNAKAKIS, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pp. 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] AAMPORT, L. A., G-Animal's Journal **41** (1986) 73+, This is a full ARTICLE entry.

[4] KNUTH, D. E., *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] KNVTH, J. C., The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

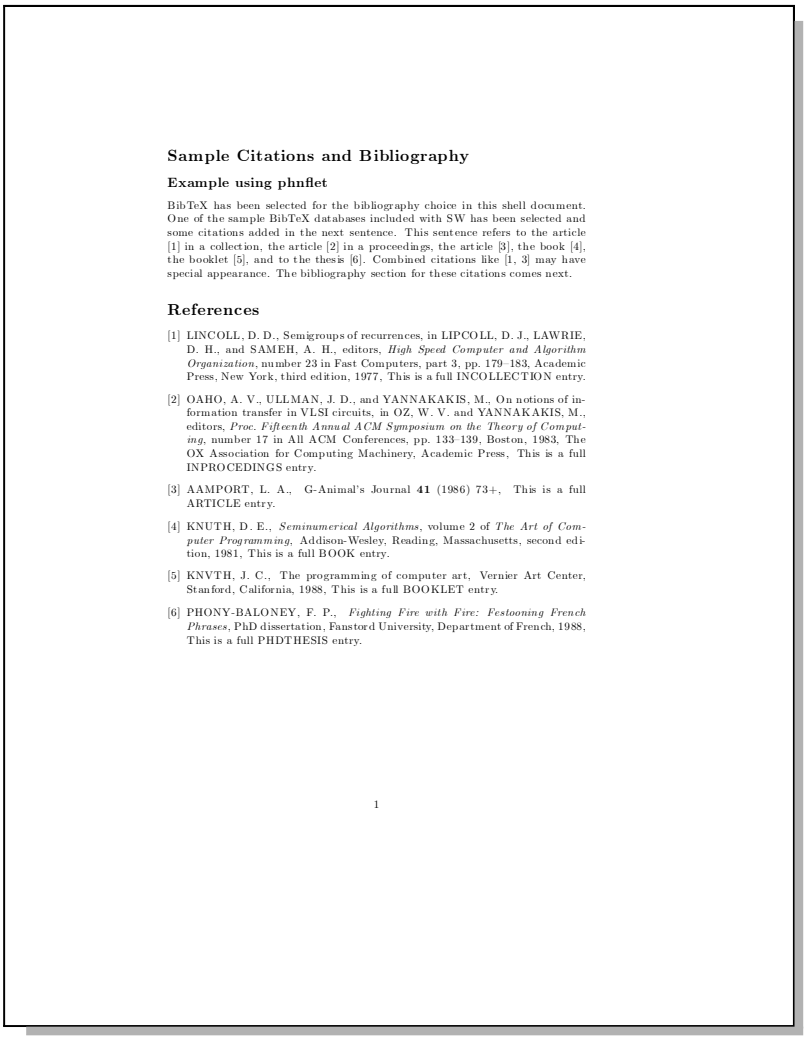
[6] PHONY-BALONEY, F. P., *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phnflet.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is for *Nuclear Fusion Letters.* In the reference list, the style prints authors' names in capital letters.



Sample Citations and Bibliography

Example using phnflet

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] LINCOLL, D. D., Semigroups of recurrences, in LIPCOLL, D. J., LAWRIE, D. H., and SAMEH, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pp. 179–183, Academic Press, New York, third edition, 1977, This is a full INCOLLECTION entry.

[2] OAHO, A. V., ULLMAN, J. D., and YANNAKAKIS, M., On notions of information transfer in VLSI circuits, in OZ, W. V. and YANNAKAKIS, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pp. 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] AAMPORT, L. A., G-Animal's Journal **41** (1986) 73+, This is a full ARTICLE entry.

[4] KNUTH, D. E., *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] KNVTH, J. C., The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

[6] PHONY-BALONEY, F. P., *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phone.bst

Format of reference list label	Name
Organization of reference list	Alphabetical
Format of citation	[Name]
Required files	*directory* package
Directory	`TCITeX/BibTeX/bst/directory`
Sample BibTeX Databases:	
`business.bib`	
`family.bib`	
`test.bib`	

The style is part of `directory`, a macro package for LaTeX and BibTeX that facilitates the construction, maintenance, and use of a database that is similar to an address book. You can use the package to construct your own address book; in this way, the package operates like ordinary BibTeX styles except that the reference list it produces contains information about companies, people, and places instead of published articles and books. You can also use the package to include information about companies, people, and places in your document; see `letter.bst` on page 507.

All styles associated with `directory` require the LaTeX *directory* package, which is available on the program CD in the directory `CTAN/biblio/bibtex/contrib/directory`. Follow the standard procedure for adding the package to your program installation. Modifications are required to use entries derived from both `directory` operations and standard bibliography operations in the same document. For more information, see the file `directory.tex` in `CTAN/biblio/bibtex/contrib/directory` on the program CD.

The `directory` styles also require the use of the `\dir{`***key***`}` command instead of the `\cite{`***key***`}` command. In your document, use TeX fields containing `\dir{`***key***`}` commands instead of standard citations, as described below. The styles support a `\nodir{`***key***`}` command, which creates a phone book with no citations in the text.

The `phone.bst` style produces a reference list containing the name, phone, and fax fields that correspond to the cited keys. It prints an abbreviated name at the citation point unless the `\nodir{`***key***`}` command is used.

► To enter a `\dir` command in a TeX field

1. Place the insertion point where you want the citation to appear.
2. From the Insert menu, choose Typeset Object and then choose TeX Field.
3. In the entry area, type **\dir{*key*}** where ***key*** is the key for the database entry you want to cite.
4. Choose OK.

The first sample shown below illustrates a phone list created with `\dir{`***key***`}` commands in the text. The second sample illustrates a phone list created using a `\nodir{*}` command without any preceding text. The samples were created using the sample databases `business.bib` and `family.bib`.

Sample Citations and Bibliography

Example using phone

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. The citations in this sentence have been created with TEX commands that replace standard citations. The phone book below contains numbers for **Knudsoft (RS.2 Computer Room)** and also for **Microknud Corp.**. It also contains listings for **Knudson D. D., Bunny B. and Pluto** and for **Knudson D. E.**. The phone book for these citations comes next.

Knudsoft (RS.2 Computer Room) phn: +01-(0)2-434.23.23

Knudson D. D., Bunny B. and Pluto *p* phn: +01-(0)2-765.43.21 gsm: +01-(0)5-555.55.55 *r* phn: +01-(0)2-876.54.32

Knudson D. E. *p* phn: +01-(0)2-234.56.78

Microknud Corp. phn: +01-(0)2-465.83.99 fax: 005.79.00

Sample Citations and Bibliography

Example using phone

.

Geuzaine C. *w* phn: +32-(0)4-366.37.10 fax: +32-(0)4-366.29.10

Knudsoft (RS.2 Computer Room) phn: +01-(0)2-434.23.23

Knudson D. D., Bunny B. and Pluto *p* phn: +01-(0)2-765.43.21 gsm: +01-(0)5-555.55.55 *r* phn: +01-(0)2-876.54.32

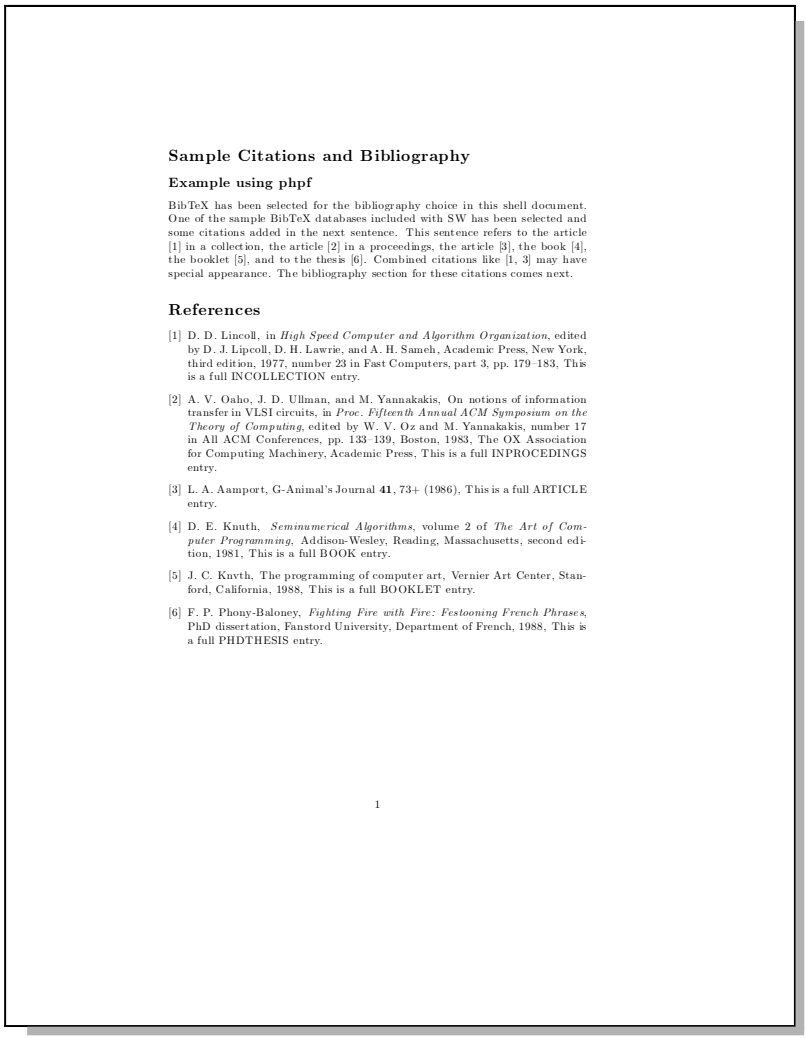
Knudson D. E. *p* phn: +01-(0)2-234.56.78

Microknud Corp. phn: +01-(0)2-465.83.99 fax: 005.79.00

phpf.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is for *Physics of Fluids*. It is similar to the style used in American Institute of Physics journals, but lists any number of authors for multiauthor publications.



Sample Citations and Bibliography

Example using phpf

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll, in *High Speed Computer and Algorithm Organization*, edited by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Academic Press, New York, third edition, 1977, number 23 in Fast Computers, part 3, pp. 179–183, This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis, On notions of information transfer in VLSI circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by W. V. Oz and M. Yannakakis, number 17 in All ACM Conferences, pp. 133–139, Boston, 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] L. A. Aamport, G-Animal's Journal **41**, 73+ (1986), This is a full ARTICLE entry.

[4] D. E. Knuth, *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 1981, This is a full BOOK entry.

[5] J. C. Knvth, The programming of computer art, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

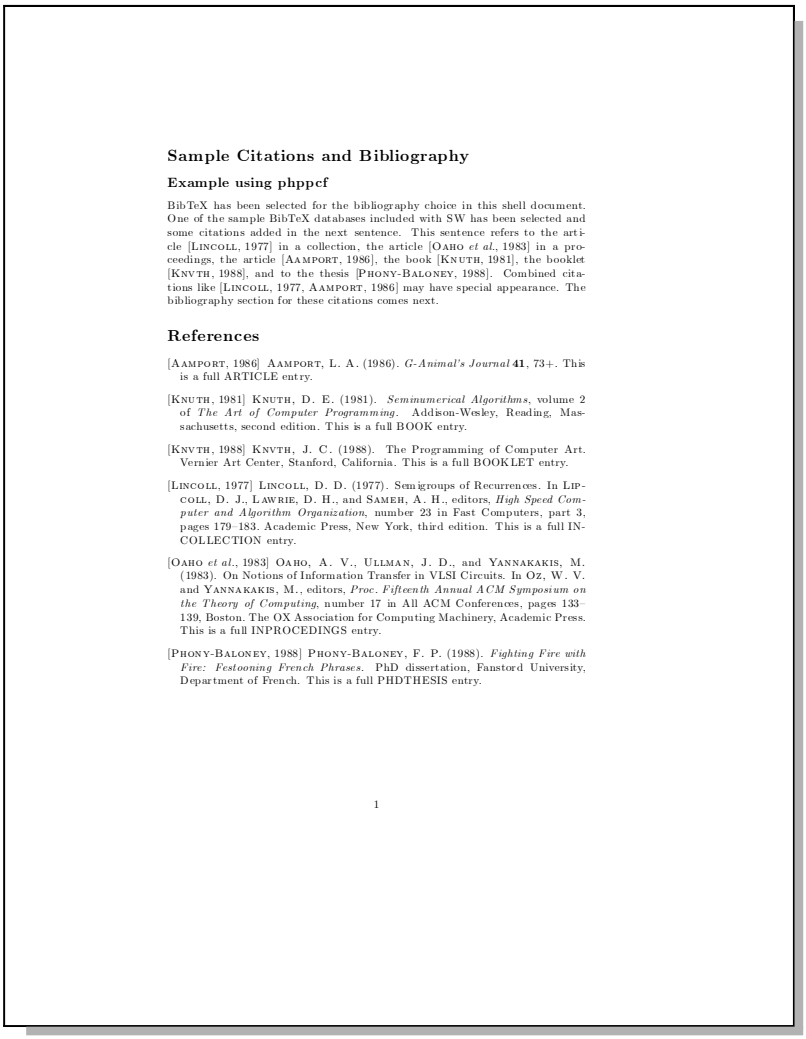
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, 1988, This is a full PHDTHESIS entry.

