

Mastering MATLAB®

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Preface

This book is about MATLAB[®]. If you use MATLAB or consider using it, *Mastering MATLAB* is for you. The text represents an alternative to learning MATLAB on your own, with or without the help of the documentation that comes with the software. The informal style of this book makes it easy to read, and, as the title suggests, it provides the tools you need to master MATLAB. As a programming language and data-visualization tool, MATLAB offers a rich set of capabilities for solving problems in engineering, scientific, computing, and mathematical disciplines. The fundamental goal of this text is to help you increase your productivity by showing you how to use these capabilities efficiently. To optimize the interactive nature of MATLAB, the material is generally presented in the form of examples that you can duplicate by running MATLAB as you read this book.

This text covers only topics that are of use to a general audience. The material presented here generally applies to all computer platforms. None of the *Toolboxes*, *Blocksets*, or other *Libraries* that are available for additional cost are discussed, although some are referred to in appropriate places. There are simply too many additional product items to consider in one book.

Since MATLAB continues to evolve as a software tool, this text focuses on MATLAB version 7.12. For the most part, the material applies to versions 6.x through 7.11 of MATLAB, as well as later versions. When appropriate, distinctions between versions are made.

We, the authors, encourage you to give us feedback on this book. What are the best features of the text? What areas need more work? What topics should be left out? What topics should be added? We can be reached at the e-mail address masteringmatlab@gmail.com. In addition, errata, all examples in the text, and other related material can be found at <http://www.masteringmatlab.com>

NEW TO THIS EDITION

Major changes from *Mastering MATLAB 7* (based on MATLAB version 7.0, Release 14, June 2004) were prompted by user feedback, changes and enhancements to MATLAB itself, increased availability of books on specialized aspects of MATLAB such as programming interfaces and Windows integration, and the desire for more examples in the text.

1. All chapters have been revised and updated for MATLAB version 7.12, Release 2011a, April 2011.
2. Chapter 32 (“Examples, Examples, Examples”) is revised and greatly expanded to provide even more helpful examples.

3. Many topics are rewritten to take advantage of new features available in MATLAB 7.12 and beyond.
4. Depreciated or obsolete functions have been removed or de-emphasized.
5. Appendices have been expanded to include changes in MATLAB functions and functionality from version 5.0 through version 7.12. These appendices help the user identify incompatibilities between versions so that MATLAB code can be written that runs seamlessly across many MATLAB versions.
6. Chapters on programming in C, Fortran, and Java along with Windows integration were dropped to make room for expanded examples and coverage of the new features of MATLAB 7.12.