

# The Full Title of an AMS Book or Monograph

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*Dedicated to Professor XY*

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The Author thanks J. Smith.

ABSTRACT. This is a sample document which shows the most important features of the AMS Book or Monograph Article class.

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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.



## **Part 1**

### **The First Part**





## CHAPTER 1

# About the AMS Book or Monograph Class

This is the body (mainmatter) of the AMS Book or Monograph sample 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

# Features of this Sample Document

### 1. Section

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

**1.1. Subsection.** This is just some text under a subsection.

1.1.1. *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. 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.

You can apply the size tags – Format menu, Font size submenu – tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

You can use the `\begin{quote}` etc. `\end{quote}` environment for typesetting short quotations. Select the text then click on Insert, Quotations, 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*

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

The Quotation environment is used for quotations of more than one paragraph. Following is the beginning of *The Jungle Books* by Rudyard Kipling. (You should select the text first then click on Insert, Quotations, Quotation):

It was seven o'clock of a very warm evening in the Seeonee Hills when Father Wolf woke up from his day's rest, scratched himself, yawned and spread out his paws one after the other to get rid of sleepy feeling in their tips. Mother Wolf lay with her big gray nose dropped across her four tumbling, squealing cubs, and the moon shone into the mouth of the cave where they all lived. "*Augrh*" said Father Wolf, "it is time to hunt again." And he was going to spring down hill when a little shadow with a bushy tail crossed

the threshold and whined: “Good luck go with you, O Chief of the Wolves; and good luck and strong white teeth go with the noble children, that they may never forget the hungry in this world.”

It was the jackal—Tabaqui the Dish-licker—and the wolves of India despise Tabaqui because he runs about making mischief, and telling tales, and eating rags and pieces of leather from the village rubbish-heaps. But they are afraid of him too, because Tabaqui, more than any one else in the jungle, is apt to go mad, and then he forgets that he was afraid of anyone, and runs through the forest biting everything in his way.

Use the Verbatim environment if you want L<sup>A</sup>T<sub>E</sub>X to preserve spacing, perhaps when including a fragment from a program such as:

```
#include <iostream>          // < > is used for standard libraries.
void main(void)              // ''main'' method always called first.
{
    cout << ''This is a message.'';
                                // Send to output stream.
}
```

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

### 3. Mathematics and Text

It holds [1] the following

THEOREM 1. (*The Currant 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

$$(3.1) \quad \max_{\substack{v \in H, v \neq 0 \\ (v, u_1)=0, \dots, (v, u_{n-1})=0}} \frac{(Tv, v)}{(v, v)} = m(u_1, \dots, u_{n-1})$$

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  $H$ ,

$$(3.2) \quad \mu_n = \min_{u_1, \dots, u_{n-1} \in H} m(u_1, \dots, u_{n-1})$$

The above equations are automatically numbered as equation (3.1) and (3.2).

### 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.

## 5. Theorem-Like Environments

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

ACKNOWLEDGEMENT 1. *This is an acknowledgement*

ALGORITHM 1. *This is an algorithm*

AXIOM 1. *This is an axiom*

CASE 1. *This is a case*

CLAIM 1. *This is a claim*

CONCLUSION 1. *This is a conclusion*

CONDITION 1. *This is a condition*

CONJECTURE 1. *This is a conjecture*

COROLLARY 1. *This is a corollary*

CRITERION 1. *This is a criterion*

DEFINITION 1. *This is a definition*

EXAMPLE 1. *This is an example*

EXERCISE 1. *This is an exercise*

LEMMA 1. *This is a lemma*

PROOF. This is the proof of the lemma. □

NOTATION 1. *This is notation*

PROBLEM 1. *This is a problem*

PROPOSITION 1. *This is a proposition*

REMARK 1. *This is a remark*

SOLUTION 1. *This is a solution*

SUMMARY 1. *This is a summary*

THEOREM 2. *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.