

ORDER YOUR INSPECTION COPY NOW

You may request an inspection copy of a textbook via the web, email, fax, or post:



www.cambridge.org/textbooks



inspectioncopy@cambridge.org



fax +44 (0)1223 326111



Please complete this form and return it to:

The Academic TB Dept, Cambridge University Press,
Cambridge CB2 2RU, UK

Title	ISBN
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

First Name Surname

Department

Academic Institution

Address

Postcode Country

Email address

Course Name(s)

Level Number of Students

Course Date Local Bookseller(s)

Our inspection copy policy

In the UK, Australia and New Zealand books are sent out for a maximum of 28 days, after which they must be returned or paid for if they are not adopted for a course of 12 or more students. Outside the UK, Australia and New Zealand, inspection copies are sent as desk copies free of charge. Not all titles are available for inspection in all countries. Lecturers must complete and return the **Reply Slip** enclosed with each book.

Books not yet published will be sent in the month of publication.

Purchasing Copies

Should you wish to purchase copies of this book, you can do so online via our website at www.cambridge.org/order or by phone +44 (0) 1223 326050, fax +44 (0) 1223 326111, or email directcustserve@cambridge.org When ordering, please quote the catalogue code.

Catalogue code: 16588

OTHER ESSENTIAL TEXTBOOKS IN THIS AREA FROM CAMBRIDGE

Graduate Text

Dynamical Systems and Numerical Analysis

Andrew Stuart, *University of Warwick*

This book unites the study of dynamical systems and numerical solution of differential equations.

For more information see:

<http://books.cambridge.org/0521645638.htm>

1999 228 x 152 mm 710 pp
0 521 64563 8 Paperback £29.95

A First Course in the Numerical Analysis of Differential Equations

A. Iserles, *University of Cambridge*

'... a well written and exciting book ... the exposition throughout the book is clear and very lively. The author's enthusiasm and wit are obvious on almost every page and I recommend the text very strongly indeed.'

J. Mackenzie, *Proceedings of the Edinburgh Mathematical Society*

'This is a well-written, challenging introductory text ... The soft cover edition is a terrific buy – I highly recommend it.'

Tom King, *Mathematics of Computation*

For more information see:

<http://books.cambridge.org/0521556554.htm>

1996 247 x 174 mm 396 pp 100 line diagrams 129 exercises
0 521 55655 4 Paperback £23.95

CAMBRIDGE
UNIVERSITY PRESS
www.cambridge.org

ISBN 0-521-98175-1



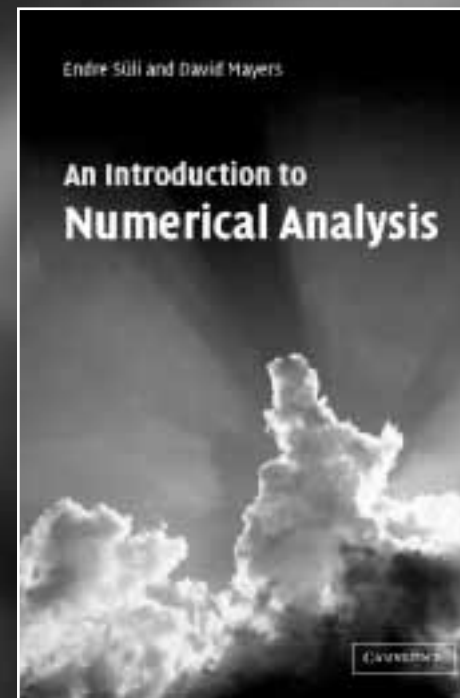
Printed in the United Kingdom
at the University Press, Cambridge

March 2003

CAMBRIDGE TEXTBOOKS

... all your students need to know

An Introduction to Numerical Analysis



Endre Süli
and
David Mayeres

Order your inspection copy now

CAMBRIDGE
UNIVERSITY PRESS

An Introduction to Numerical Analysis



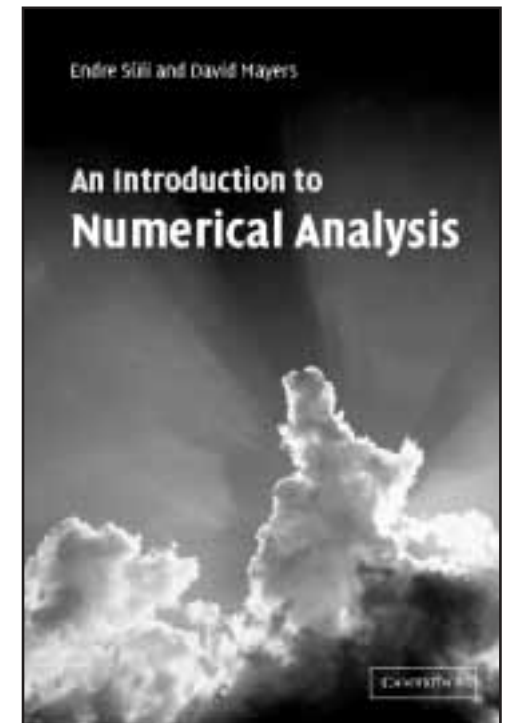
Endre Süli, *Oxford University*

David Mayer, *Oxford University*

Numerical analysis provides the theoretical foundation for the numerical algorithms we rely on to solve a multitude of computational problems in science. Based on a successful course at Oxford University, the authors cover a wide range of such problems whilst paying particular attention to the stability, accuracy, reliability and efficiency of numerical algorithms. This book is ideal as a text for students in the second year of a university mathematics course. It combines practicality in applications with high standards of rigour. Numerous exercises are provided, with solutions for instructors available from solutions@cambridge.org

Contents

1. Solution of equations by iteration; 2. Solution of systems of linear equations; 3. Special matrices; 4. Simultaneous nonlinear equations; 5. Eigenvalues and eigenvectors of a symmetric matrix; 6. Polynomial interpolation; 7. Numerical integration – I; 8. Polynomial approximation in the ∞ -norm; 9. Approximation in the 2-norm; 10. Numerical integration – II; 11. Piecewise polynomial approximation; 12. Initial Value Problems for ODEs; 13. Boundary Value Problems for ODEs; 14. The Finite Element Method; Appendix 1. An overview of results from real analysis; Appendix 2. WWW-resources.



- **Class tested and based on a course taught by the authors at Oxford University**
- **Motivational and contextual material brings the subject alive**
- **Ideal reference for those working in other fields**