1

phppcf.bst

Format of reference list label	[AUTHOR, date] [AUTHOR and AUTHOR, date] [AUTHOR *et al.,* date]
Organization of reference list	In order of first citation
Format of citation	[AUTHOR, date] [AUTHOR and AUTHOR, date] [AUTHOR *et al.,* date]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is a physics version of `apalike.bst` (see page 447), which formats bibliography entries alphabetically by author, last name first. Citations in the text can include single and multiple author-date references. In citations and in the reference list, the style prints authors' names in small capitals.



Sample Citations and Bibliography

Example using phppcf

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll, 1977] in a collection, the article [Oaho *et al.*, 1983] in a proceedings, the article [Aamport, 1986], the book [Knuth, 1981], the booklet [Knvth, 1988], and to the thesis [Phony-Baloney, 1988]. Combined citations like [Lincoll, 1977, Aamport, 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport, 1986] Aamport, L. A. (1986). *G-Animal's Journal* **41**, 73+. This is a full ARTICLE entry.

[Knuth, 1981] Knuth, D. E. (1981). *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition. This is a full BOOK entry.

[Knvth, 1988] Knvth, J. C. (1988). The Programming of Computer Art. Vernier Art Center, Stanford, California. This is a full BOOKLET entry.

[Lincoll, 1977] Lincoll, D. D. (1977). Semigroups of Recurrences. In Lipcoll, D. J., Lawrie, D. H., and Sameh, A. H., editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition. This is a full INCOLLECTION entry.

[Oaho *et al.*, 1983] Oaho, A. V., Ullman, J. D., and Yannakakis, M. (1983). On Notions of Information Transfer in VLSI Circuits. In Oz, W. V. and Yannakakis, M., editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

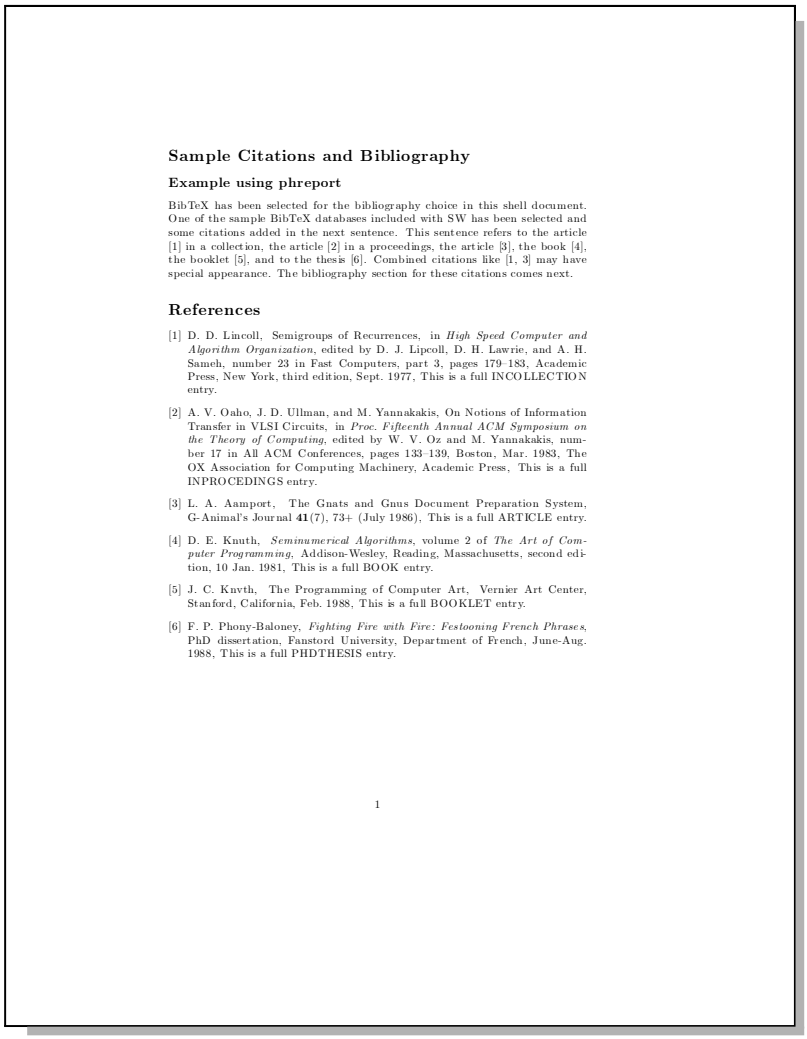
[Phony-Baloney, 1988] Phony-Baloney, F. P. (1988). *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French. This is a full PHDTHESIS entry.

1

phreport.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/beebe`

The style supports bibliographies for internal reports.



Sample Citations and Bibliography

Example using phreport

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll, Semigroups of Recurrences, in *High Speed Computer and Algorithm Organization*, edited by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers, part 3, pages 179–183, Academic Press, New York, third edition, Sept. 1977, This is a full INCOLLECTION entry.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis, On Notions of Information Transfer in VLSI Circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by W. V. Oz and M. Yannakakis, number 17 in All ACM Conferences, pages 133–139, Boston, Mar. 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

[3] L. A. Aamport, The Gnats and Gnus Document Preparation System, G-Animal's Journal **41**(7), 73+ (July 1986), This is a full ARTICLE entry.

[4] D. E. Knuth, *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 Jan. 1981, This is a full BOOK entry.

[5] J. C. Knvth, The Programming of Computer Art, Vernier Art Center, Stanford, California, Feb. 1988, This is a full BOOKLET entry.

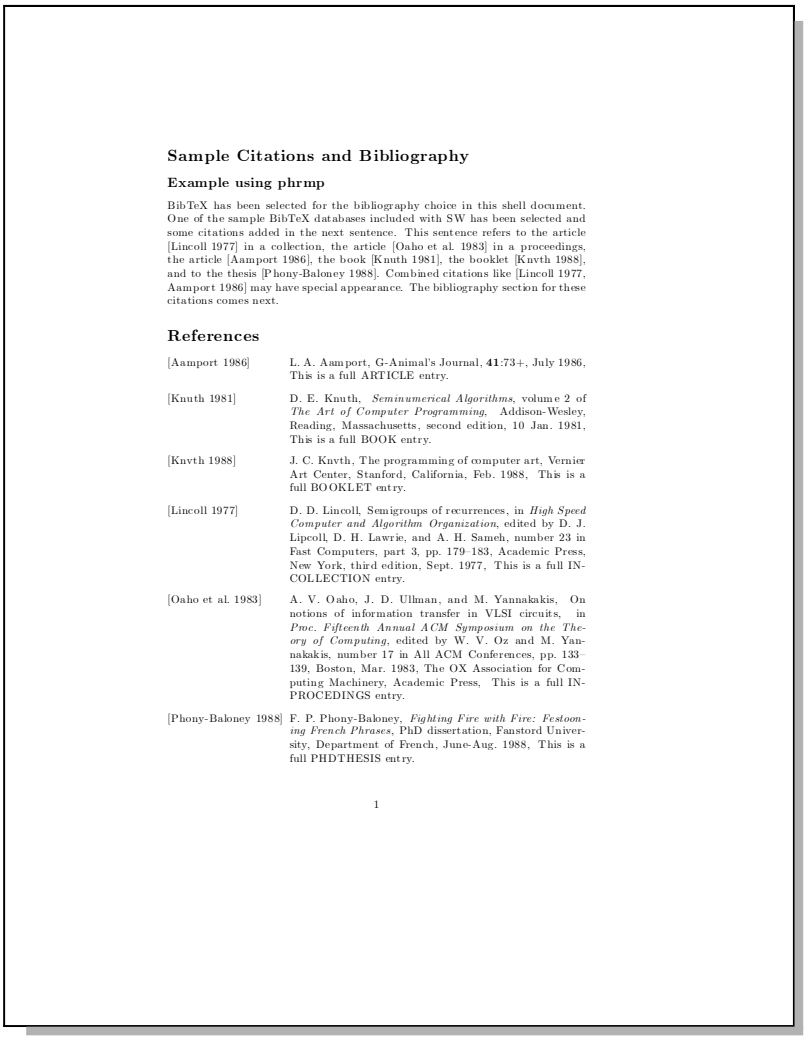
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988, This is a full PHDTHESIS entry.

1

phrmp.bst

Format of reference list label	[Author date] [Author et al. date]
Organization of reference list	Alphabetical by author
Format of citation	[Author date] [Author date, Author date] [Author et al. date]
Directory	`TCITeX/BibTeX/bst/beebe`

The style is for *Reviews of Modern Physics*. Reference list entries are indented far enough to accommodate the widest entry label.



Sample Citations and Bibliography

Example using phrmp

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lincoll 1977] in a collection, the article [Oaho et al. 1983] in a proceedings, the article [Aamport 1986], the book [Knuth 1981], the booklet [Knvth 1988], and to the thesis [Phony-Baloney 1988]. Combined citations like [Lincoll 1977, Aamport 1986] may have special appearance. The bibliography section for these citations comes next.

References

[Aamport 1986] L. A. Aamport, G-Animal's Journal, **41**:73+, July 1986, This is a full ARTICLE entry.

[Knuth 1981] D. E. Knuth, *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second edition, 10 Jan. 1981, This is a full BOOK entry.

[Knvth 1988] J. C. Knvth, The programming of computer art, Vernier Art Center, Stanford, California, Feb. 1988, This is a full BOOKLET entry.

[Lincoll 1977] D. D. Lincoll, Semigroups of recurrences, in *High Speed Computer and Algorithm Organization*, edited by D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, number 23 in Fast Computers, part 3, pp. 179–183, Academic Press, New York, third edition, Sept. 1977, This is a full INCOLLECTION entry.

[Oaho et al. 1983] A. V. Oaho, J. D. Ullman, and M. Yannakakis, On notions of information transfer in VLSI circuits, in *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, edited by W. V. Oz and M. Yannakakis, number 17 in All ACM Conferences, pp. 133–139, Boston, Mar. 1983, The OX Association for Computing Machinery, Academic Press, This is a full INPROCEDINGS entry.

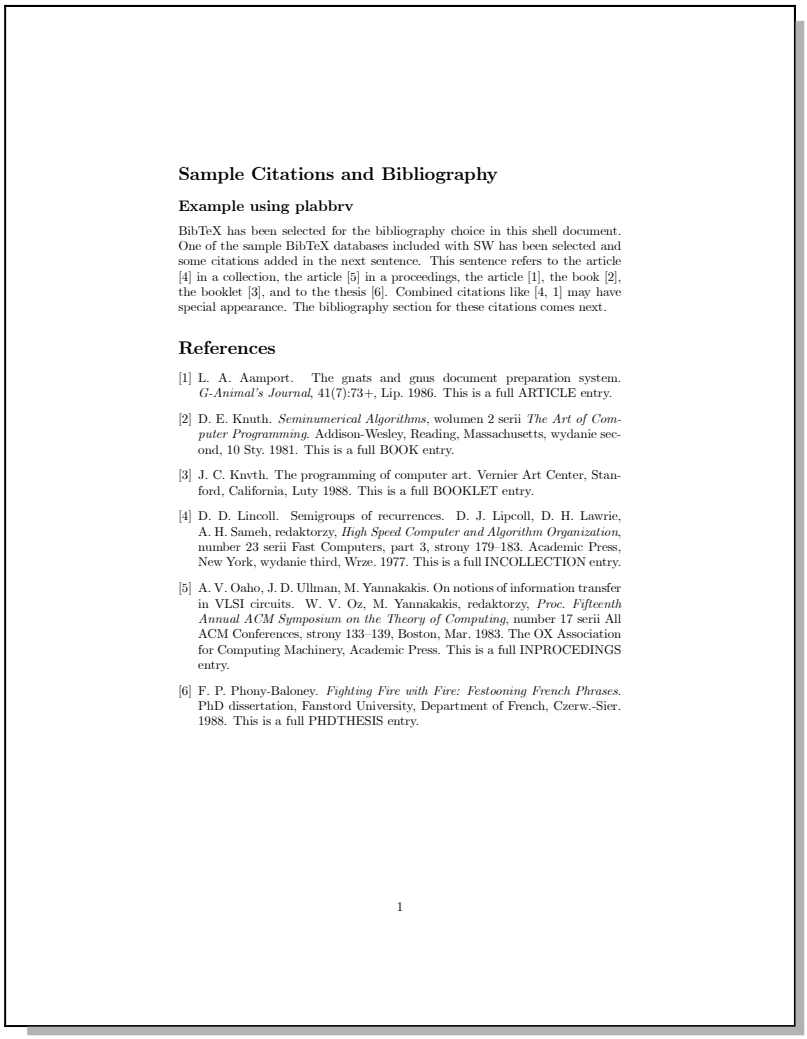
[Phony-Baloney 1988] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988, This is a full PHDTHESIS entry.

1

plabbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/plbib`
Sample BibTeX Database: `plbib.bib`	

The style is for text in Polish. Like `abbrv.bst`, this style creates compact entries by abbreviating first names, month names, and journal names. It sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using plabbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, Lip. 1986. This is a full ARTICLE entry.

