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Welcome to the W	iley LATEX Package!
Click on the tabs above for r	nore information on each topic.
Tech Support	
email to Amy Hendrickson, amy If possible please send a small	this documentation, you may send yh@texnology.com, Wiley LaTEX support. file demonstrating the problem. e. Please consult your editor for permission.
Files in this package,	and what they do
Basic Macro Files	
wileySix.cls	for 6x9 size use, \documentclass {wileySix}
wileySev.cls	for 7x10 size use, \documentclass {wileySev}
(If you are not sure which size t	to use, please ask your editor)
Font File	
w-bookps.sty	PostScript font file, use \usepackage {w-bookps }
Documentation	
docs.pdf	This file
pages.pdf	Sample pages, showing code and results
Both of these files might be left easily find the commands you r	open in the background as you work on your .tex file, so that you can need, and how to use them.
Sample Files	
w-bksamp.tex	File for you to run on your system to make sure everything is working, and to see the LaTeX commands to get the resulting typeset document.
w-bksampTypeset.pdf	PDF of sample file to compare with your results
w-bksamp.ind	Small sample index file, for making index in w-bksamp.
Template file	
w-bktmpl.tex	Template file, for authors to copy and rename when making their own book.
Inserting graphics files	
wileylogo.eps/pdf	Graphics file to produce Wiley logo on titlepage of book. Wiley will provide the title pages and copyright page, so you don't need to use this unless you want to make the title pages for your own reasons.
Scientific Workplace	
sw.txt	Concise description of using these .cls files with SWP
WileySix.shl/	
WileySev.shl	Shell files to be used with Scientific WorkPlace

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Starting Offprintinfo Crop Marks Draft Version	Halftitle/Title/Copyright Brief Contents/Contents

#### The Sample file: w-bksamp.pdf

Looking at the code and results in the sample file is the easiest way to see what this style has to offer, and how to enter commands.

#### Use the template file

The easiest way to start your book is to copy and rename the template file, **w-bktmpl.tex**, and use it to start your book. This file has the necessary commands in the right order and using it will save you time and trouble.

#### Use the right size .cls file!

Your book will either be 6x9 or 7x10 size, ask your editor if you are not sure which size should be used.

```
For, for 6 x 9 trim size:
\documentclass{wileySix}
```

```
Or, for 7 x 10 size:
\documentclass{wileySev}
```

Commands in both styles are identical, only the page size is different.

#### Using PostScript fonts

The default fonts are Computer Modern.

For a finished appearance for your book, you are Strongly Recommended to use

\usepackage{w-bookps},

```
the PostScript font file.
```

You may need to edit w-bookps.sty so that the font names match those on your system, although this is fairly unlikely. If you do have a font problem, check the top of w-bookps.sty for instructions.

#### Additional .sty files

Many authors will want to use additional .sty files. We suggest that you do not add any more .sty files than you absolutely need, to avoid conflicts with the Wiley style file.

There may be files that you want to use that redefine a command found in the Wiley .cls file. This will cause an error message and possibly cause the new definition to not work correctly.

To get around this you can set the command attempting to be redefined to **\relax**. For instance, if you do this: **\usepackage{amsthm}**, you will get an error message saying that **\proof** has already been defined. The fix:

```
\documentclass{wileySix}
\let\proof\relax
\let\endproof\relax
```



This command will supply the copyright information that will appear at the bottom of selected pages. Use: **\offprintinfo{title, edition}{author}** 

You can break lines if necessary:

\offprintinfo{Survey Methodology, \\ Second Edition}{Robert M. Groves}

Survey Methodology, Second Edition. By Robert M. Groves Copyright © 2012 John Wiley & Sons, Inc.

#### Setting the year

The default copyright year will be the current year. You may need to set the year explicitly, in case you are publishing near the end of one year, and want the copyright date to be the following year.

#### Do this: \copyrightyear{2014}.

Using the previous example, we will get this:

Survey Methodology, Second Edition. By Robert M. Groves Copyright © 2014 John Wiley & Sons, Inc.

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Crop n	narks									

Easy!

**\cropmarks** to turn them on; **\nocropmarks** to turn them off. Default is **\cropmarks**.

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# **Draft Version**

Draft version: enter \draft before \begindocument

You'll get double spaced version, with draft footline.

The draft footline will cause the current time and date to be printed.

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# WILEY WILL SUPPLY THE TITLE and COPYRIGHT PAGES!

So, you have no need to make the title pages yourself unless you want to for your own reasons. If you find that you would like to have your own title and half title pages, the following description will show you how to do so.

## Half Title and Title Pages

First comes the Half Title page which is simply the title of the book; then comes the full titlepage.

## Setting Info for Half Title and Title Pages

Set up the title and author information, to be used when you type in **halftitlepage** and **\titlepage** 

```
\booktitle{Enter book Title Here}
\subtitle{Optional, enter subtitle here}
\authors{First Author\\
\affil{first author affil} %% optional
Second Author\\
\affil{second author affil} %% optional
}
\halftitlepage
\titlepage
```

## Halftitle and Titlepage, If changing font is necessary

If your title is too wide for the halftitlepage or titlepage you can make the font for that page smaller by changing the font declaration, below \usepackage {w-bookps}:

## \font\halftitlefont=\helveticabold at 20pt

\font\titlefont=\helveticabold at 27pt

and adjusting the font size a point or two smaller until the title will fit.

## **Copyright Page**

```
% Note, you must use \ to start indented lines, ie,
\begin{copyrightpage}{2007}
Survey Methodology / Robert M. Groves . . . [et al.].
\ p. cm.---(Wiley series in survey methodology)
\ `Wiley-Interscience."
\ Includes bibliographical references and index.
\ ISBN 0-471-48348-6 (pbk.)
...
\end{copyrightpage}
```

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#### **Brief Contents**

Using Brief Contents is optional. It contains only the Part titles (if there are Parts in the book), and Chapter titles. If the book is an edited book, the authors of the chapter will be listed as well. Use: **briefcontents** 

#### Contents

```
Use: \tableofcontents
Setting: \setcounter{tocdepth}{2}
%% How many levels of section head would you like to appear in the
%% Table of Contents?
%% 0= chapter titles, 1= section titles, 2= subsection titles,
%% 3= subsubsection titles.
%%==>>
\setcounter{tocdepth}{2}
```

You can set the tocdepth either higher or lower depending on how many levels of section head you'd like to appear in the table of contents.

#### Differing version of title printing on page and in Contents

You can have one version of the chapter or section title appear on the page, and another version be sent to the Table of Contents (TOC).

```
\chapter[This version goes to running head and TOC]
{This version appears on the page}
\section[This version goes to running head and TOC]
```

{This version appears on the page}

A common reason to use the square bracket optional argument to chapter or section, is when \\ is used in the title, but we don't want to break lines in the running head or in the Table of Contents.

#### Getting Chapter Title in TOC start on new page

You may want to get a chapter title to appear at the top of a new page, instead at the bottom of the previous page in the TOC. In this case, type this in before the chapter title:

```
\addtocontents{toc}{\string\newpage} (or, \addtocontents{toc}{\string\eject})
\chapter{Here is chapter title}
```

If you use \newpage the bottom of the page will fill with any remaining white space; If you use \eject any remaining white space will be put between the previous entries, and the text will fill out to the bottom of the page.

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Edited Book Chapter: Single Affiliation Chapter:	Multiple Affiliations		

## **The Edited Book**

The edited book is much like the Monograph, with these additions:

- Brief Contents will list author names as well as chapter titles; no additional intervention is needed beyond typing in \briefcontents immediately before \tableofcontents.
- Edited book may use Contributors environment to list all the authors and their affiliations.

