

# RTPbond - Strange things RTP

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# 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 if it were 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 command. Since the introduction chapter appears before the `mainmatter` TeX field, it is again an unnumbered chapter. The primary difference between the preface and the introduction in this sample 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

## About the Standard Latex Book Class

This is the body (mainmatter) of the Standard LaTeX Book document.

The front matter has a number of sample entries that you should replace with your own.

Replace this text with the body of your book. Do not delete the `mainmatter` TeX field found above in a paragraph by itself or the numbering of different objects will be wrong.

The typesetting specification selected by this document uses the default class options. There are, however, a number of class options. The available options include setting the paper size and the point size of the font used in the body of the document etc. Details are given as comments right after the `documentclass` command.



## Chapter 2

# The Most Important Features of this Document

### 2.1 Section

Use the `\section{Section}` command for major sections, and the `\subsection{Subsection}` command for subsections, etc.

#### 2.1.1 Subsection

This is just some text under a subsection.

##### Subsubsection

This is just some text under a subsubsection.

**Subsubsubsection** This is just some text under a subsubsubsection.

**Subsubsubsubsection** This is just some text under a subsubsubsubsection.

### 2.2 Typesetting Commands

Select a part of the text then click on the button Emphasize (H!), or Bold (Fs), or Italic (Kt), or Slanted (Kt) to typeset *Emphasize*, **Bold**, *Italics*, *Slanted* texts.

You can also typeset Roman, Sans Serif, SMALL CAPS, and Typewriter texts.

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



(After selecting the text click on Insert, Code Environments, Code.)

## 2.3 Mathematics and Text

It holds [1] the following

**Theorem 1** (*The Curreant minimax principle.*) *Let  $T$  be completely continuous selfadjoint operator in a Hilbert space  $H$ . Let  $n$  be an arbitrary integer and let  $u_1, \dots, u_{n-1}$  be an arbitrary system of  $n - 1$  linearly independent elements of  $H$ . Denote*

$$\max_{\substack{v \in H, v \neq 0 \\ (v, u_1) = 0, \dots, (v, u_{n-1}) = 0}} \frac{(Tv, v)}{(v, v)} = m(u_1, \dots, u_{n-1}) \quad (2.1)$$

*Then the  $n$ -th eigenvalue of  $T$  is equal to the minimum of these maxima, when minimizing over all linearly independent systems  $u_1, \dots, u_{n-1}$  in  $H$ ,*

$$\mu_n = \min_{u_1, \dots, u_{n-1} \in H} m(u_1, \dots, u_{n-1}) \quad (2.2)$$

The above equations are automatically numbered as equation (2.1) and (2.2).

## 2.4 Lists Environments

You can create numbered, bulleted, and description lists (Use the Itemization or Enumeration buttons, or click on the Insert menu then chose an item from the Enumeration submenu):

1. List item 1
2. List item 2
  - (a) A list item under a list item.
  - (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.

**Bunyip** Mythical beast of Australian Aboriginal legends.

## 2.5 Theorem-Like Environments

The following theorem-like environments (in alphabetical order) are available in this style.

**Acknowledgement 2** *This is an acknowledgement*

**Algorithm 3** *This is an algorithm*

**Axiom 4** *This is an axiom*

**Case 5** *This is a case*

**Claim 6** *This is a claim*

**Conclusion 7** *This is a conclusion*

**Condition 8** *This is a condition*

**Conjecture 9** *This is a conjecture*

**Corollary 10** *This is a corollary*

**Criterion 11** *This is a criterion*

**Definition 12** *This is a definition*

**Example 13** *This is an example*

**Exercise 14** *This is an exercise*

**Lemma 15** *This is a lemma*

**Proof.** This is the proof of the lemma. ■

**Notation 16** *This is notation*

**Problem 17** *This is a problem*

**Proposition 18** *This is a proposition*

**Remark 19** *This is a remark*

**Summary 20** *This is a summary*

**Theorem 21** *This is a theorem*

**Proof of the Main Theorem.** This is the proof. ■

## Appendix A

# The First Appendix

The `\appendix` command should be used only once. Subsequent appendices can be created using the `Chapter` command.





## Appendix B

# The Second Appendix

Some text for the second Appendix.

This text is a sample for a short bibliography. You can cite a book by making use of the command `\cite{KarelRektorys}`: [1]. Papers can be cited similarly: [2]. 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].



# Bibliography

- [1] Rektorys, K., *Variational methods in Mathematics, Science and Engineering*, D. Reidel Publishing Company, Dordrecht-Holland/Boston-U.S.A., 2th edition, 1975
- [2] BERTÓTI, E.: *On mixed variational formulation of linear elasticity using nonsymmetric stresses and displacements*, International Journal for Numerical Methods in Engineering., **42**, (1997), 561-578.
- [3] SZEIDL, G.: *Boundary integral equations for plane problems in terms of stress functions of order one*, Journal of Computational and Applied Mechanics, **2**(2), (2001), 237-261.
- [4] CARLSON D. E.: *On Günther's stress functions for couple stresses*, Quart. Appl. Math., **25**, (1967), 139-146.



# 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.