[2] D. E. Knuth. *Seminumerical Algorithms*, wolumen 2 serii *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, wydanie second, 10 Sty. 1981. This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, Luty 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll. Semigroups of recurrences. D. J. Lipcoll, D. H. Lawrie, A. H. Sameh, redaktorzy, *High Speed Computer and Algorithm Organization*, number 23 serii Fast Computers, part 3, strony 179–183. Academic Press, New York, wydanie third, Wrze. 1977. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, M. Yannakakis. On notions of information transfer in VLSI circuits. W. V. Oz, M. Yannakakis, redaktorzy, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 serii All ACM Conferences, strony 133–139, Boston, Mar. 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

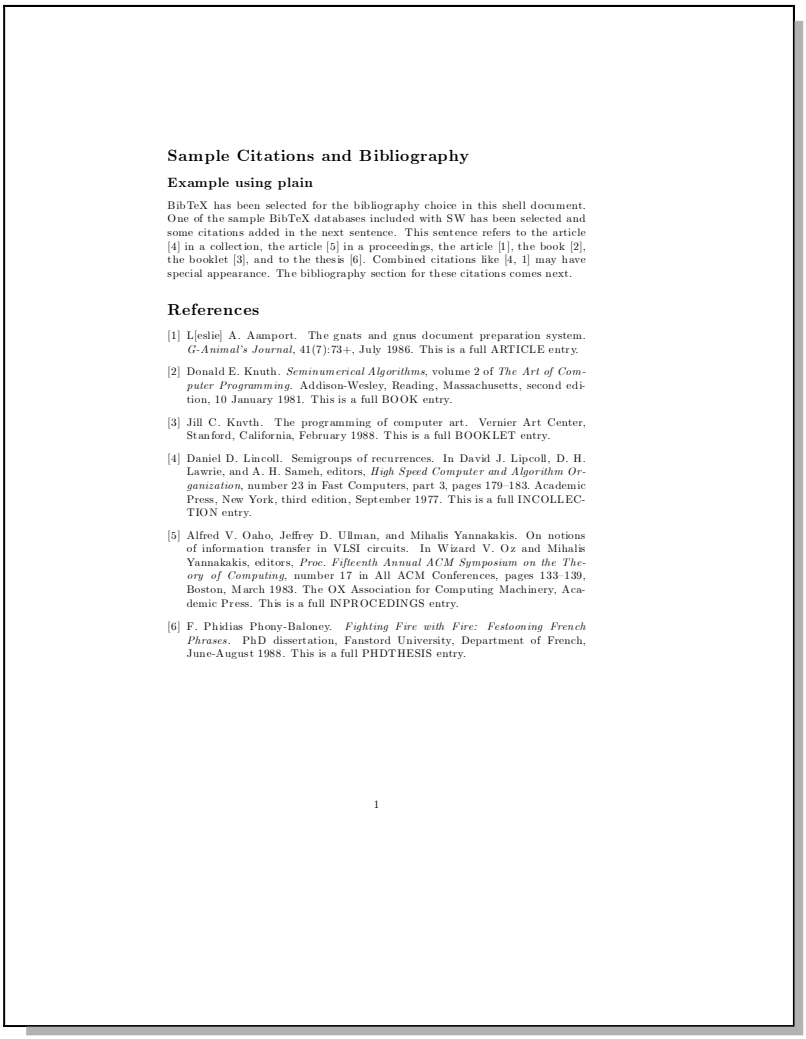
[6] F. P. Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, Czerw.-Sier. 1988. This is a full PHDTHESIS entry.

1

plain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`

One of the BibTEX standard bibliography styles, `plain.bst` creates bibliographies formatted more or less as suggested by van Leunen in *A Handbook for Scholars.* The style sorts entries alphabetically and labels them with numbers. The style is the basis for many other bibliography styles.



Sample Citations and Bibliography

Example using plain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

plainhtml.bst

Format of reference list label	[authoryear]
Organization of reference list	Alphabetical by author
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

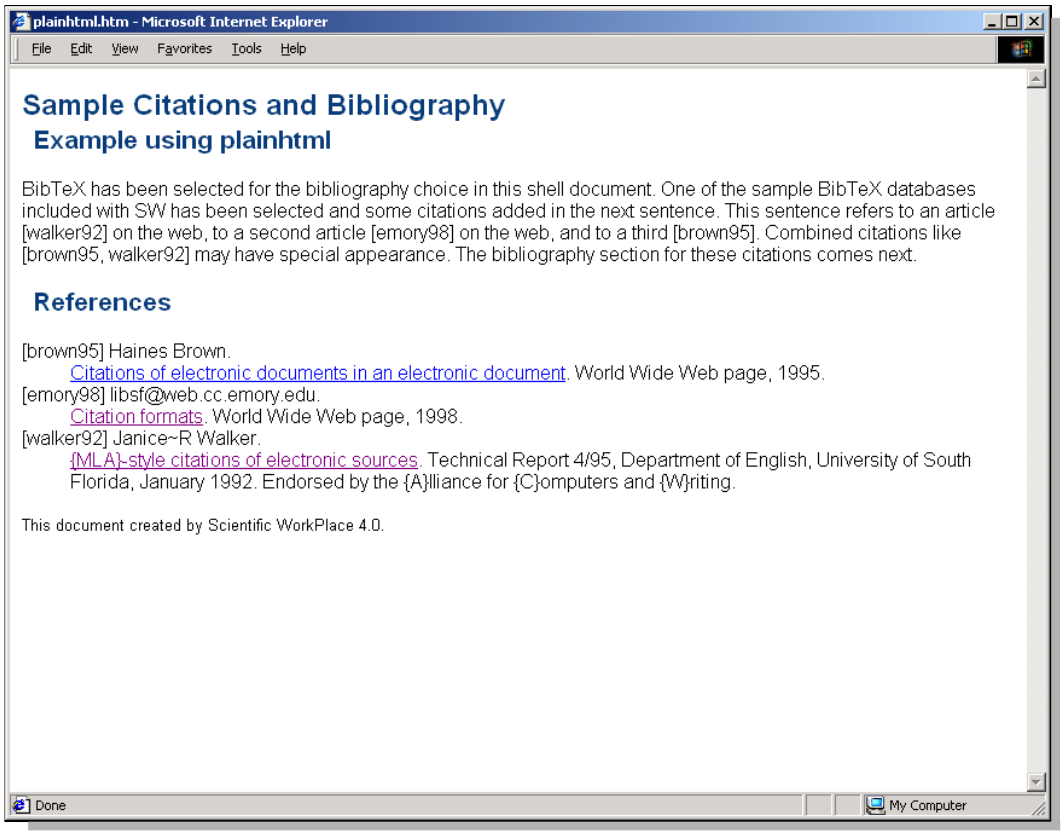
This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands <dl> and </dl>. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references. The style is based on `plain.bst`, which sorts references alphabetically. The styles `plainhtmldate.bst` and `plainhtmldater.bst` are related.

To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and to specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document according to the instructions that follow.

► **To incorporate the HTML bibliography into a document**

1. Using an ASCII editor, open the `.bbl` file created for your document.
2. Copy the contents of the file to the clipboard.
3. Open your document in *SWP* or *SW*.
4. Delete the [BIBTEX] instruction.
5. In its place, insert an HTML object:
   a. From the Insert menu, choose HTML Field.
   b. Paste the contents of the clipboard into the field.
   c. Choose OK.
6. Export the file to HTML:
   a. From the File menu, choose Export Document.
   b. Select the document.
   c. In the Save as type box, choose the HTML format you want.
   d. Choose OK.

The sample `.htm` file shown on the next page was created according to these instructions and using a modification of the sample bibliography `bibrefs.bib`.

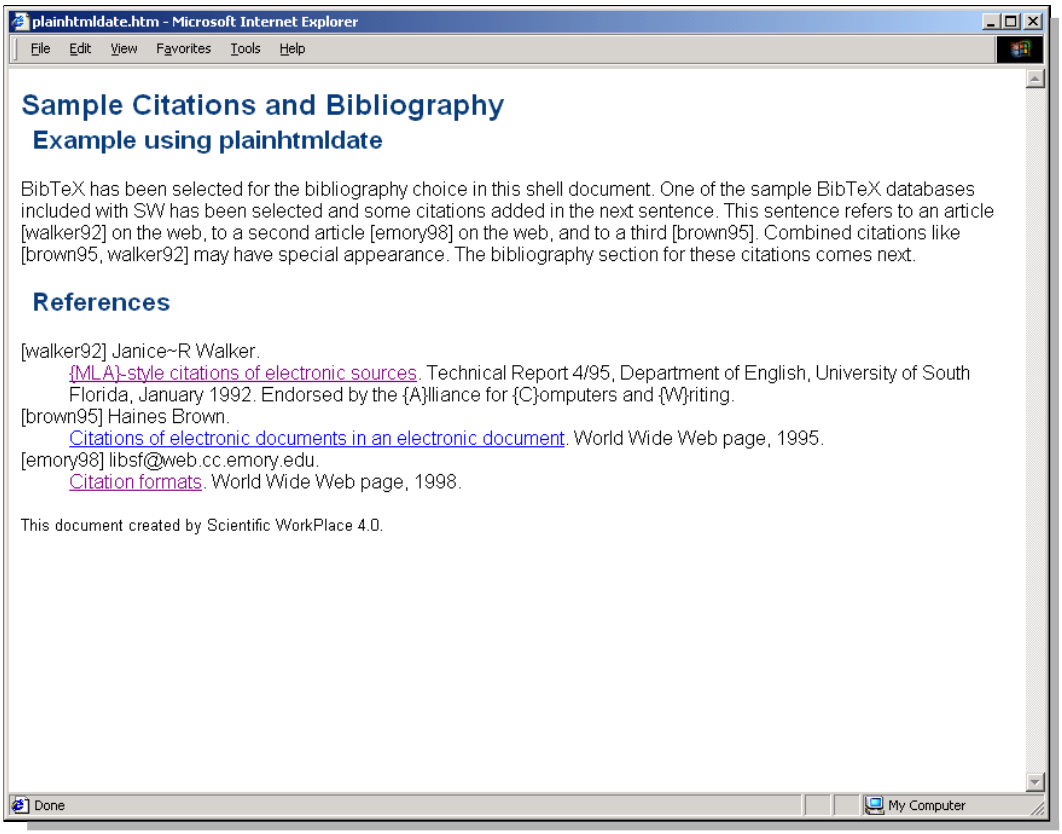

plainhtml.htm - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Sample Citations and Bibliography
Example using plainhtml
BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to an article [walker92] on the web, to a second article [emory98] on the web, and to a third [brown95]. Combined citations like [brown95, walker92] may have special appearance. The bibliography section for these citations comes next.
References
[brown95] Haines Brown.
Citations of electronic documents in an electronic document. World Wide Web page, 1995.
[emory98] libsf@web.cc.emory.edu.
Citation formats. World Wide Web page, 1998.
[walker92] Janice~R Walker.
{MLA}-style citations of electronic sources. Technical Report 4/95, Department of English, University of South Florida, January 1992. Endorsed by the {A}lliance for {C}omputers and {W}riting.
This document created by Scientific WorkPlace 4.0.
Done
My Computer

plainhtmldate.bst

Format of reference list label	[authoryear]
Organization of reference list	Chronological order
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands `<dl>` and `</dl>`. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references. The style is based on `plainhtml.bst`, but lists references in chronological order. It is related to `plainhtmldater.bst`.

To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and to specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document as described for `plainhtml.bst` on page 538. The sample `.htm` file below was created according to those instructions and using a modification of the sample bibliography `bibrefs.bib`.

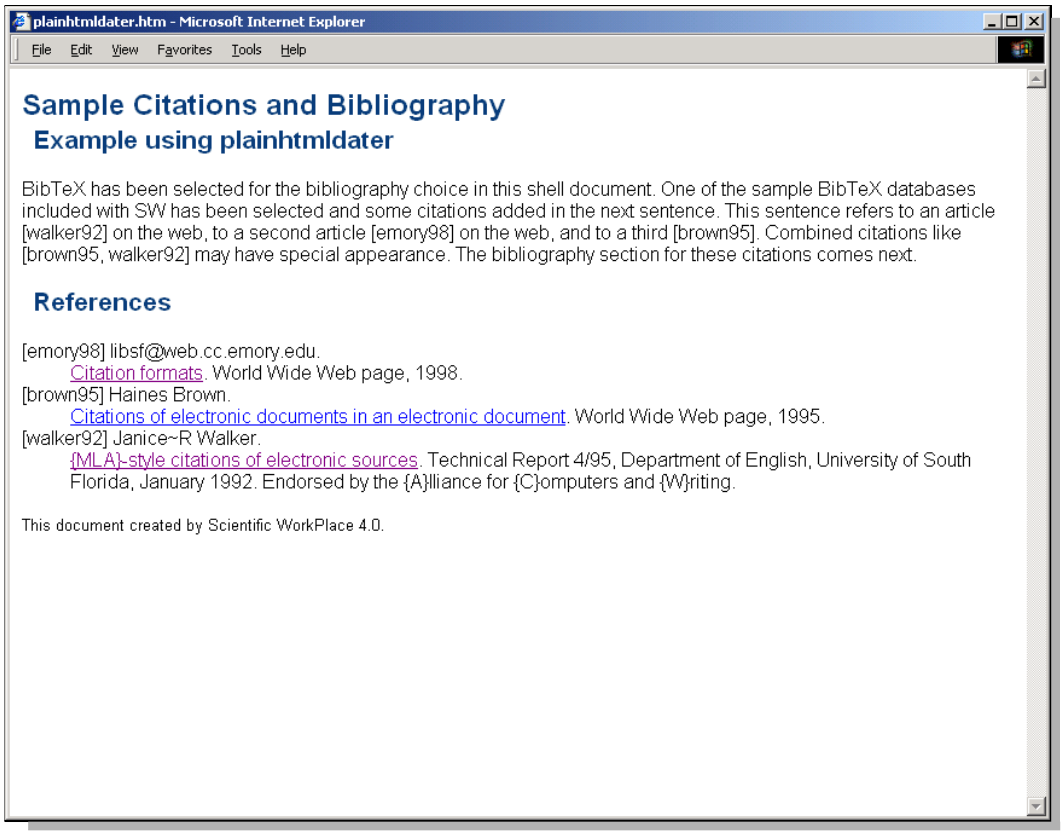


plainhtmldater.bst

Format of reference list label	[authoryear]
Organization of reference list	Reverse chronological order
Format of citation	[authoryear]
Directory	`TCITeX/BibTeX/bst/bibhtml`
Sample BibTeX Database: `bibrefs.bib`	

This style creates a reference list appropriate for use on websites. It produces the reference list as an HTML file contained within the commands `<dl>` and `</dl>`. The style supports URL fields within the bibliographic information, so that entries in the bibliography become links to the resources themselves. The resulting HTML file can be incorporated into the HTML file for the document containing the citations. The symbols ~and – remain in the output file, but can be changed with a post-processor to ` ` and `&enspace;` or `' '` and `'-'` as required. The style doesn't produce an automatic heading for the list of references. The style is based on `plainhtml.bst`, but lists references in reverse chronological order. It is related to `plainhtmldate.bst`.