Use **\begin{contributors}...\end{contributors}** and then enter each author with the **\name{}** command, followed by the affiliation information.

```
\begin{contributors}
\name{Masayki Abe,} Fujitsu Laboratories Ltd., Fujitsu Limited, Atsugi,
Japan
```

```
\name{L. A. Akers, } Center for Solid State Electronics Research, Arizona
State University, Tempe, Arizona
\end{contributors}
```

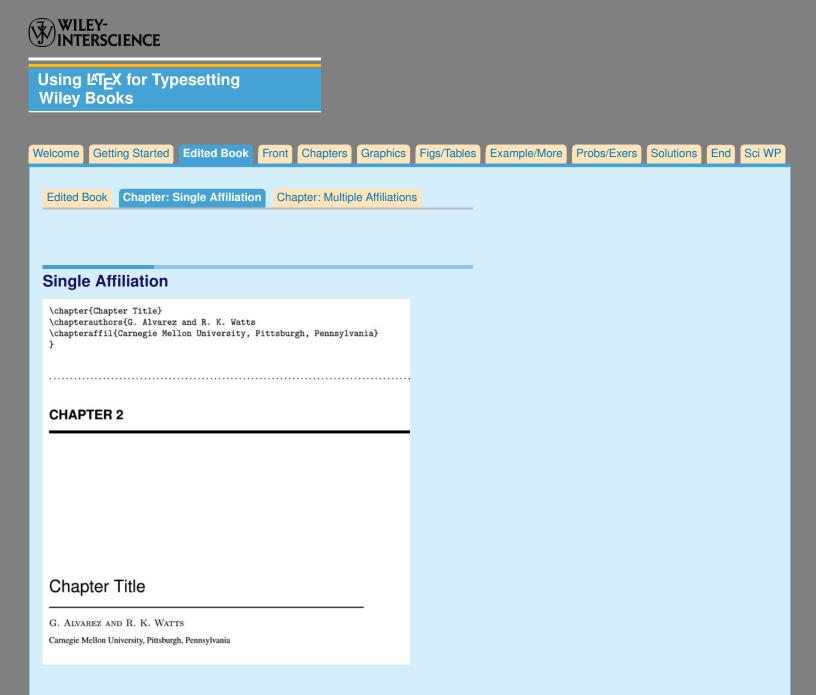
Chapters in Edited book need the author name and affiliation as well as the chapter title.
 \chapteraffil{} will print the affiliations below the chapter title.

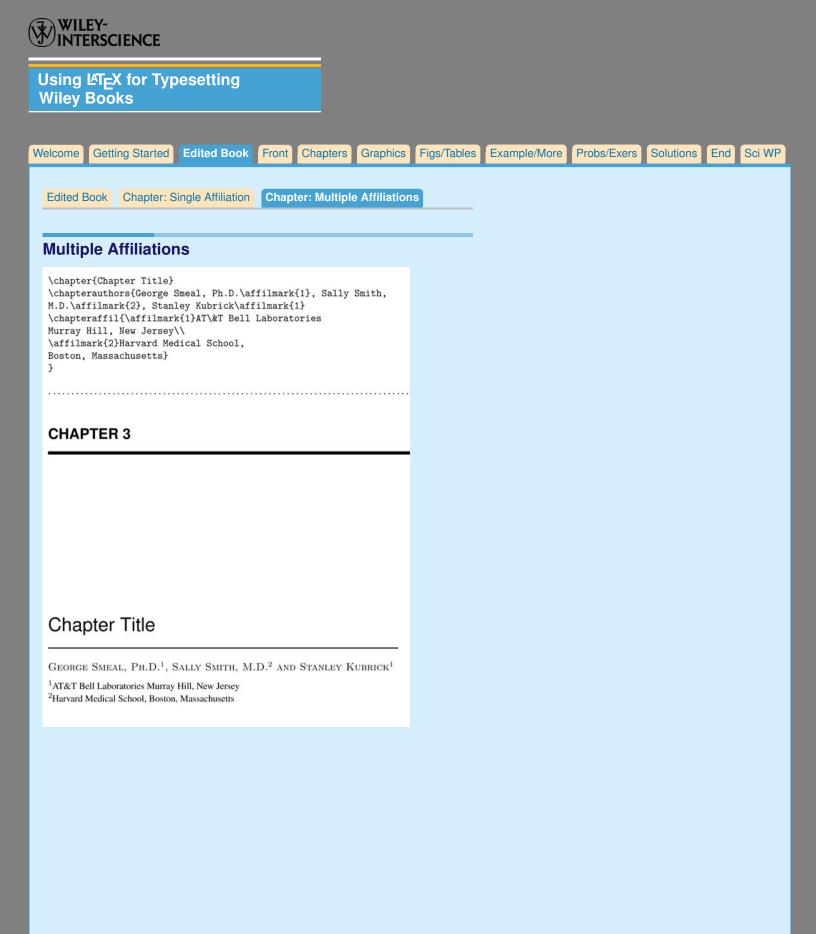
For authors with a single affiliation:

```
\chapter{First Edited Book Sample Chapter Title}
%%
\chapterauthors{G. Alvarez and R. K. Watts
%%
\chapteraffil{Carnegie Mellon University, Pittsburgh, Pennsylvania}
%%
}% <== end \chapterauthors{}</pre>
```

For authors with multiple affiliations, use **\affilmark{number}**.

```
\chapter{Second Edited Book Sample Chapter Title}
%%
\chapterauthors{George Smeal, Ph.D.\affilmark{1}, Sally Smith,
M.D.\affilmark{2} and Stanley Kubrick\affilmark{1}
%%
\chapteraffil{\affilmark{1}AT\&T Bell Laboratories
Murray Hill, New Jersey\\
\affilmark{2}Harvard Medical School,
Boston, Massachusetts}
%%
}% <== end \chapterauthors{}</pre>
```





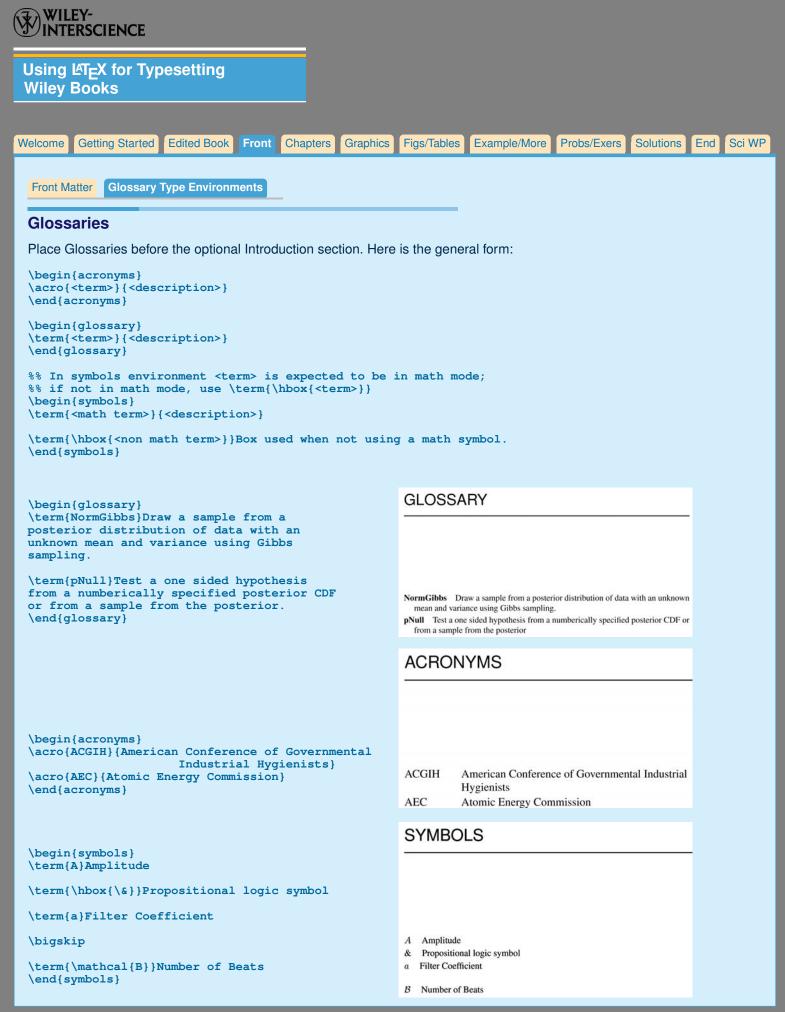
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Front Matter Glossary Type Environments			

