Preface

In this book you will find a brief introduction to the LaTeX system for typesetting documents. LaTeX, usually pronounced "lay-teck," is widely used throughout science and engineering. It is available, free of charge, for most operating systems.

Because of its popularity, every year there is a new batch of students and researchers who want to pick up the rudiments of LaTeX. Although many books have been written about LaTeX, we feel that there is a niche for a short, lively introduction that covers the essential material, while avoiding unnecessary detail. (In practice, most LaTeX users get by with a small vocabulary of commands.)

The book is aimed squarely at beginners to LaTeX who wish to learn the basics with a minimum of fuss. Our main target audience is students and early career researchers faced with the prospect of producing a report, thesis, article, presentation, or poster for the first time. Previous incarnations of this book were used in undergraduate and postgraduate classes at the University of Dundee, the University of Strathclyde, and the International Centre for Mathematical Sciences in Edinburgh, and we have found the treatment to be suitable for a short course on mathematical typesetting with LaTeX (typically two hours of lectures and three hours of supervised computer laboratories). The first edition of this book was still proving popular 20 years after it was written, even though certain parts were looking dated. Following encouragement from the publishing team at SIAM, we have therefore produced this updated second edition.

We firmly believe that the best way to teach LaTeX is by example. Hence, a large part of the book consists of "before and after" illustrations showing the effect of LaTeX commands. Feedback on the first edition has made it clear to us that our intended readership values conciseness. So, in completely revising and updating the book, we have continued to be ruthless with the page count. In addition to refreshing our references to the online world, we have added significant new material on

- packages made available by the American Mathematical Society, including support for typesetting mathematical symbols and multiline displays (commands from these packages are indicated by ($\mathcal{AMS}$) in the index);

- the BibTeX program for creating a bibliography;

- the `beamer` package for creating presentations;

- the `a0poster` class for creating posters.

To maintain the humor-to-content ratio, there is also some extra nonsense at the end of Chapter 5.

The book is organized as follows. Chapter 1 motivates LATEX, introduces the key high-level concepts, and points to other available resources.

Chapter 2 deals with common low-level formatting commands, and Chapter 3 covers mathematical typesetting. Essential high-level commands are introduced in Chapter 4, which also gives tips on troubleshooting. In Chapter 5, more advanced issues are treated, including the use of packages.

Examples of complete LATEX documents are provided in Appendix A and Appendix B, and the production of slides and posters is treated in Appendix C and Appendix D. Finally, Appendix E lists some LATEX-related websites. The source files for the documents in Appendices A–D are available for download from SIAM's web page for this book, www.siam.org/books/OT148.

The first edition was prepared when both authors were at the University of Dundee. We thank the support staff, particularly Nick Dawes, for their technical expertise. Penny Davies commented on an almost-final version of the book, and numerous students provided feedback on the material. Nick Higham gave expert advice on many of the issues that we faced, and scrutinized several versions of the manuscript, including this new edition (on the implicit understanding that we would again refer to [5]).

Finally, we acknowledge the efforts of all those who have helped to make LATEX such a valuable tool for the scientific community, especially Donald Knuth [7], Leslie Lamport [8], and the team members involved in the LATEX3 Project.

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Scotland, July 1996
and July 2016

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