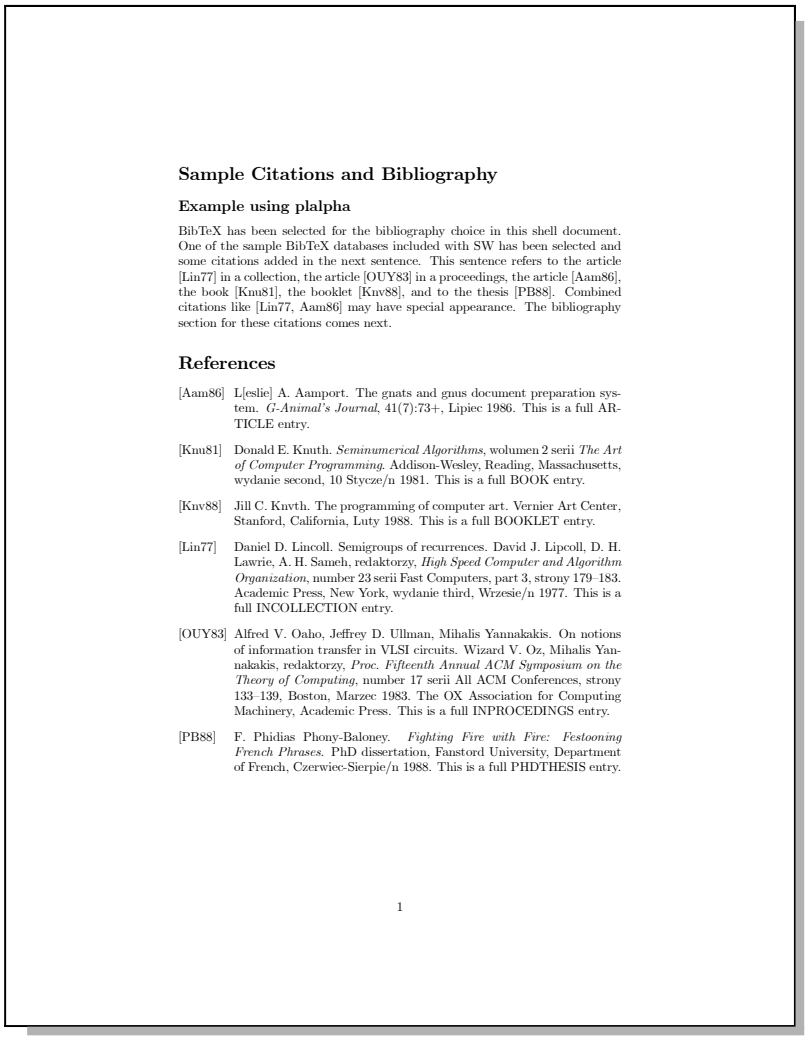
To use the style in *SWP* and *SW*, follow the standard procedure to insert citations in your document and to specify and generate a BibTeX bibliography. Then, incorporate the resulting HTML file into your document as described for `plainhtml.bst` on page 538. The sample `.htm` file below was created according to those instructions and using a modification of the sample bibliography `bibrefs.bib`.



plalpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/plbib`

The style is for text in Polish. Like `alpha.bst`, this style uses source labels such as *Knu66,* formed from the author's name and the year of publication.



Sample Citations and Bibliography

Example using plalpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, Lipiec 1986. This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. *Seminumerical Algorithms*, wolumen 2 serii *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, wydanie second, 10 Stycze/n 1981. This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, Luty 1988. This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. David J. Lipcoll, D. H. Lawrie, A. H. Sameh, redaktorzy, *High Speed Computer and Algorithm Organization*, number 23 serii Fast Computers, part 3, strony 179–183. Academic Press, New York, wydanie third, Wrzesie/n 1977. This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman, Mihalis Yannakakis. On notions of information transfer in VLSI circuits. Wizard V. Oz, Mihalis Yannakakis, redaktorzy, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 serii All ACM Conferences, strony 133–139, Boston, Marzec 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

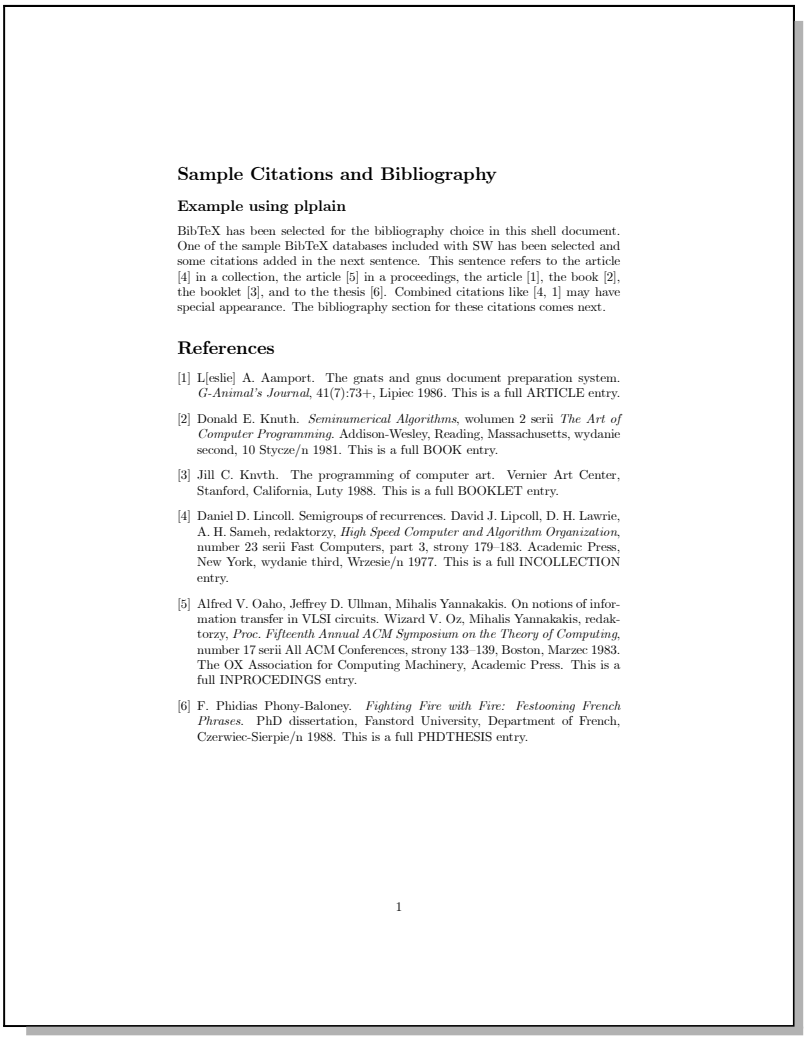
[PB88] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, Czerwiec-Sierpie/n 1988. This is a full PHDTHESIS entry.

1

plplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/plbib`
Sample BibTeX Database: `plbib.bib`	

The style is for text in Polish. Like `plain.bst`, this style sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using plplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, Lipiec 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, wolumen 2 serii *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, wydanie second, 10 Stycze/n 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, Luty 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. David J. Lipcoll, D. H. Lawrie, A. H. Sameh, redaktorzy, *High Speed Computer and Algorithm Organization*, number 23 serii Fast Computers, part 3, strony 179–183. Academic Press, New York, wydanie third, Wrzesie/n 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman, Mihalis Yannakakis. On notions of information transfer in VLSI circuits. Wizard V. Oz, Mihalis Yannakakis, redaktorzy, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 serii All ACM Conferences, strony 133–139, Boston, Marzec 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

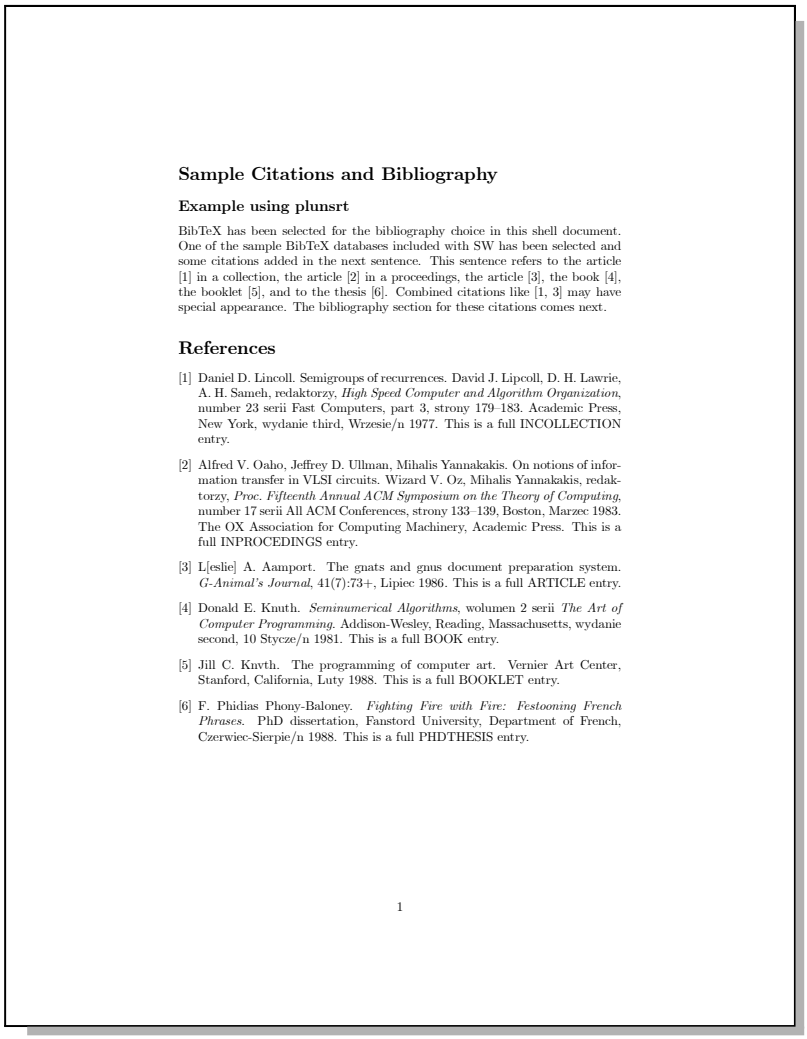
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, Czerwiec-Sierpie/n 1988. This is a full PHDTHESIS entry.

1

plunsrt.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/plbib`
Sample BibTEX Database: `plbib.bib`	

The bibliography style is for text in Polish. Like `unsrt.bst`, this style lists bibliography entries in the order of their first citation and labels them with numbers.



Sample Citations and Bibliography

Example using plunsrt

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll. Semigroups of recurrences. David J. Lipcoll, D. H. Lawrie, A. H. Sameh, redaktorzy, *High Speed Computer and Algorithm Organization*, number 23 serii Fast Computers, part 3, strony 179–183. Academic Press, New York, wydanie third, Wrzesie/n 1977. This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, Mihalis Yannakakis. On notions of information transfer in VLSI circuits. Wizard V. Oz, Mihalis Yannakakis, redaktorzy, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 serii All ACM Conferences, strony 133–139, Boston, Marzec 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, Lipiec 1986. This is a full ARTICLE entry.

[4] Donald E. Knuth. *Seminumerical Algorithms*, wolumen 2 serii *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, wydanie second, 10 Stycze/n 1981. This is a full BOOK entry.

[5] Jill C. Knyth. The programming of computer art. Vernier Art Center, Stanford, California, Luty 1988. This is a full BOOKLET entry.

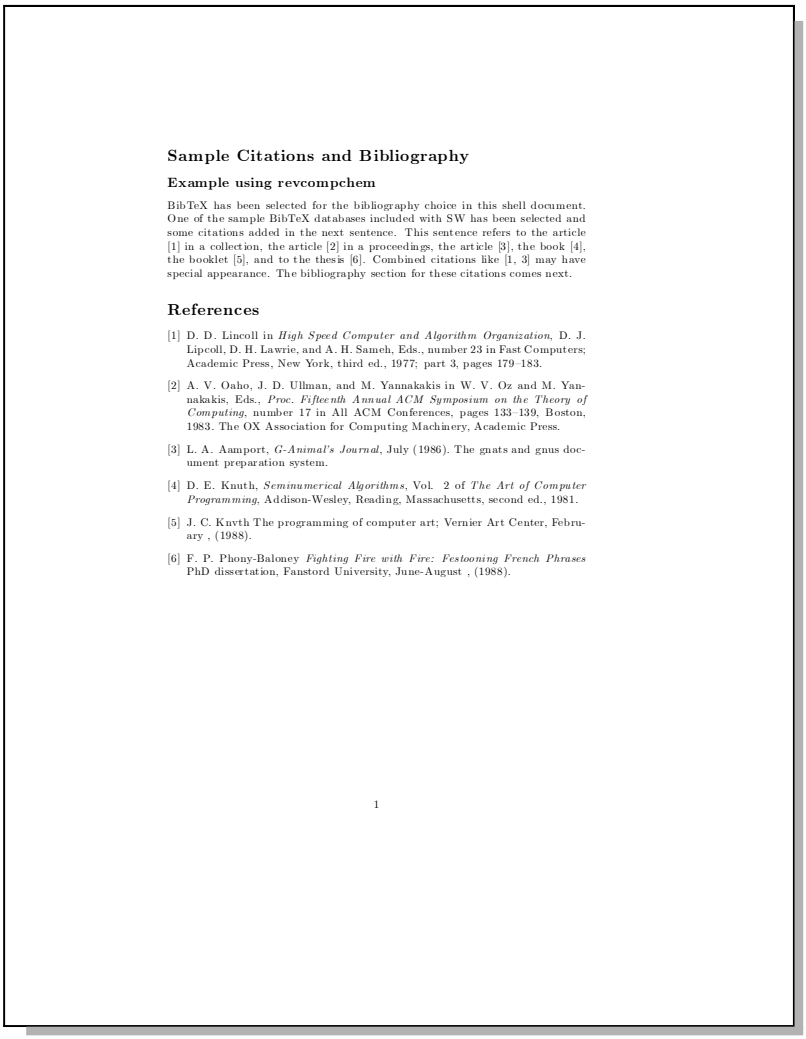
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, Czerwiec-Sierpie/n 1988. This is a full PHDTHESIS entry.