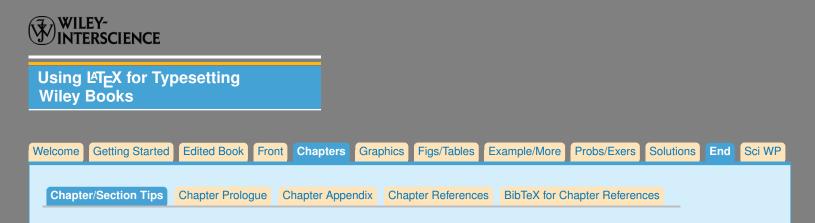
## **Front Matter**

Notice the order of the frontmatter. Only the Dedication (optional) or the Contributors page, for an edited book, should be entered before the table of contents. All these environments are optional, except for **\tableofcontents**.

Note: To send a shorter version of figure or table caption to the **\listoftables** or **\listoftables**, use the optional square bracket argument for caption: **\caption[short version]{Full Caption}** 

```
୫୫୫୫୫୫୫୫୫୫୫୫୫୫
\dedication{}
****
\begin{contributors}...\end{contributors}% for edited book only
***
\contentsinbrief %optional
\tableofcontents
\listoffigures %optional
\listoftables %optional
                 \begin{foreword}
text
\end{foreword}
*****
\begin{preface} %% or \begin{firstpreface} for preface to first edition
text
\prefaceauthor{}
\where{place\\
date}
\end{preface}
               %% or \end{firstpreface} for preface to first edition
****
\acknowledgments
acknowledgment text
\authorinitials{}
****
                \begin{acronyms}
\acro{<term>} {<description>}
\end{acronyms}
<u>୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫୫</u>
\begin{glossary}
\term{<term>} {<description>}
\end{glossary}
****
         %% In symbols environment <term> is expected to be in math mode;
%% if not in math mode, use \term{\hbox{<term>}}
\begin{symbols}
\term{<math term>}{<description>}
\term{\hbox{<non math term>}}Box used when not using a math symbol.
\end{symbols}
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
\begin{introduction}
\introauthor{<author name>}{<affiliation>}
Introduction text...
\end{introduction}
```





# **Setting Options**

Near the top of the w-bktmpl file you will see the following text and commands. These commands allow you to set the section level that you want numbered:

```
\setcounter{secnumdepth}{<number>}
```

```
ie, \setcounter{secnumdepth}{3}
```

and the levels of section heads to appear in the Table of Contents

```
\setcounter{tocdepth}{<number>}
```

ie, \setcounter{tocdepth}{1}

## **Chapter/Section Tips**

## How to make:

Footnote in chapter title, use \thanks{}:
\chapter{title\thanks{}}
ie, \chapter{title\thanks{Research sponsored by NASA}}

```
Short chapter title for running head:
\chapter{long title}
\markboth{short version}{short version}
```

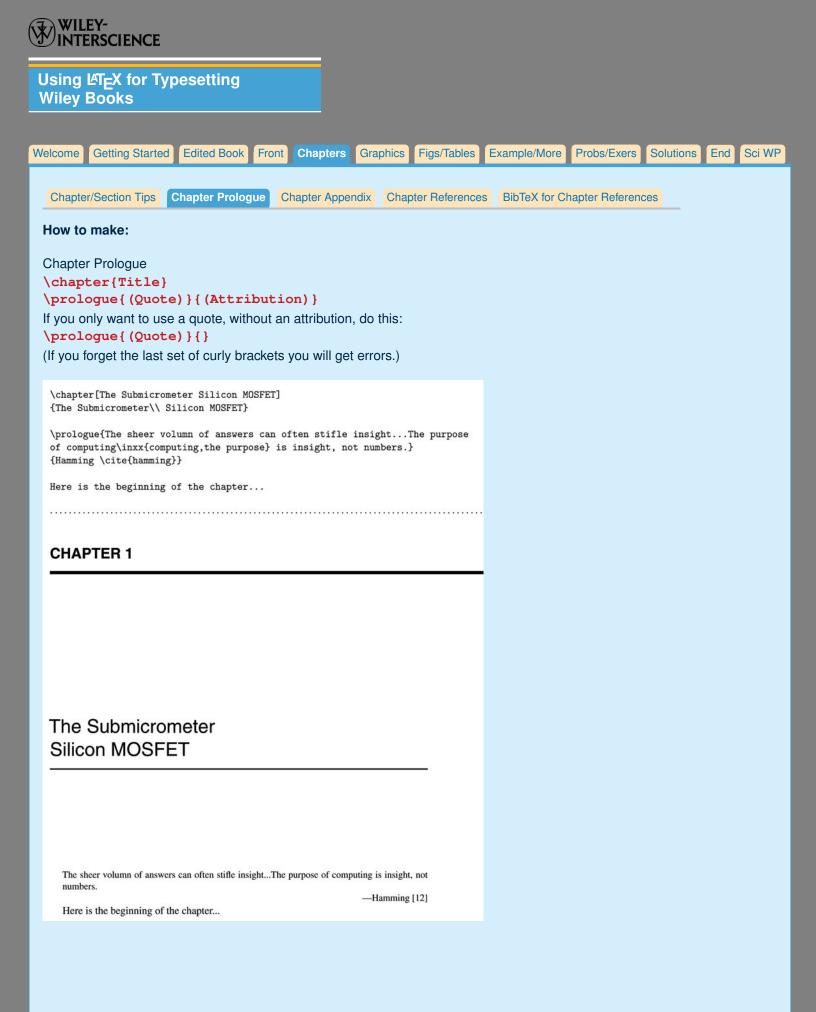
Short section running head:
\section{Long version}
\markright{short version}