1

revcompchem.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/chem-journal`

This bibliography style is for *Reviews in Computational Chemistry.* The style omits the title of entries classified as 'article', 'book', 'inbook', and 'incollection' and omits information coded as 'note' in all entries except those classified as 'unpublished'.



Sample Citations and Bibliography

Example using revcompchem

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] D. D. Lincoll in *High Speed Computer and Algorithm Organization*, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, Eds., number 23 in Fast Computers; Academic Press, New York, third ed., 1977; part 3, pages 179–183.

[2] A. V. Oaho, J. D. Ullman, and M. Yannakakis in W. V. Oz and M. Yannakakis, Eds., *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, 1983. The OX Association for Computing Machinery, Academic Press.

[3] L. A. Aamport, *G-Animal's Journal*, July (1986). The gnats and gnus document preparation system.

[4] D. E. Knuth, *Seminumerical Algorithms*, Vol. 2 of *The Art of Computer Programming*, Addison-Wesley, Reading, Massachusetts, second ed., 1981.

[5] J. C. Knvth The programming of computer art; Vernier Art Center, February , (1988).

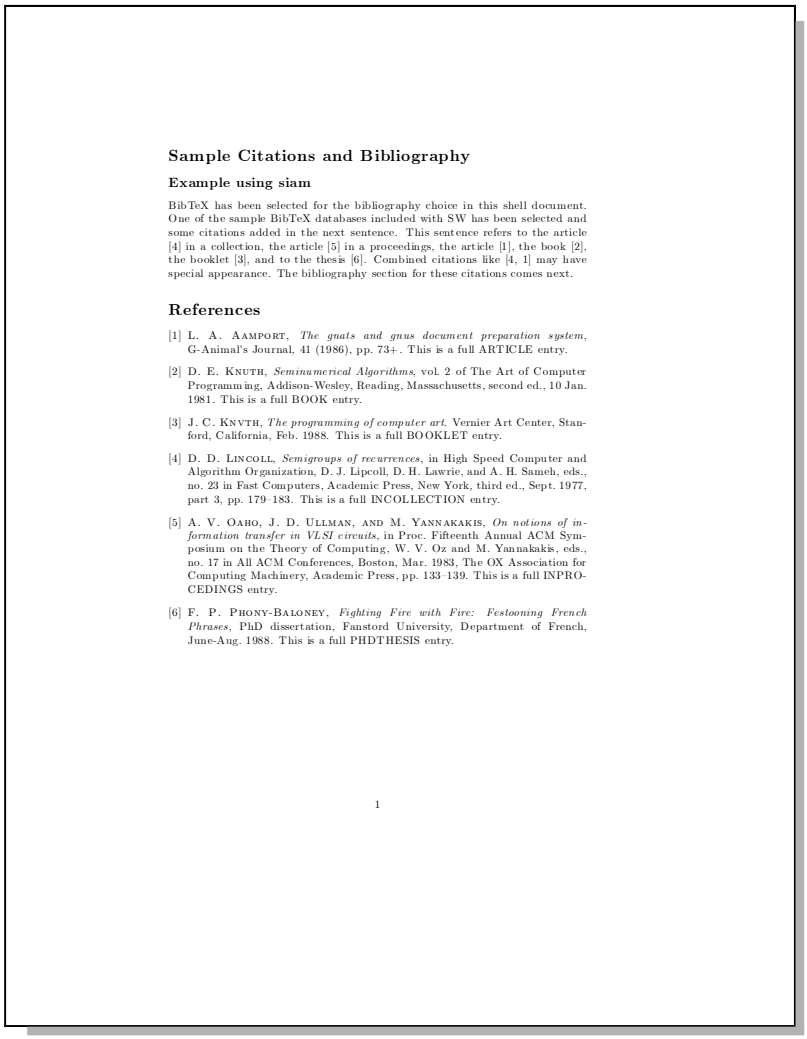
[6] F. P. Phony-Baloney *Fighting Fire with Fire: Festooning French Phrases* PhD dissertation, Fanstord University, June-August , (1988).

1

siam.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`

One of the BibTeX standard bibliography styles, `siam.bst` (24-Jan-88 version) uses the abbreviations of the *Mathematical Reviews*. The style prints authors' names in the reference list in small capitals. It prints titles in italics, with article titles in lowercase and book titles in mixed upper- and lower-case letters. Commas separate all fields except before notes.



Sample Citations and Bibliography

Example using siam

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport, *The gnats and gnus document preparation system*, G-Animal's Journal, 41 (1986), pp. 73+. This is a full ARTICLE entry.

[2] D. E. Knuth, *Seminumerical Algorithms*, vol. 2 of The Art of Computer Programming, Addison-Wesley, Reading, Massachusetts, second ed., 10 Jan. 1981. This is a full BOOK entry.

[3] J. C. Knvth, *The programming of computer art*. Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll, *Semigroups of recurrences*, in High Speed Computer and Algorithm Organization, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds., no. 23 in Fast Computers, Academic Press, New York, third ed., Sept. 1977, part 3, pp. 179–183. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis, *On notions of information transfer in VLSI circuits*, in Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, W. V. Oz and M. Yannakakis, eds., no. 17 in All ACM Conferences, Boston, Mar. 1983, The OX Association for Computing Machinery, Academic Press, pp. 133–139. This is a full INPROCEDINGS entry.

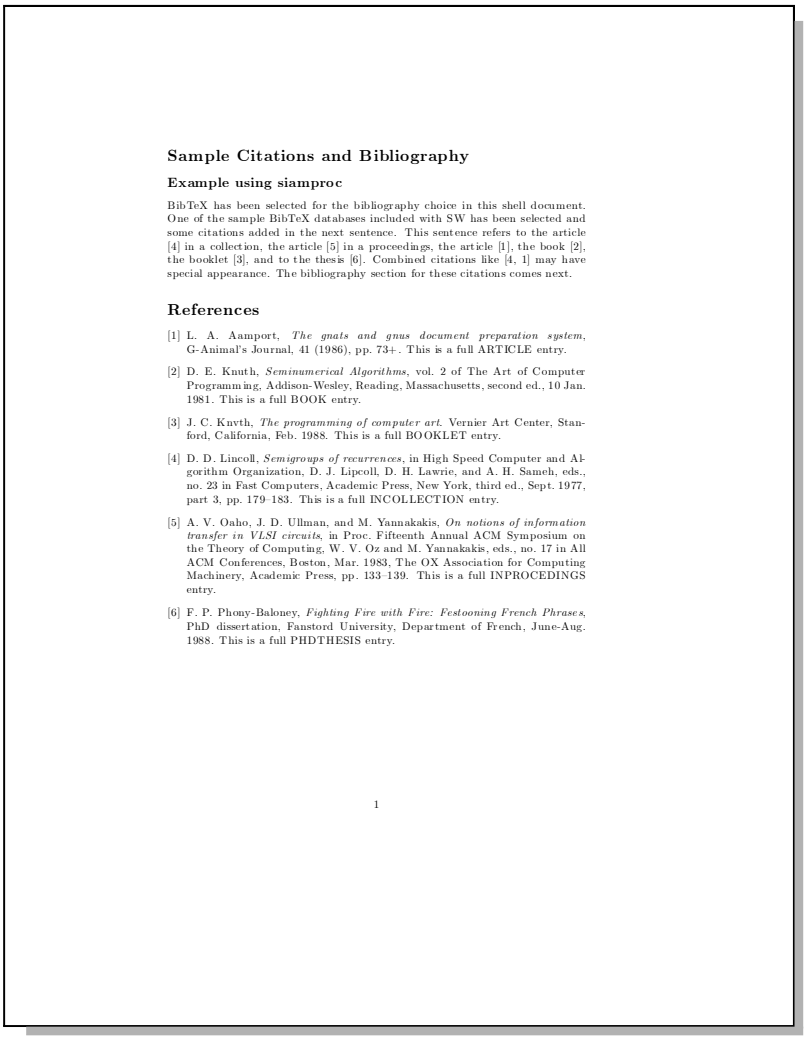
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

siamproc.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/siam`

The style is a BibTeX bibliography styles for SIAM journals. It uses the abbreviations of the *Mathematical Reviews*. The style prints titles in italics, with article titles in lowercase and book titles in mixed upper- and lowercase letters.



Sample Citations and Bibliography

Example using siamproc

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport, *The gnats and gnus document preparation system*, G-Animal's Journal, 41 (1986), pp. 73+. This is a full ARTICLE entry.

[2] D. E. Knuth, *Seminumerical Algorithms*, vol. 2 of The Art of Computer Programming, Addison-Wesley, Reading, Massachusetts, second ed., 10 Jan. 1981. This is a full BOOK entry.

[3] J. C. Knvth, *The programming of computer art*. Vernier Art Center, Stanford, California, Feb. 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll, *Semigroups of recurrences*, in High Speed Computer and Algorithm Organization, D. J. Lipcoll, D. H. Lawrie, and A. H. Sameh, eds., no. 23 in Fast Computers, Academic Press, New York, third ed., Sept. 1977, part 3, pp. 179–183. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman, and M. Yannakakis, *On notions of information transfer in VLSI circuits*, in Proc. Fifteenth Annual ACM Symposium on the Theory of Computing, W. V. Oz and M. Yannakakis, eds., no. 17 in All ACM Conferences, Boston, Mar. 1983, The OX Association for Computing Machinery, Academic Press, pp. 133–139. This is a full INPROCEDINGS entry.

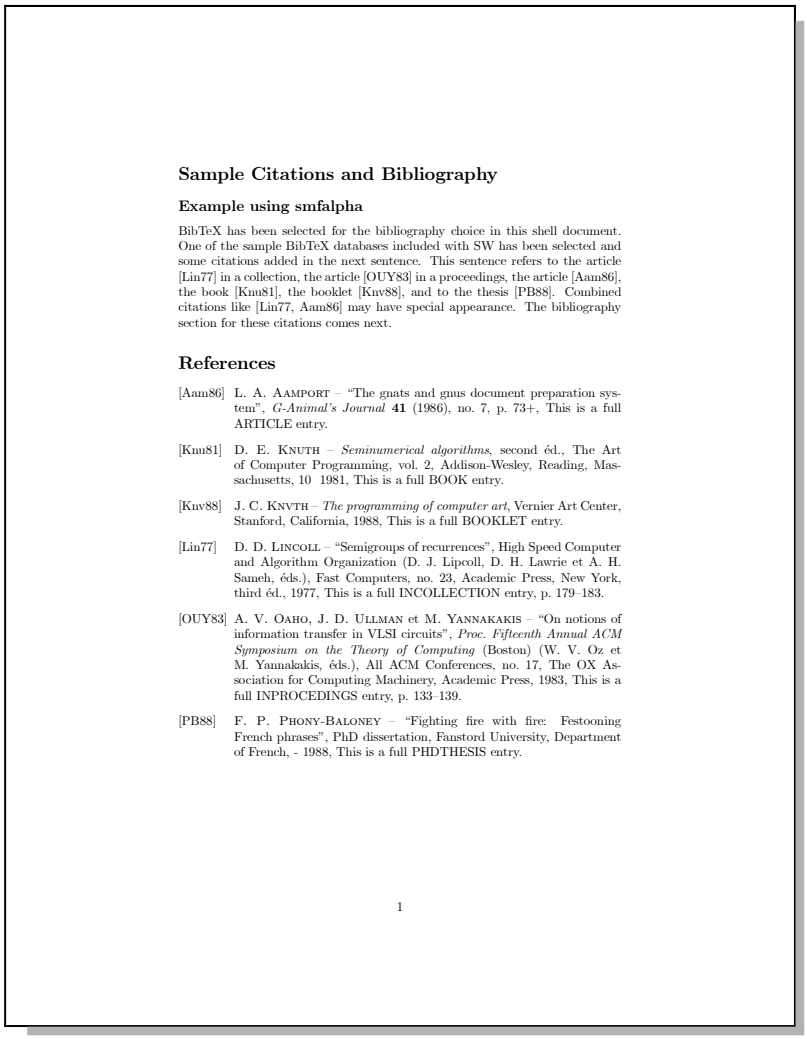
[6] F. P. Phony-Baloney, *Fighting Fire with Fire: Festooning French Phrases*, PhD dissertation, Fanstord University, Department of French, June-Aug. 1988. This is a full PHDTHESIS entry.

1

smfalpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/smflatex`

The style was designed for the Société Mathématique de France. It uses source labels such as *Knu66,* formed from the author's name and the year of publication. The style sorts entries alphabetically and prints authors' names in small capitals in the reference list.



Sample Citations and Bibliography

Example using smfalpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L. A. Aamport – "The gnats and gnus document preparation system", *G-Animal's Journal* **41** (1986), no. 7, p. 73+, This is a full ARTICLE entry.

[Knu81] D. E. Knuth – *Seminumerical algorithms*, second éd., The Art of Computer Programming, vol. 2, Addison-Wesley, Reading, Massachusetts, 10 1981, This is a full BOOK entry.

[Knv88] J. C. Knvth – *The programming of computer art*, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

[Lin77] D. D. Lincoll – "Semigroups of recurrences", High Speed Computer and Algorithm Organization (D. J. Lipcoll, D. H. Lawrie et A. H. Sameh, éds.), Fast Computers, no. 23, Academic Press, New York, third éd., 1977, This is a full INCOLLECTION entry, p. 179–183.

[OUY83] A. V. Oaho, J. D. Ullman et M. Yannakakis – "On notions of information transfer in VLSI circuits", *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* (Boston) (W. V. Oz et M. Yannakakis, éds.), All ACM Conferences, no. 17, The OX Association for Computing Machinery, Academic Press, 1983, This is a full INPROCEDINGS entry, p. 133–139.

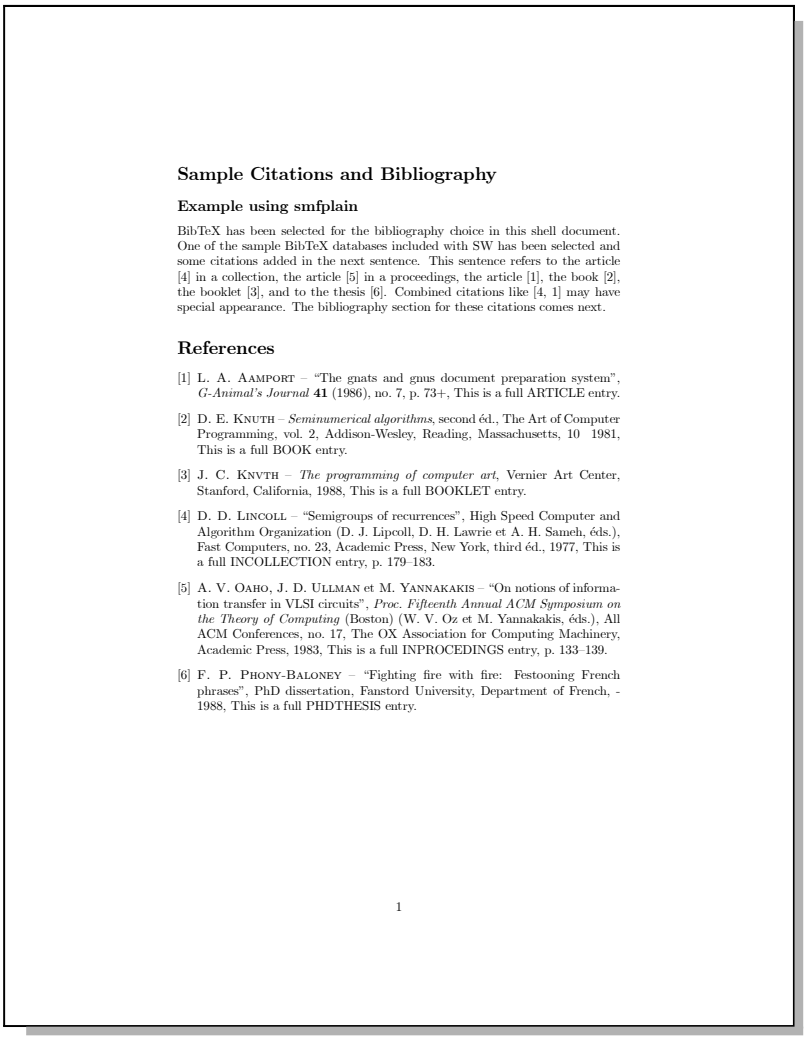
[PB88] F. P. Phony-Baloney – "Fighting fire with fire: Festooning French phrases", PhD dissertation, Fanstord University, Department of French, - 1988, This is a full PHDTHESIS entry.

1

smfplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/smflatex`

The style was designed for the Société Mathématique de France. The style prints authors' names in small capitals in the reference list.



Sample Citations and Bibliography

Example using smfplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport – "The gnats and gnus document preparation system", *G-Animal's Journal* **41** (1986), no. 7, p. 73+, This is a full ARTICLE entry.

[2] D. E. Knuth – *Seminumerical algorithms*, second éd., The Art of Computer Programming, vol. 2, Addison-Wesley, Reading, Massachusetts, 10 1981, This is a full BOOK entry.

[3] J. C. Knvth – *The programming of computer art*, Vernier Art Center, Stanford, California, 1988, This is a full BOOKLET entry.

[4] D. D. Lincoll – "Semigroups of recurrences", High Speed Computer and Algorithm Organization (D. J. Lipcoll, D. H. Lawrie et A. H. Sameh, éds.), Fast Computers, no. 23, Academic Press, New York, third éd., 1977, This is a full INCOLLECTION entry, p. 179–183.

[5] A. V. Oaho, J. D. Ullman et M. Yannakakis – "On notions of information transfer in VLSI circuits", *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing* (Boston) (W. V. Oz et M. Yannakakis, éds.), All ACM Conferences, no. 17, The OX Association for Computing Machinery, Academic Press, 1983, This is a full INPROCEDINGS entry, p. 133–139.

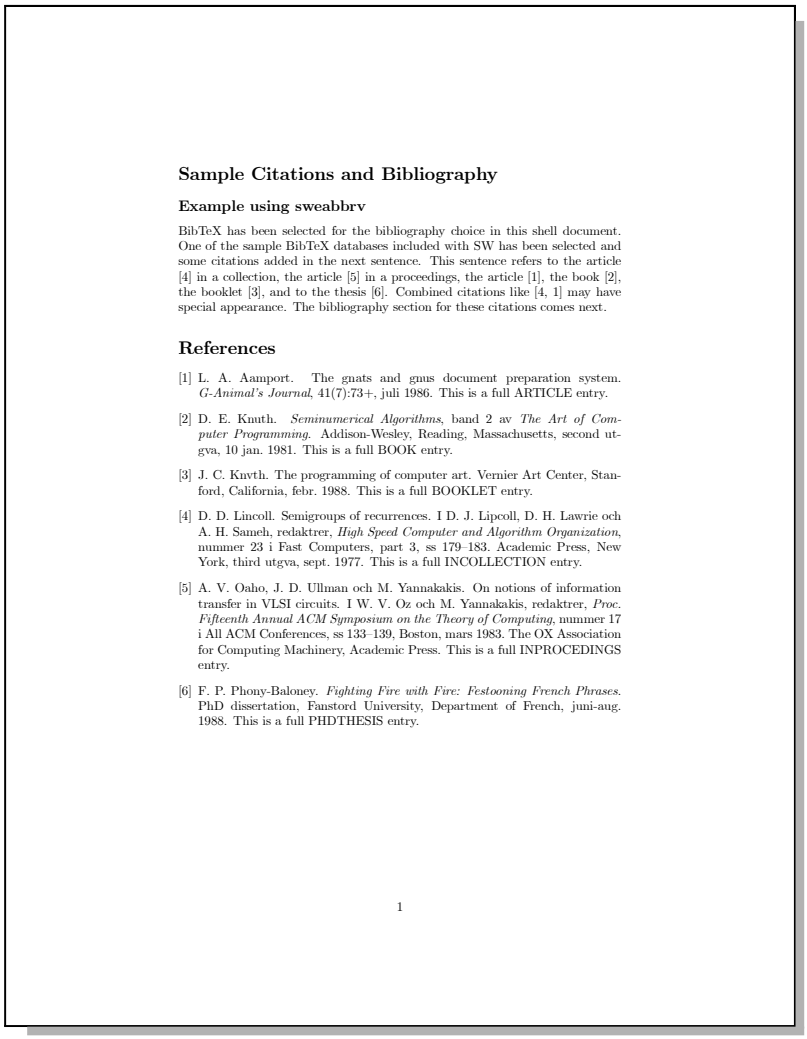
[6] F. P. Phony-Baloney – "Fighting fire with fire: Festooning French phrases", PhD dissertation, Fanstord University, Department of French, -1988, This is a full PHDTHESIS entry.

1

sweabbrv.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/swebib`

The style is the Swedish version of BibTeX standard bibliography style `abbrv.bst`, which creates compact entries by abbreviating first names, month names, and journal names.



Sample Citations and Bibliography

Example using sweabbrv

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L. A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, juli 1986. This is a full ARTICLE entry.

[2] D. E. Knuth. *Seminumerical Algorithms*, band 2 av *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second utgva, 10 jan. 1981. This is a full BOOK entry.

[3] J. C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, febr. 1988. This is a full BOOKLET entry.

[4] D. D. Lincoll. Semigroups of recurrences. I D. J. Lipcoll, D. H. Lawrie och A. H. Sameh, redaktrer, *High Speed Computer and Algorithm Organization*, nummer 23 i Fast Computers, part 3, ss 179–183. Academic Press, New York, third utgva, sept. 1977. This is a full INCOLLECTION entry.

[5] A. V. Oaho, J. D. Ullman och M. Yannakakis. On notions of information transfer in VLSI circuits. I W. V. Oz och M. Yannakakis, redaktrer, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, nummer 17 i All ACM Conferences, ss 133–139, Boston, mars 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

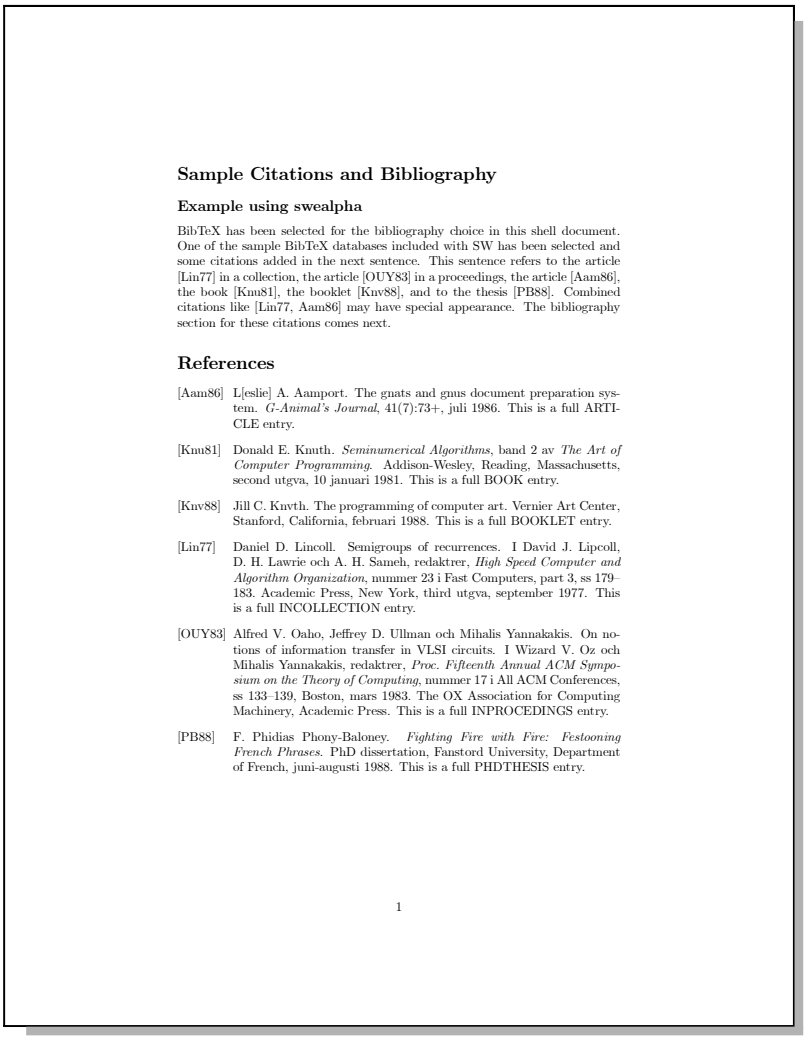
[6] F. P. Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, juni-aug. 1988. This is a full PHDTHESIS entry.

1

swealpha.bst

Format of reference list label	[Source label]
Organization of reference list	Alphabetical by author
Format of citation	[Source label]
Directory	`TCITeX/BibTeX/bst/swebib`

The style is the Swedish version of BibTeX standard bibliography style `alpha.bst`, which uses source labels such as *Knu66,* formed from the author's name and the year of publication, and sorts entries alphabetically.



Sample Citations and Bibliography

Example using swealpha

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [Lin77] in a collection, the article [OUY83] in a proceedings, the article [Aam86], the book [Knu81], the booklet [Knv88], and to the thesis [PB88]. Combined citations like [Lin77, Aam86] may have special appearance. The bibliography section for these citations comes next.

References

[Aam86] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, juli 1986. This is a full ARTICLE entry.

[Knu81] Donald E. Knuth. *Seminumerical Algorithms*, band 2 av *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second utgva, 10 januari 1981. This is a full BOOK entry.

[Knv88] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, februari 1988. This is a full BOOKLET entry.

[Lin77] Daniel D. Lincoll. Semigroups of recurrences. I David J. Lipcoll, D. H. Lawrie och A. H. Sameh, redaktrer, *High Speed Computer and Algorithm Organization*, nummer 23 i Fast Computers, part 3, ss 179–183. Academic Press, New York, third utgva, september 1977. This is a full INCOLLECTION entry.