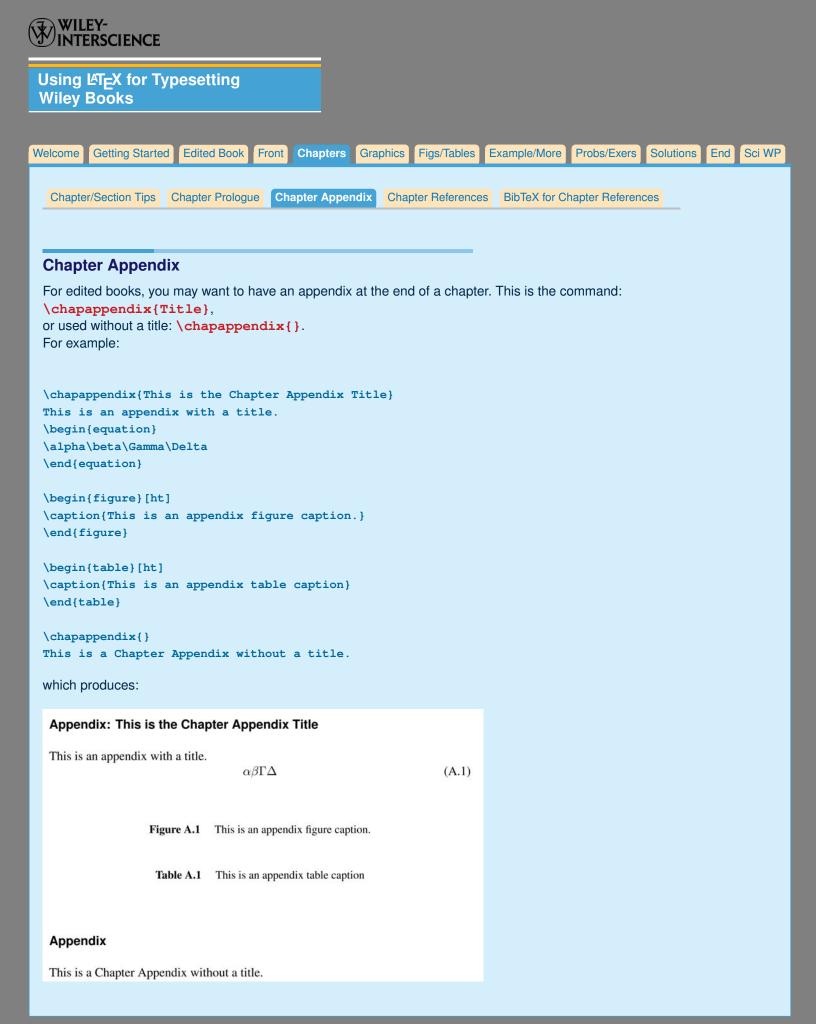
```
Short version for Table of Contents and Running Heads:
\chapter[Short Version] {long version}
\section[Short Version] {long version}
```

Different version for Table of Contents: When using \\ to break lines in chapter title, enter the title in square brackets without the \\ to keep from breaking lines in the Table of Contents. \chapter[First line Second line] {First line \\ Second line }

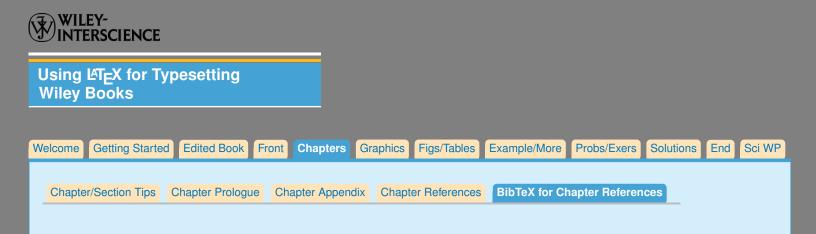
Lower case in Section Head: Use the command \lowercase{}, for example: \section{How to get \lowercase{lowercase} in section head: \lowercase{\$p\$}H}

Skip before section head, to help with page makeup: You may be surprised to find that \vskip-12pt\section{section title} doesn't seem to produce a negative skip before the section. Instead, supply an extra skip: \vskip-12pt\vskip1pt\section{section title}, which will work. Why? The \section command will delete the skip previous to it; so we supply a dummy skip, and now the skip we want will work.









## **BibTeX for Chapter References**

See bibtex for general advice about using BibTeX. If you google 'bibtex' you will find more advice and examples. For using BibTeX for chapters:

- You need an additional .sty file, chapterbib.sty
   \usepackage{chapterbib}
- You should enter

bibliographystyle{<style you choose>}
bibliography{<name of bib file>}
at the end of chapters.

- Run LATEX several times
- On the command line do **bibtex** <chapter file name> for each chapter.
- Then run \u00e9TEX on your root file several more times, and you will find that you now have chapter bibliographies.

Here's an example:

```
\documentclass{wileysix}
\usepackage{natbib}
\usepackage{chapterbib}
```

\begin{document}

\include{chap1}
\include{chap2}
% other chapters ...

\end{document}

```
% chap1.tex
\chapter{one chapter}
text~\cite{paper1}
text~\cite{paper2}
```

```
%% at end of chapter:
\bibliographystyle{plainnat}
\bibliography{sampbib}
```

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Graphics Files
To include graphics files in your .tex document, you must declare \usepackage{graphicx}
Insert graphics file with the command <b>\includegraphics[height=<dimen>, width=<dimen>] {illustration}</dimen></dimen></b> Generally, you should supply Either height or width, and the other dimension will accomodate, and your aspect ratio will be correct. (The aspect ratio describes the proportional relationship between the width of an image and its height.)
The only exception is if you use .tif files, which need both width and height declared. \includegraphics[height=2.25in, width=3in] {illustration.tif}
Тір
You can call for the width of the graphic in terms of the width of the page.
<pre>Often this combination is used: \centerline{\includegraphics[width=.8\textwidth]{illustration}}</pre>
Use the right filename extension

You must use the correct extension depending on which program you use to turn your .dvi file to .pdf.

- If you are using pdflatex, you must supply .pdf, .jpg or .png files
- if you are using dvips you must use .eps or .tif files.

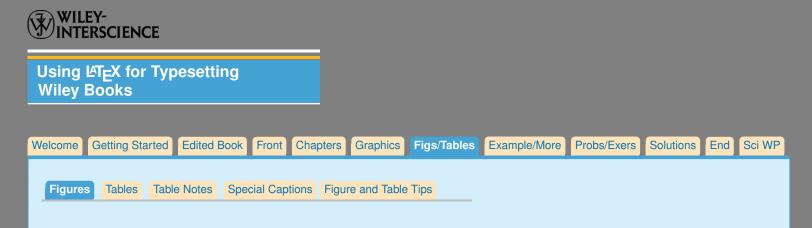
EPS files can be converted to PDF using the epstopdf utility, included in most LaTeX distributions. On the command line, you can use **epstopdf** <filename>.eps and a <filename>.pdf will be produced.

Another possibility is translating .eps files to .pdf with the Acrobat program, or with Photoshop.

## **Notes on Graphics Choices**

JPG: widely used on Internet, digital cameras, etc. They are the best choice if you want to insert photos.

- **PNG:** a very common format (even if not as much as JPG); it's a lossless format and it's the best choice for diagrams (if you were not able to generate a vector version) and screenshots.
- **PDF:** is widely used for documents but can be used to store images as well. It supports both vector and bit-map images, but it's not recommended for the latter, as JPG or PNG will provide the same result using less disk space.



Figures are written in the standard way in this style. The caption should be written underneath the illustration.

Remember that a cross-referencing label should be used within or after the caption, but not before it, in order to get the right figure number.

```
Sample using \centerline{}:
\begin{figure}
\centerline{\includegraphics[width=.8\textwidth]{illustration}}
\caption{Caption text}
\label{figone}
\end{figure}
```

Side by Side Captions

```
To make side by side captions, for either figures or tables,
\begin{figure or table} \sidebyside{} {} \end{figure or table}
```

Note: \label{} After caption! Figures have caption below illustration; Tables have caption above table.

```
\begin{figure}
\sidebyside{ Space for figure \caption{}\label{fig-one}}
                { Space for figure \caption{}\label{fig-two}}
\end{figure}
or
\begin{table}
\sidebyside{\caption{}\label{tab-1} Space for table}
                     {\caption{}\label{tab-2} Space for table}
\end{table}
```

Here's an example:

\begin{figure}[ht] \sidebyside{Space for figure... \caption{This caption will go on the left side of the page. It is the initial caption of two side-by-side captions.}} {Space for second figure... \caption{This caption will go on the right side of the page. It is the second of two side-by-side captions.}} \end{figure}

Space for figure... Space for second figure...

```
Figure 1: This caption will
go on the left side of the
page. It is the initial cap-
tion of two side-by-side
captions.
```

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Figure	s Tables Tabl	e Notes Speci	ial Captions F	Figure and Table	Tips					

## Making the table

- Caption goes on top of table.
- Try to avoid vertical lines
- Try to use horizontal lines only at the top, underneath the column headers and at the bottom of table.
- To make more vertical space between lines in tables you can use \vrule height 10pt depth 3pt width 0pt, called a 'strut'. You can choose the height and depth dimensions.
- To change space between every line in all the tables, you change the definition of \arraystretch{}, which allows you to multiply the distance between lines. For instance
   \def\arraystretch{1.2} will give you 120% of the original distance between lines.
- Use \centering to make table center horizontally.

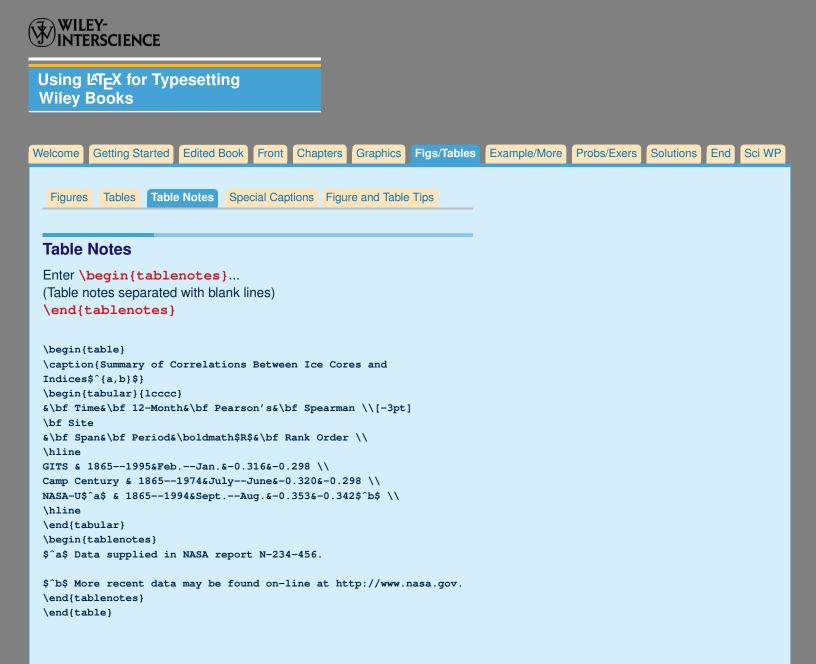
## Sample

In the sample below, notice 1) there is less vertical space between the first and second line of the column header, produced with \\[-3pt] at the end of the first line; 2) Bold should be used for column headers; \boldmath is used to bold math expressions.

```
\begin{table}
\caption{Summary of Correlations Between Ice Cores and
Indices }
\centering
\begin{tabular} {lcccc}
\hline
&\bf Time&\bf 12-Month&\bf Pearson's&\bf Spearman \\[-3pt]
\bf Site
&\bf Span&\bf Period&\boldmath$R$&\bf Rank Order \\
\hline
GITS & 1865--1995&Feb.--Jan.&-0.316&-0.298 \\
Camp Century & 1865--1974&July--June&-0.320&-0.298 \\
NASA-U & 1865--1994&Sept.--Aug.&-0.353&-0.342 \\
\hline
\end{tabular}
\end{table}
```

## 16.1: Summary of Correlations Between Ice Cores and Indices

Site	Time Span	12-Month Period	Pearson's $R$	Spearman Rank Order
GITS	1865–1995	Feb.–Jan.	-0.316	-0.298
Camp Century	1865–1974	July–June	-0.320	-0.298
NASA-U	1865–1994	Sept.–Aug.	-0.353	-0.342

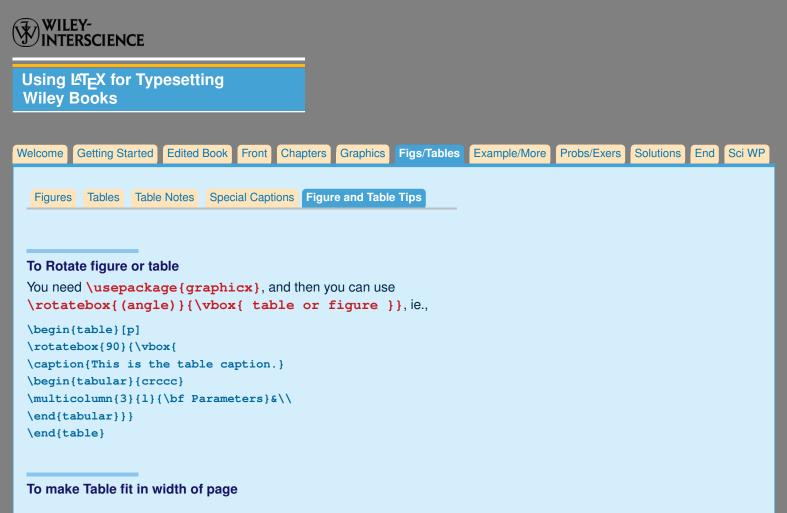


#### 16.1: Summary of Correlations Between Ice Cores and Indices<sup>*a,b*</sup>

Site	Time Span	12-Month Period	Pearson's R	Spearman Rank Order
GITS	1865–1995	Feb.–Jan.	-0.316	-0.298
Camp Century	1865–1974	July–June	-0.320	-0.298
NASA-U <sup>a</sup>	1865–1994	SeptAug.	-0.353	$-0.342^{b}$

<sup>a</sup> Data supplied in NASA report N-234-456.

<sup>b</sup> More recent data may be found on-line at http://www.nasa.gov.



- advance\tabcolsep-4pt will subtract 8 points between table columns, an useful trick to know. The default is \tabcolsep=6pt, for 12pt space between columns.
- Default font size for tables is \small. If you want the table to use a smaller font, you can set \let\tablefontsize\footnotesize, inside \begin{table}...\end{table}.