[OUY83] Alfred V. Oaho, Jeffrey D. Ullman och Mihalis Yannakakis. On notions of information transfer in VLSI circuits. I Wizard V. Oz och Mihalis Yannakakis, redaktrer, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, nummer 17 i All ACM Conferences, ss 133–139, Boston, mars 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

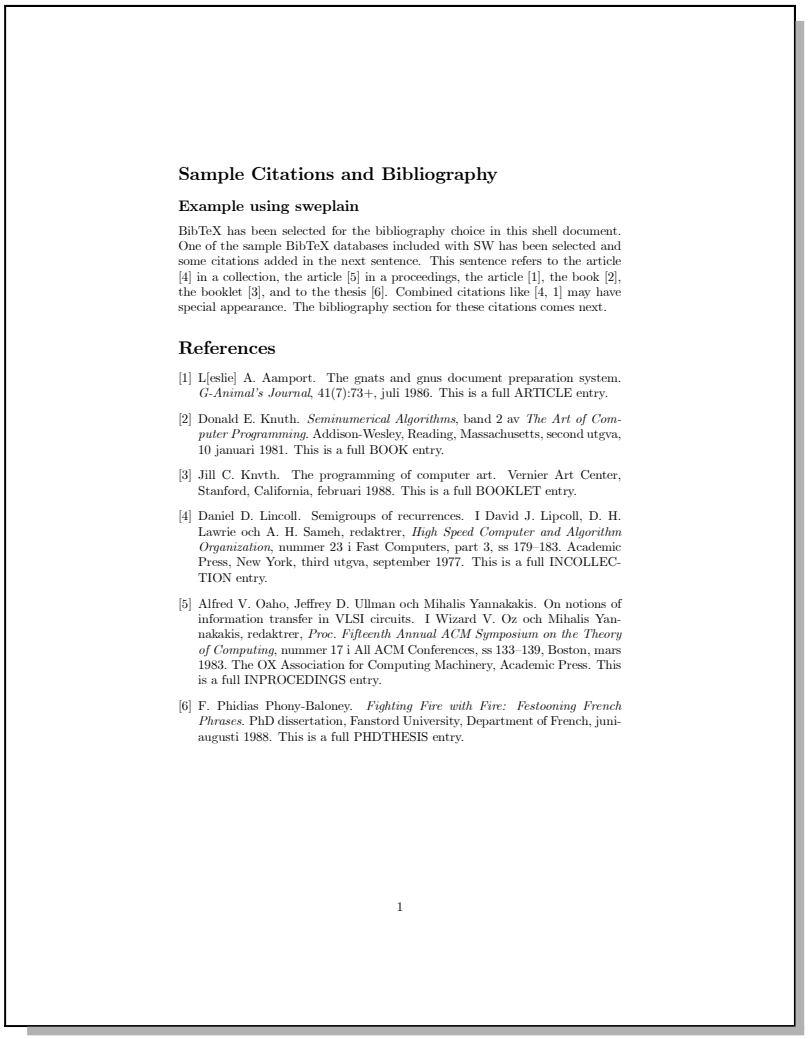
[PB88] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, juni-augusti 1988. This is a full PHDTHESIS entry.

1

sweplain.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/swebib`

The style is the Swedish version of BibTeX standard bibliography style `plain.bst`, which sorts entries alphabetically and labels them with numbers.



Sample Citations and Bibliography

Example using sweplain

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, juli 1986. This is a full ARTICLE entry.

[2] Donald E. Knuth. *Seminumerical Algorithms*, band 2 av *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second utgva, 10 januari 1981. This is a full BOOK entry.

[3] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, februari 1988. This is a full BOOKLET entry.

[4] Daniel D. Lincoll. Semigroups of recurrences. I David J. Lipcoll, D. H. Lawrie och A. H. Sameh, redaktrer, *High Speed Computer and Algorithm Organization*, nummer 23 i Fast Computers, part 3, ss 179–183. Academic Press, New York, third utgva, september 1977. This is a full INCOLLECTION entry.

[5] Alfred V. Oaho, Jeffrey D. Ullman och Mihalis Yannakakis. On notions of information transfer in VLSI circuits. I Wizard V. Oz och Mihalis Yannakakis, redaktrer, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, nummer 17 i All ACM Conferences, ss 133–139, Boston, mars 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

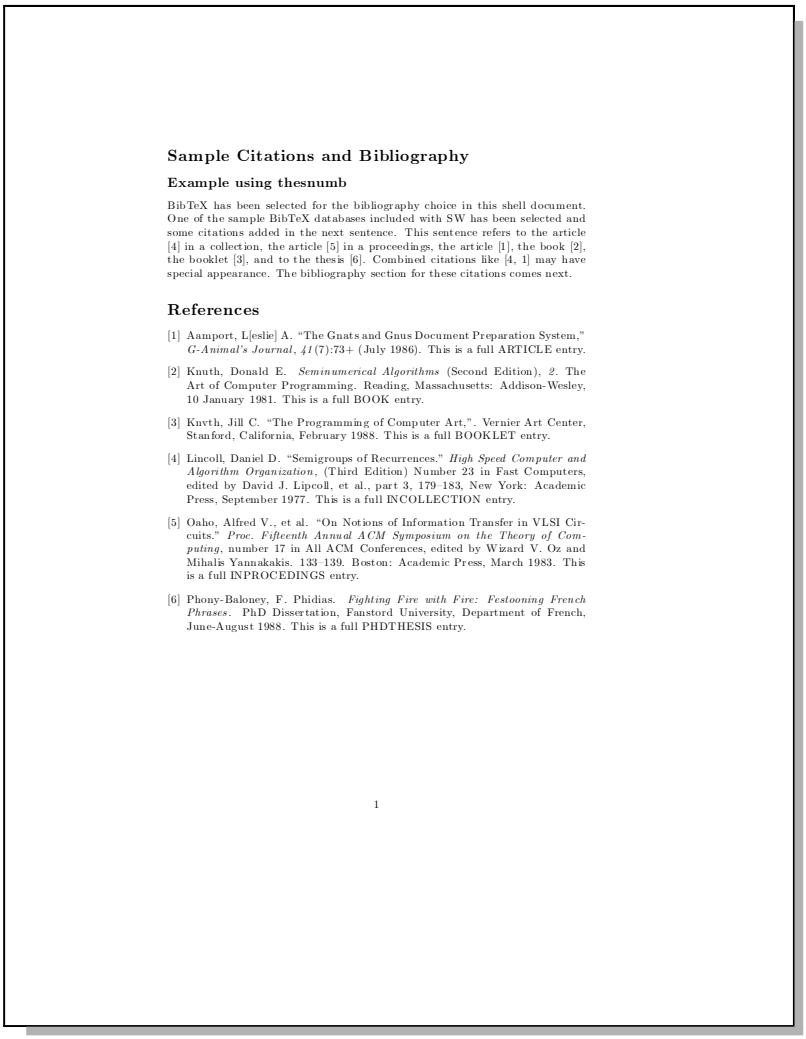
[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, juni-augusti 1988. This is a full PHDTHESIS entry.

1

thesnumb.bst

Format of reference list label	[number]
Organization of reference list	Alphabetical by author
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/afthesis`

The style is included on CTAN as part of the `afthesis` package. It supports the standard Air Force Institute of Technology bibliography style as shown in the AFIT *Style Guide for Theses and Dissertations*.



Sample Citations and Bibliography

Example using thesnumb

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [4] in a collection, the article [5] in a proceedings, the article [1], the book [2], the booklet [3], and to the thesis [6]. Combined citations like [4, 1] may have special appearance. The bibliography section for these citations comes next.

References

[1] Aamport, L[eslie] A. "The Gnats and Gnus Document Preparation System," *G-Animal's Journal*, *41*(7):73+ (July 1986). This is a full ARTICLE entry.

[2] Knuth, Donald E. *Seminumerical Algorithms* (Second Edition), *2*. The Art of Computer Programming. Reading, Massachusetts: Addison-Wesley, 10 January 1981. This is a full BOOK entry.

[3] Knvth, Jill C. "The Programming of Computer Art,". Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[4] Lincoll, Daniel D. "Semigroups of Recurrences," *High Speed Computer and Algorithm Organization*, (Third Edition) Number 23 in Fast Computers, edited by David J. Lipcoll, et al., part 3, 179–183, New York: Academic Press, September 1977. This is a full INCOLLECTION entry.

[5] Oaho, Alfred V., et al. "On Notions of Information Transfer in VLSI Circuits." *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, edited by Wizard V. Oz and Mihalis Yannakakis. 133–139. Boston: Academic Press, March 1983. This is a full INPROCEDINGS entry.

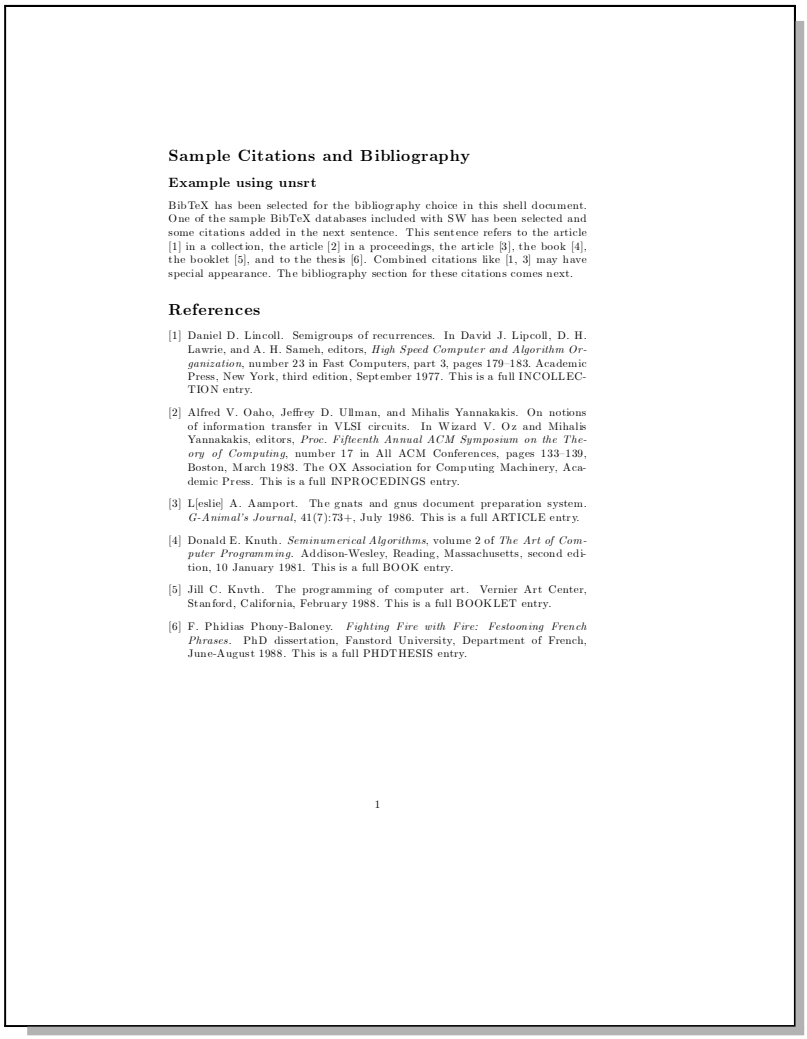
[6] Phony-Baloney, F. Phidias. *Fighting Fire with Fire: Festooning French Phrases*. PhD Dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

unsrt.bst

Format of reference list label	[number]
Organization of reference list	In order of first citation
Format of citation	[number]
Directory	`TCITeX/BibTeX/bst/base`

One of the BibTEX standard bibliography styles, `unsrt.bst` lists bibliography entries in the order of their first citation. Otherwise, the style is the same as `plain.bst`, which labels entries with numbers.



Sample Citations and Bibliography

Example using unsrt

BibTeX has been selected for the bibliography choice in this shell document. One of the sample BibTeX databases included with SW has been selected and some citations added in the next sentence. This sentence refers to the article [1] in a collection, the article [2] in a proceedings, the article [3], the book [4], the booklet [5], and to the thesis [6]. Combined citations like [1, 3] may have special appearance. The bibliography section for these citations comes next.

References

[1] Daniel D. Lincoll. Semigroups of recurrences. In David J. Lipcoll, D. H. Lawrie, and A. H. Sameh, editors, *High Speed Computer and Algorithm Organization*, number 23 in Fast Computers, part 3, pages 179–183. Academic Press, New York, third edition, September 1977. This is a full INCOLLECTION entry.

[2] Alfred V. Oaho, Jeffrey D. Ullman, and Mihalis Yannakakis. On notions of information transfer in VLSI circuits. In Wizard V. Oz and Mihalis Yannakakis, editors, *Proc. Fifteenth Annual ACM Symposium on the Theory of Computing*, number 17 in All ACM Conferences, pages 133–139, Boston, March 1983. The OX Association for Computing Machinery, Academic Press. This is a full INPROCEDINGS entry.

[3] L[eslie] A. Aamport. The gnats and gnus document preparation system. *G-Animal's Journal*, 41(7):73+, July 1986. This is a full ARTICLE entry.

[4] Donald E. Knuth. *Seminumerical Algorithms*, volume 2 of *The Art of Computer Programming*. Addison-Wesley, Reading, Massachusetts, second edition, 10 January 1981. This is a full BOOK entry.

[5] Jill C. Knvth. The programming of computer art. Vernier Art Center, Stanford, California, February 1988. This is a full BOOKLET entry.

[6] F. Phidias Phony-Baloney. *Fighting Fire with Fire: Festooning French Phrases*. PhD dissertation, Fanstord University, Department of French, June-August 1988. This is a full PHDTHESIS entry.