## **Tip: Page Placement for Figures and Tables**

A hint to help with page makeup: Often authors have problems with keeping tables or figures close to their first mention in the text. A tool to help with this problem is putting more than one illustration and caption in the same figure; or caption and table in one table environment. This may help position your illustrations closer to where they are mentioned in the text. You can either put these grouped illustrations at the top ([t]) or bottom ([b]) of the page, or put them on their own page ([p]).

```
\begin{figure}[t]
```

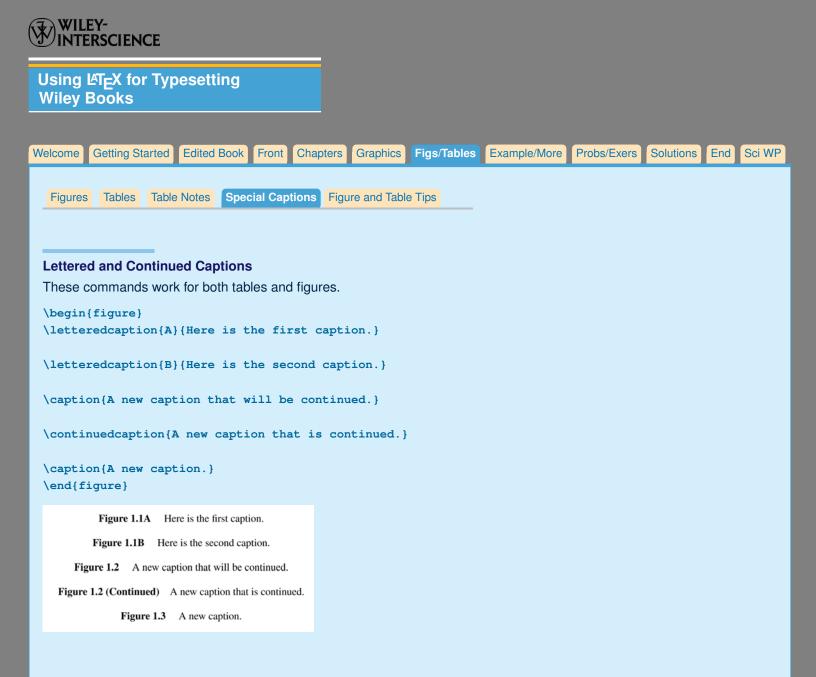
```
\includegraphics[width=.8\textwidth]{samp}
\caption{First caption\label{firstfig}}
```

```
\includegraphics[width=.6\textwidth]{samp2}
\caption{Caption for second illustration}
\label{secondfig}
```

```
\includegraphics[width=.7\textwidth]{samp3}
\caption{Caption for third illustration}
\label{thirdfig}
```

```
\end{figure}
```

This works with tables as well, where you can put a number of tables and captions within one **\begin{table}** ... **\end{table}** environment.





Use Black's law [Equation (6.3)] to estimate the reduction in useful product life if a metal line is initially run at 55°C at a maximum line current density.

## **Theorems and Proof**

Wileysix and wileysev provide the standard Theorem environment: \newtheorem { theorem } { Theorem }

```
To make your own theorem type environment, follow this form: 
\newtheorem{<name you use>}{<name on page>}.
```

```
For example, \newtheorem {lemma} {Lemma}
used \begin {lemma} Sample \end {lemma} produces
```

#### Lemma 1 Sample

If you want chapter numbers as well as theorem numbers, you can add [chapter] at the end of each, ie, \newtheorem{theorem} {Theorem} [chapter]

**\begin{proof}**...**\end{proof}** will give you the proof environment, ending with a black square.

## To Illustrate an Algorithm

The **\begin{algorithm**} ... **\end{algorithm**} is a simple algorithm environment.

 Algorithm number may be labeled and cross-referenced; Spaces and blank lines will be preserved; Math and font changes may be used.

See example algorithm code and results in w-bksamp.

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۷	Velcome Getting Started Edited Book Front Chapters Graphics Figs/Tables Example/More Probs/Exers Solutions End Sci WP
	Problems Exercises
	Problem Sets
	The commands need to make problem sets are: \begin{problems}\end{problems},  and
	You may make side-by-side problems using the command <b>{}</b> with two arguments; and side-by-side sub problems using the command <b></b> . Here is an example:
	<pre>\begin{problems} \prob For Hooker's data, Problem 1.2, use the Box and Cox and Atkinson procedures to determine a appropriate transformation of PRES in the regression of PRES on TEMP. find \$\hat\lambda\$, \$\tilde\lambda\$, the score test, and the added variable plot for the score. Summarize the results.</pre>
	\prob The following data were collected in a study of the effect of dissolved sulfur on the surface tension of liquid copper (Baes and Killogg, 1953).
	$\subprob$ Find the transformations of \$X\$ and \$Y\$ sot that in the transformed scale the regression is linear.
	<pre>\subprob Assuming that \$X\$ is transformed to \$\ln(X)\$, which choice of \$Y\$ gives better results, \$Y\$ or \$\ln(Y)\$? (Sclove, 1972).</pre>
	\sidebysidesubprob{In the case of \$\alpha_1\$?}{In the case of \$\alpha_2\$?}
	\prob Examine the Longley data, Problem 3.3, for applicability of assumptions of the linear model.
	<pre>\sidebysideprob{In the case of \$\Gamma_1\$?}{In the case of \$\Gamma_2\$?} \end{problems}</pre>
	PROBLEMS
	<b>3.1</b> For Hooker's data, Problem 1.2, use the Box and Cox and Atkinson procedures to determine a appropriate transformation of PRES in the regression of PRES on TEMP. Find $\hat{\lambda}$ , $\tilde{\lambda}$ , the score test, and the added variable plot for the score. Summarize the results.
	<ul> <li>3.2 The following data were collected in a study of the effect of dissolved sulfur on the surface tension of liquid copper (Baes and Killogg, 1953).</li> <li>a) Find the transformations of X and Y sot that in the transformed scale the regression is linear.</li> <li>b) Assuming that X is transformed to ln(X), which choice of Y gives better results, Y or ln(Y)? (Sclove, 1972).</li> </ul>
	c) In the case of $\alpha_1$ ? d) In the case of $\alpha_2$ ? <b>33</b> Examine the Longley data Problem 3.3 for applicability of assumptions of
	<b>3.3</b> Examine the Longley data, Problem 3.3, for applicability of assumptions of the linear model.
	<b>3.4</b> In the case of $\Gamma_1$ ? <b>3.5</b> In the case of $\Gamma_2$ ?

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	Problems Exercises						
	Exercises						
	Very similar to Problems, the commands need to make Exercises are: \begin{exercises}\end{exercises},  and						
	You may make side-by-side exercises using the command <b>{</b> with two arguments; and side-by-side sub problems using the command <b>}</b> . For example:						
	<pre>\begin{exercises} \exer For Hooker's data, Exercise 1.2, use the Box and Cox and Atkinson procedures to determine a appropriate transformation of PRES in the regression of PRES on TEMP. find \$\hat\lambda\$, \$\tilde\lambda\$, the score test, and the added variable plot for the score. Summarize the results.</pre>						
	\exer The following data were collected in a study of the effect of dissolved sulfur on the surface tension of liquid copper (Baes and Killogg, 1953).						
	\subexer Find the transformations of \$X\$ and \$Y\$ sot that in the transformed scale the regression is linear.						
	\subexer Assuming that \$X\$ is transformed to \$\ln(X)\$, which choice of \$Y\$ gives better results, \$Y\$ or \$\ln(Y)\$? (Sclove, 1972).						
	\sidebysidesubexer{In the case of \$\Delta_1\$?}{In the case of \$\Delta_2\$?}						
	\exer Examine the Longley data, Problem 3.3, for applicability of assumptions of the linear model.						
	\sidebysideexer{In the case of \$\Gamma_1\$?}{In the case of \$\Gamma_2\$?} \end{exercises}						
	EXERCISES						
	<b>3.1</b> For Hooker's data, Exercise 1.2, use the Box and Cox and Atkinson procedures to determine a appropriate transformation of PRES in the regression of PRES on TEMP. find $\hat{\lambda}$ , $\tilde{\lambda}$ , the score test, and the added variable plot for the score. Summarize the results.						
	<ul> <li>3.2 The following data were collected in a study of the effect of dissolved sulfur on the surface tension of liquid copper (Baes and Killogg, 1953).</li> <li>a) Find the transformations of X and Y sot that in the transformed scale the regression is linear.</li> <li>b) Assuming that X is transformed to ln(X), which choice of Y gives better results, Y or ln(Y)? (Sclove, 1972).</li> </ul>						
	c) In the case of $\Delta_1$ ? d) In the case of $\Delta_2$ ? <b>3.3</b> Examine the Longley data, Problem 3.3, for applicability of assumptions of						

the linear model.

**3.4** In the case of  $\Gamma_1$ ? **3.5** In the case of  $\Gamma_2$ ?

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Entering Solutions, and Solution section
Here is a feature that may save you a lot of trouble:
A solution section at the end of your book, and the ability to enter Solutions within the Problem or Exercise sections.
The solution will not print where it is typed in, but only at the end of the book, after the commands shown below.
You must enter \usepackage {answers} before \begin{document}.
<ul> <li>Then either in the Problems or the Exercises environment, enter the solution to each or selected problems or exercises, after either the \prob command and problem text, or after the \exer command and exercise text.</li> </ul>
\begin{sol} Solution text \end{sol}
For example:
\begin{problems} \prob
First problem
\begin{sol} Here is the solution to the first problem. \end{sol}
\prob Here is the second problem.
\begin{sol} Here is the second solution \end{sol}
\end{problems}
At the end of the book type in \solutions
Then, for each chapter or appendix where solutions were written, you should write
or with the chapter number or appendix letter as the argument:
<pre>\solutions \solutionchap{1} \solutionchap{2} \solutionappendix{A} \solutionappendix{B}</pre>

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References       Appendices       Index         End of Book References       BibTeX							
References at the End of the Book							
References are done using the standard LaTEX co	ommands:						
\begin{references}{100.}							
\bibitem{kilby}J. S. Kilby, ''Invention of the Integrated IEEE Trans. Electron Devices,} {\bf ED-23,} 648 (1976).	Circuit,'' {\it						
\bibitem{hamming}R. W. Hamming, {\it Numerical Methods for Engineers}, Chapter N-1, McGraw-Hill, New York, 1962.	r Scientists and						
 \end{references}							
REFERENCES							
		-					
<ol> <li>J. S. Kilby, "Invention of the Integrated Circuit," <i>IEEE Trans. Electron Dev</i> 23, 648 (1976).</li> </ol>							
<ol> <li>R. W. Hamming, Numerical Methods for Scientists and Engineers, Cha McGraw-Hill, New York, 1962.</li> </ol>	pter N-1,						
or, for the named style of references, using \bi	bitem[symb	olic name	]{ <biblabe< th=""><th>1&gt;}:</th><th></th><th></th><th></th></biblabe<>	1>}:			
Sample named reference citation: \cite{xkilby}, \cite{xHu}.							
<pre>\begin{references}{hum86} \bibitem[kil76]{xkilby}J. S. Kilby, ''Invention of the Integrated Circuit,'' {\it IEEE Trans. Elec {\bf ED-23,} 648 (1976).</pre>	tron Devices,}						
<pre>\bibitem[hum86]{xHu}J. Lee, K. Mayaram, and C. Hu, ''A Theoret Study of Gate/Drain Offset in LDD MOSFETs'' {\it IEEE Electron Device Lett.,} {\bf ED (1986).</pre>							
\end{references}							
Sample named reference citation: [kil76], [hum86].							
REFERENCES		_					
[kil76] J. S. Kilby, "Invention of the Integrated Circuit," IEEE Trans. Electron Devic	es.						
<ul> <li>[ki176] J. S. Kiby, Internation of the integrated circuit, <i>IEEE Trans. Electron Device</i> ED-23, 648 (1976).</li> <li>[hum86] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LI MOSFETs" <i>IEEE Electron Device Lett.</i>, EDL-7(3), 152 (1986).</li> </ul>							

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# BibT<sub>E</sub>X

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To use BibTeX follow these steps:

- 1. Make a xxx.bib file, with 'xxx' being any file name you choose. This is the database file including all the references.
- Now you must choose a bibliography style with \bibliographystyle{<name of style>}

Wiley doesn't require any particular bibliography style, so it is up to you to decide on a bibliography style that you like.

You must have a matching .bst file for any style you choose. If you don't have the .bst file on your system you should be able to find it online. Download the file and save in the same directory where you are making your book.

- Next you must write \bibliography{zzz}, with 'zzz' being the name of the .bib database file that you have written. You can also use more than one .bib file, in which case you must separate the filenames with a comma: \bibliography{zzz,yyy},
- 4. Using the label names of entries in the .bib database file, you can now write either \cite{<label>} or \nocite{<label>} for each reference that you want to appear in the bibliography.

\cite will produce a printed citation, \nocite will not print, but in either case the entry in the .bib file matching the label name will appear in the finished bibliography.

- 5. Run LaTeX on the .tex document, producing the usual .aux file.
- 6. Run BibTeX on the .tex document, producing a .bbl file,
- 7. And, finally, run LaTeX on the .tex file, and Voila! your bibliography will appear where you have written \bibliography{(your bib file name)}.

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References Appendices Index								
Appendices								
Unlike standard LaTEX, with wileysix and wileysev.cls, you should use the appendix command with an argument: \appendix{ <optional title="">}</optional>								
Remember that if you do not use a title, supply facing curly brackets: <a href="https://appendix{">\appendix{</a> }								
Here are some samples:								
<pre>\appendix{This Is the Appendix Title} This is an appendix with a title. \begin{equation}</pre>								
\alpha\beta\Gamma\Delta \end{equation}\inxx{Appendix,Title}								
APPENDIX A								
THIS IS THE APPENDIX TITLE								

This is an appendix with a title.

 $lphaeta\Gamma\Delta$ 

(A.1)

and

\appendix{}
This is an appendix without a title.

# APPENDIX B

This is an appendix without a title.

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References       Appendices       Index         Standard LaTeX Index       Author Index (Optional)       More Index Tips					
Making your Index					
1. No commands needed before \begin{document}					
<ol> <li>Enter \index{term} or \index{term!subterm} or \index{term!subterm!subterm}</li> <li>Be Careful! no spaces before or after the '!' or your sub terms will not alphabetize correctly.</li> </ol>					
3. Run LaTeX, producing filename .idx					
<ol> <li>Then, on the command line, type 'makeindx filename' which will produce filename.ind. You can edit this file if you want to change anything in it.</li> </ol>					
5. Now, index will appear where you type this command: \printindex					
<pre>\documentclass{wileysix} %% or \documentclass{wileysev} \usepackage{makeidx} \makeindex \begin{document} Borden's symbol, Elsie the cow, is a Jersey, a kind of cow characterized by a caramel colored coat and large dark eyes.\index{Cows}\index{Cows!Jersey}\index{Cows!Jersey!Brown eyed} \printindex \end{document}</pre>					

# **More Information**

Comprehensive information on making an index in  $\ensuremath{\mathbb{P}} T_E\!X$  is found here:

http://en.wikibooks.org/wiki/LaTeX/Indexing

which is part of the general  $\ensuremath{\mathbb{E}}\xspace T_E\!X$  reference:

http://en.wikibooks.org/wiki/LaTeX

See the wikibook for examples of how to enter index commands.