1

Index

aaai-named.bst, 420
aabbrv.bst, 422
aalpha.bst, 423
abbrv.bst, 424
achemso.bst, 425
achemsol.bst, 426
acm.bst, 427
additional information
  technical support, xxiii
address-html.bst, 431
address.bst, 428
adfathesis.bst, 433
agsm.bst, 434
alpha.bst, 435
alphahtml.bst, 436
alphahtmldate.bst, 438
alphahtmldater.bst, 439
amsalpha.bst, 440
amsplain.bst, 441
annotate.bst, 442
annotation.bst, 443
anotit.bst, 444
apa.bst, 445
apacite.bst, 446
apalike.bst, 447
apalike2.bst, 448
aplain.bst, 449
apsr.bst, 450
Article shells
  AASTeX Journal, 14
  about, 11
  Academic Press Journals, 16
  Academic Press Journals - Modified, 18
  American Chemical Society, 20
  American Statistical Association Proceedings, 22
  AMS Journal Article, 24
  AMS Proceedings Article, 26
  An Astronomy-Astrophysics Journal, 28
  Annals of Statistics-Draft, 30
  Article (SE), 280
  ASAE Transactions, 32
  ASME Meeting, 34
  Astronomy & Astrophysics, 36
  Balkema, 37
  DECUS Proceedings, 39
  Elbert Walker's Article, 41
  Elsevier CRC One-column, 43
  Elsevier CRC Two-column, 45
  Elsevier IFAC Proceedings, 47
  Elsevier Preprint, 49
  Geophysics Journal, 51
  Harold O. Fried's Article, 53
  IEEE Transactions for Conferences, 55
  IEEE Transactions for Journals, 56
  IEICE Transactions, 57
  International Journal of Forecasting - Draft, 58
  Japanese Journal of Applied Physics, 60
  JEEP - A General Purpose Vehicle, 62
  JEEP - Double-spaced Except for Quotes, 64
  Journal of International Economics North Holland, 66
  Journal of Low Temperature Physics, 68
  Journal of Progress in Surface Science, 70
  Kluwer Journal, 72
  LaTeX-like Article (SE), 282
  Linear Algebra and its Applications, 74
  Mathematical Reviews Template, 76
  Mathematics Magazine Article, 78
  Modified Article for Short Texts, 80
  Monthly Notices of the Royal Astronomical Society, 82
  REVTeX 4, 84
  Sans serif Article (SE), 284
  Science Magazine, 86
  SIAM Journal, 88
  SIAM Proceedings in Applied Mathematics, 90
  SIAM-ACM Preprint, 92
  Similar to AIP, 94
  Similar to AIP - Modified, 96
  Similar to Bulletin of the American Mathematical Society, 98
  Similar to MAA Monthly before 1992, 100
  Similar to North-Holland Journals, 102
  Similar to Sequential Analysis Journal, 104
  Simple MIT Press Article, 12
  Society for Computer Simulation, 106
  SPIE Proceedings, 108
  SPIE Proceedings (new), 112
  SPIE Proceedings - Modified, 110
  Springer-Verlag Heidelberg Journal, 114
  Squeezed States and Uncertainty Relations, 116
  Standard LaTeX Article, 268
  Standard LaTeX Article (Blank), 268
  Standard LaTeX Article (Chicago), 118
  Standard LaTeX Article (Harvard), 120
  Standard LaTeX Article (hyperref), 122
  Statistics and Decisions, 123

TU Wien, 125
TU Wien Article (new), 127
World Scientific Proceedings 10x7, 133
World Scientific Proceedings 11x8.5, 135
World Scientific Proceedings 9.75x6.50, 131
World Scientific Proceedings 9x6, 129
Article.cls
option defaults, 3
page layout, 4
asaetr.bst, 451
Assignment shells
Assignment, 188
Assorted-Basic Assignment, 198
astron.bst, 452
aunsnot.bst, 453
aunsrt.bst, 454
Author Packages for AMS shells
Contemporary Mathematics (Proceedings), 138
Generic Journal, 140
Mathematics of Computation, 142
authordate1.bst, 455
authordate2.bst, 456
authordate3.bst, 457
authordate4.bst, 458

bbs.bst, 459
bibtoref.bst, 460
birthday.bst, 461
Book shells
about, 145
AMS Book or Monograph, 146
Book - CalcLabs Book (SE), 286
Book 1 (SE), 302
ETP (Electronic Technical Publishing), 150
Fred Szabo's Book (SE), 288
Jonathan Lewin's Book (SE), 292
LaTeX-like book (SE), 294
Linda Gilbert Book, 154
Springer-Verlag Conference, 158
Springer-Verlag Heidelberg LLNCS, 162
Springer-Verlag Heidelberg Physics Monograph, 166
Springer-Verlag Multiauthored, 170
Springer-Verlag Single authored, 174
Standard LaTeX Book, 270
Stewart Calculus Book (SE), 298
SW Book 1, 200
SW Book 2, 204
SW Book 3, 208
SW Book 4, 212
SW Book 5, 216
SW Book 6, 220
User's Guide (SE), 300
World Scientific Book 9.00x6.00, 178
World Scientific Book 9.75x6.50, 182
Book.cls
option defaults, 3
page layout, 5

cbe.bst, 463
cea.bst, 464
cell.bst, 466
chicagoa.bst, 468
.clo files, 1
.cls files, 1
Conference proceedings shells
Standard LaTeX Conference Proceedings, 274
.cst files, 1
customer support, xxiii

Document class defaults, 2
Document class options, 2
Document shells
about, 1
choosing, 7
Standard LaTeX shells, 8
dtk.bst, 469
DVI file, xx

econometrica.bst, 470

Email for technical support, xxiii
email-html.bst, 473
email.bst, 471
Exam shells
about, 187
Assignment, 188
Bolton Institute, 189
Class Announcement, 190
Class Handout, 191
Exam 1 (SE), 306
Exam Builder (SE), 307
Exam Builder w title page (SE), 308
SW Exam 1 - 8.5 x 11 Page, 192
SW Exam 1 - 8.5 x 14 Page, 193
SW Exam 2, 194
SW Exam 3, 195

Fax shells
Fax 1 (SE), 310
SW Fax 1, 224
SW Fax 2, 225
SW Fax 3, 226
finplain.bst, 475

gerabbrv.bst, 476
geralpha.bst, 477
gerapali.bst, 478
gerplain.bst, 479
gerunsrt.bst, 480

Help
additional information, xxiv
discussion forum, xxiv
online help, xxii
resources, xxii
technical support, xxiii
humanbio.bst, 481
humannat.bst, 482

ieee.bst, 483
ieeepes.bst, 484
ieeetr.bst, 485
imac.bst, 486
inlinebib.bst, 487
is-abbrv.bst, 489
is-alpha.bst, 490
is-plain.bst, 491

is-unsrt.bst, 492

jas99.bst, 493
jbact.bst, 494
jcc.bst, 495
jkthesis.bst, 496
jmb.bst, 497
jmr.bst, 499
jpc.bst, 500
jphysicsB.bst, 501
jtb.bst, 502
jthcarsu.bst, 503
jurabib.bst, 504
jureco.bst, 505

kluwer.bst, 506

LaTeX, xx
LaTeX document classes
  about, 2
  sebase, 2
Letter shells
  Informal Letter, 227
  Letter 1 (SE), 315
  Letter 2 (SE), 316
  Letter 3 (SE), 317
  Letter 4 (SE), 318
  Similar to TeXbook Example, 228
  SW Letter 1, 229
  SW Letter 2, 230
  SW Letter 3, 231
  SW Letter 4, 232
  SW Letter 5, 233
  SW Letter 6, 234
letter.bst, 507

MacKichan, contacting, xxiii
mbplain.bst, 509
Memo shells
  Memo 1 (SE), 319
  SW Memo 1, 235
  SW Memo 2, 236
  SW Memo 3, 237
  SW Memo 4, 238
  SW Memo 5, 239
  SW Memo Special for Inventions, 240
mslapa.bst, 510

named.bst, 511
nar.bst, 512
nature.bst, 513
nederlands.bst, 514
New documents, 2
newapa.bst, 515

Online help, *see* Help
Other shells
  about, 197
  Assorted-Basic Assignment, 198
  Assorted-Math Scratchpad, 199
  Informal Letter, 227
  JEEP Report, 243
  Similar to TeXbook Example, 228
  SW Book 1, 200
  SW Book 2, 204
  SW Book 3, 208
  SW Book 4, 212
  SW Book 5, 216
  SW Book 6, 220
  SW Fax 1, 224
  SW Fax 2, 225
  SW Fax 3, 226
  SW Letter 1, 229
  SW Letter 2, 230
  SW Letter 3, 231
  SW Letter 4, 232
  SW Letter 5, 233
  SW Letter 6, 234
  SW Memo 1, 235
  SW Memo 2, 236
  SW Memo 3, 237
  SW Memo 4, 238
  SW Memo 5, 239
  SW Memo Special for Inventions, 240
  SW Press Release 1, 241
  SW Press Release 2, 242
  SW Report 1, 246
  SW Report 2, 248
  SW Report 3, 250
  SW Report 4, 252
  SW Report 5, 254
  SW Resume 1, 262
  SW Resume 2, 263
  SW Slides, 264
  TU Wien Report, 256
  TU Wien Report (new), 259
oxford-en.bst, 516
oxford-in.bst, 518
oxford-se.bst, 520

Packages
  about, 7
  adding and removing, 7
Page layout
  article.cls, 4
  book.cls, 5
  report.cls, 2, 6
pccp.bst, 522
PDFLaTeX, xx
phaip.bst, 523
phapalik.bst, 524
phcpc.bst, 525
phiaea.bst, 526
phjcp.bst, 527
phnf.bst, 528
phnflet.bst, 529
phone.bst, 530
phpf.bst, 532
phppcf.bst, 533
phreport.bst, 534
phrmp.bst, 535
plabbrv.bst, 536
plain.bst, 537
plainhtml.bst, 538
plainhtmldate.bst, 540
plainhtmldater.bst, 541
plalpha.bst, 542
Play shell (SE), 320
plplain.bst, 543
plunsrt.bst, 544
Press release shells
  Press Release (SE), 322
  SW Press Release 1, 241
  SW Press Release 2, 242
program resources, xxiii

Report shells
  JEEP Report, 243
  Report 1 (SE), 325
  Standard LaTeX Report, 276
  SW Report 1, 246
  SW Report 2, 248
  SW Report 3, 250
  SW Report 4, 252
  SW Report 5, 254
  TU Wien Report, 256
  TU Wien Report (new), 259

Report.cls
option defaults, 3
page layout, 2, 6
Resume shells
Resume 1 (SE), 328
SW Resume 1, 262
SW Resume 2, 263
revcompchem.bst, 545

Sebase.cls, 2
siam.bst, 546
siamproc.bst, 547
Slides shells
Slides - Jim's Landscape (SE), 329
Slides A (SE), 330
Slides B (SE), 332
Slides C (SE), 334
Slides D (SE), 336
Slides QCA (SE), 338
SW Slides, 264
smfalpha.bst, 548
smfplain.bst, 549
Standard LaTeX shells
about, 8, 267
Standard LaTeX Article, 268
Standard LaTeX Article (Blank), 268
Standard LaTeX Book, 270
Standard LaTeX Conference Proceedings, 274
Standard LaTeX Report, 276
.sty files, 1
Style Editor shells, 279
Article, 280
Book - CalcLabs Book (SE), 286
Book 1 (SE), 302
Exam 1 (SE), 306
Exam Builder (SE), 307
Exam Builder w title page (SE), 308
Fax 1 (SE), 310
Fred Szabo's Book (SE), 288
Harvard Thesis (SE), 340
Harvard Thesis Modified by Philippe Laval (SE), 344
Jonathan Lewin's Book (SE), 292
LaTeX-like Article (SE), 282
LaTeX-like book (SE), 294
Letter 1 (SE), 315
Letter 2 (SE), 316
Letter 3 (SE), 317
Letter 4 (SE), 318
LSUThesis (SE), 348
Memo 1 (SE), 319
Play (SE), 320
Press Release (SE), 322
QCA Workbook (SE), 323
Report 1 (SE), 325
Resume 1 (SE), 328
Sans serif Article (SE), 284
Simple WYSIWYG (SE), 313
Slides - Jim's Landscape (SE), 329
Slides A (SE), 330
Slides B (SE), 332
Slides C (SE), 334
Slides D (SE), 336
Slides QCA (SE), 338
Stewart Calculus Book (SE), 298
SW Readme (SE), 311
Thesis 1 (SE), 352
User's Guide (SE), 300
sweabbrv.bst, 550
swealpha.bst, 551
sweplain.bst, 552
Syllabus shells
about, 187
Syllabus, 196

technical support, xxiii
telephone MacKichan, xxiii
TeX, xx
Thesis shells
about, 355
Air Force Institute of Technology, 356
Georgia Institute of Technology, 360
Harvard Thesis (SE), 340
Harvard Thesis Modified by Philippe Laval (SE), 344
LSU Thesis (SE), 348
Massachusetts Institute of Technology, 364
Northwestern University, 366
Similar to New Mexico State University, 370
Similar to North Dakota State University, 374
Similar to University of Miami, 378
Similar to University of Utah, 382
Thesis 1 (SE), 352
University of Arizona, 386
University of California, 390
University of Georgia, 394
University of New Mexico, 398
University of New South Wales, 402
University of Pittsburgh, 406
University of Washington, 409
thesnumb.bst, 553
toll-free number, xxiii
Troubleshooting, xxii
TrueTeX, xx

Uniform Resource Locator (URL), xxiii
unsrt.bst, 554
URL, xxiii