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References     Appendices     Index       Standard LaTeX     Index     Author Index (Optional)     Model	ore Index Tips			

## **Author Index**

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Please follow these steps:

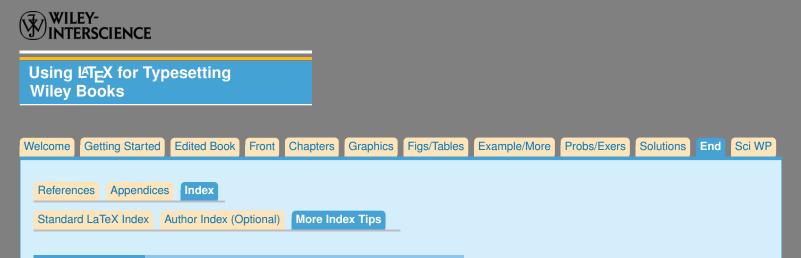
- 1. To make an author index, you must use the package multind.
- Type in \makeindex{<file name>} for each index you want, and enter your index terms.

```
\usepackage{multind}
\makeindex{topic}
\makeindex{authors}
\begin{document}
. . .
% add index terms to your book, ie,
\index{topic}{A term to go to the topic index}
\index{authors}{Put this author in the author index}
    \makeindex{topic} will open a file called topic.idx,
    \makeindex{authors} will open a file called authors.idx
  3. Pass the file name as the first argument to every index command:
    \index{<file name>}{<index term>}
    This will cause LaTeX to send the index term to a file with the same name.
  4. Run La File, you will see that there are index terms have been written into the
    appropriate <index name>.idx file. You can open this file to see the terms if you would
    like to.
  5. On the command line type makeindx <filename>
    In this case, makeindx topic and then makeindx authors.
```

- 6. Now you will have <index name>.ind In this case: topic.ind, and authors.ind.
- 7. To print the indices using the command \multiprintindex{<file name>} as you see here:

```
%% this is a Wiley command:
\multiprintindex{topic}{Topic index}
\multiprintindex{authors}{Author index}
```

. . .



## Index Tips: Enter terms carefully, Edit the .ind file

1. When entering index terms, be careful to be consistent and use either upper or lower case versions of the term being indexed.

Be Careful! no spaces before or after the '!' or your sub terms will not alphabetize correctly.

- You can edit the .ind file to move terms to different places in the file, to eliminate identical terms with one uppercase and one lowercase. It is worthwhile looking through your ind file or files carefully, and authors usually do so.
- 3. You can add letters between alphabetical sections of your index (optional),

\begin{theindex}

```
\iletter{a}
  \item Abrupt changes, 2
  \item Activation function, 275, 276, 281, 283
```

...to get an effect like this:

н	J				
Haar wavelet, 2, 110, 240	Japanese gross national product, 196				
Hamming filter, 21	Japanese Yen, 311				
Hanning filter, 21	Jordan network, 291				
Hard thresholding, 5	JPY-USD price series, 147-149, 263, 26				
Heisenberg uncertainty principle, 99					
Hessian matrix, 298 Heterogeneous market	к				
high-frequency shock, 10	Kalman filter, 16				
low-frequency shock, 10	background of, 54				
Hidden layer, 279, 280	Bayesian vector autoregression, 84				

4. On the last page of the index, you can make the two columns the same length (balance the columns), by running Large X on your book, and seeing where you think the first column should break. Enter \vfill\eject at that point, run Large X again and try again if it isn't balanced correctly the first time.

```
\item viscoelastic materials, 165, 167
\item viscosity of phase $\alpha $, 154
\item viscous incompressible fluids: steady-states, 196
\vfill\eject
\item viscous stress, 191
\item volume fraction, 130
```

You can also add or subtract space around **indexspace** to help balance the columns correctly.

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Scientific WorkPlace	Getting Started	Entering LaTeX C	ommands Fonts				

## Using Scientific Workplace 5.5 with WileySix and WileySev

However, unless the .tex file is recompiled using a LATEX system that can use PostScript font calls, the author must use only Computer Modern fonts, which are fine for math but not optimal for final book production.

The remedy is that the file can be re-LaTeXed using LaTeX outside of SWP. Then the PostScript font calls may be used with **\usepackage{w-bookps}**. Although it is unlikely that this will be necessary, this file may be edited so that the font calls match the PostScript font names on your system. See comments at the top of w-bookps.sty.

## **Differences when using SWP**

You will see references in the documentation to both font issues and the use of the template file.

Fonts Don't worry about fonts as you make your book in SWP. After you are finished, you can save your book as "portable latex", edit the .tex file to include

\usepackage {w-bookps}, and then run LaTeX on your book outside of Scientific WorkPlace.

- **Template file** When you start your SWP document, you use wileysix.shl or wileysev.shl. These are not template files, so you will have to check the documentation and sample pages to see the Wiley commands that you will need to enter.
- **Sample Pages** View sample pages, w-bksamp.pdf, that show the code on the left page, and the results on the right, for all the commands in this package.



## Wiley Files Used with SWP

Concise explanation of how to use wileysix.cls and wileysev.cls with SWP SWP-book.txt The basic macro files, identical to that used outside of SWP. WileySix.cls WileySev.cls Shell files used by SWP: WileySix.shl WileySev.shl

Using WileySix.cls and WileySev.cls with SWP

```
Drop these files into directory \swp55\shells\books\swp
WileySix.shl
WileySev.shl
Drop these files directory \swp55
WileySix.cls
WileySev.cls
```

Step 1: Drop these files into appropriate directories: If your base SWP directory is other than swp55, please edit the shl file and replace instances of swp55 with the correct name of your base SWP directory.

Step 2: Setting Defaults in SWP Start Scientific Workplace, then

```
Under Tools
==>> User Setup ==> Files
In the Open Type: bring up-- LaTeX(*.tex)
In the Save As Type: bring up-- Portable LaTeX(*.tex)
Click OK
```

Step 3: Starting your book To start your document:

```
In the File menu, click New
When the New window pops up,
    under Shell Directories: highlight Books
    under Shell Files: highlight wileysix or wileysev
    Click OK
Use 'Save as' under the File menu, to give this file the name you want.
```

Try doing Preview immediately. If you get error messages, please check, (1) To see if you dropped wileysix.cls or wileysev.cls into the base SWP directory; and (2) If your base SWP directory is other than swp55, please edit your .shl file to replace swp55 with the directory name where SWP is located.

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Scientific WorkPlace Getting Started Entering La	TeX Commands Fonts

# Entering LaTeX Commands when using SWP

Although you can pick many commands from the Tag menu and thus don't have to type them in, there are some commands that are included in the wileysix.cls or wileysev.cls files, and shown in this documentation, that are not found on that menu. In addition there may be other circumstances in which you would like to enter a  $\mu$ T<sub>E</sub>X command, i.e.,

## \setcounter{page}{<number>}

In SWP, you are not allowed to simply type LATEX commands into your file. To include LaTeX commands, at the place in your text where you would like to use them, do the following:

Click on the Insert button, then go to ==> "Typeset Object" ==> "TeX Field"

A window will open where you can enter LaTeX commands.

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	Scientif	ic WorkPlace	Getting Started	Entering LaTeX	Commands	Fonts				

# PostScript Fonts when using SWP

Using the default fonts, your book will be typeset using ComputerModern fonts.

Your book will look much better, and more professional, if you use PostScript fonts.

To typeset your book using PostScript fonts you must run LATEX on your files outside of Scientific Workplace. Fortunately, when using SWP, you can save your files in a form (Portable LaTeX File) that will be understood by any standard LATEX System.

To rerun your file produced with SWP, you need to:

Type in

```
\usepackage{w-bookps}
\usepackage{graphicx}
```

Your file is then ready to run with  $\[\]{ETEX}$  outside of SWP in order to produce your book with PS fonts.