

Advanced Numerical Methods

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Education

- Xi'an Jiaotong University, China, B.Eng, 1999
- Xi'an Jiaotong University, China, M.Eng, 2002
- National University of Singapore, Ph.D, 2007

Work Experience

- 2015.10 - present, Associate Professor, Southern University of Science and Technology
- 2014.10 – 2015.10, Scientist, Institute of High Performance Computing, Singapore
- 2011.10 – 2014.09, Scientist, Data Storage Institute , Singapore
- 2010.04 – 2011.10, Postdoctoral Associate, University of Sydney, Australia
- 2007.07 – 2010.04, Research Fellow, National University of Singapore, Singapore
- 2006.11 – 2007.07, Research Associate, Nanyang Technological University, Singapore

Teaching Assistant



- Ms. Zefan He (贺泽凡)
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- Computer Science and Engineering



- Mr. Qingmo Xie (谢庆墨)
- Email: 12331124@mail.sustech.edu.cn
- Mechanics and Aerospace Engineering



- Mr. Xiaokai Wu (吴晓凯)
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- Mechanics and Aerospace Engineering

群聊：2025 高等数值分析课程群



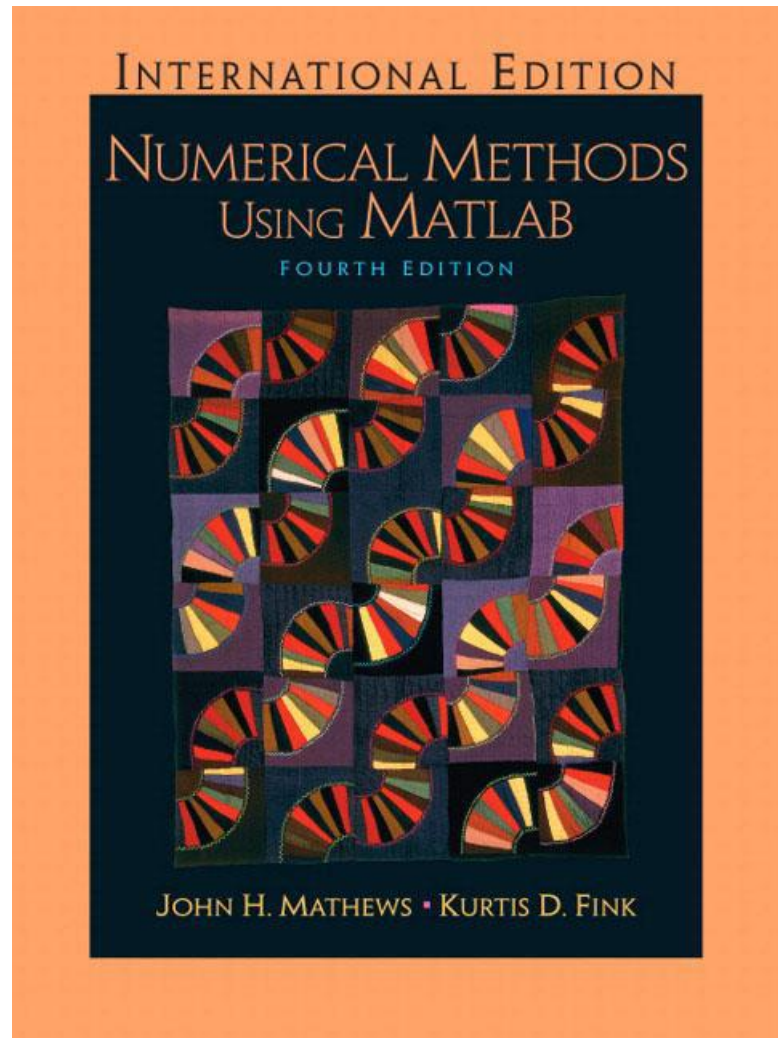
该二维码7天内(2月27日前)有效，重新进入将更新

Syllabus

- Preliminaries
- Solution to Nonlinear Equations
- Solution to Linear Systems
- Interpolation and Polynomial Approximation
- Curve fitting
- Numerical Differentiation
- Numerical Integration
- Numerical Optimization
- Solution of Differential Equations
- Solution of PDE

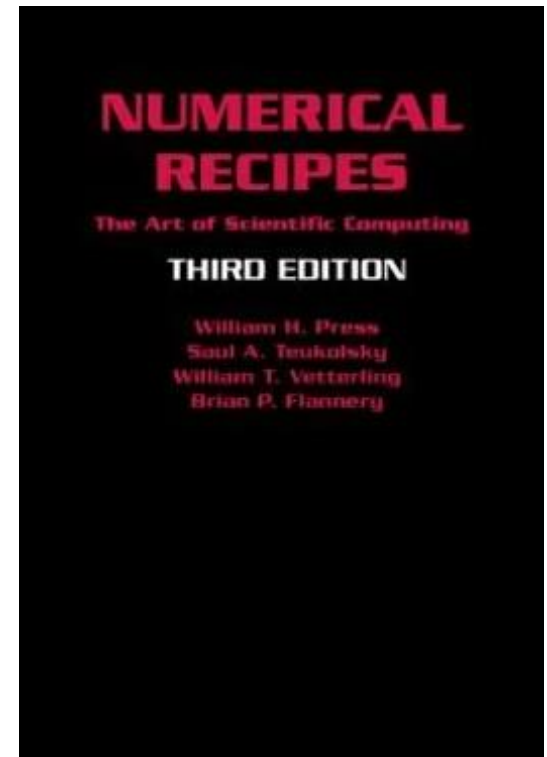
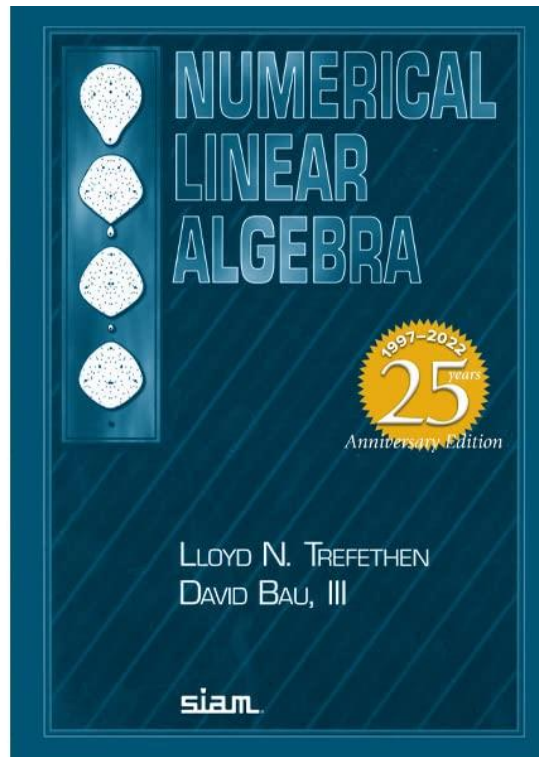
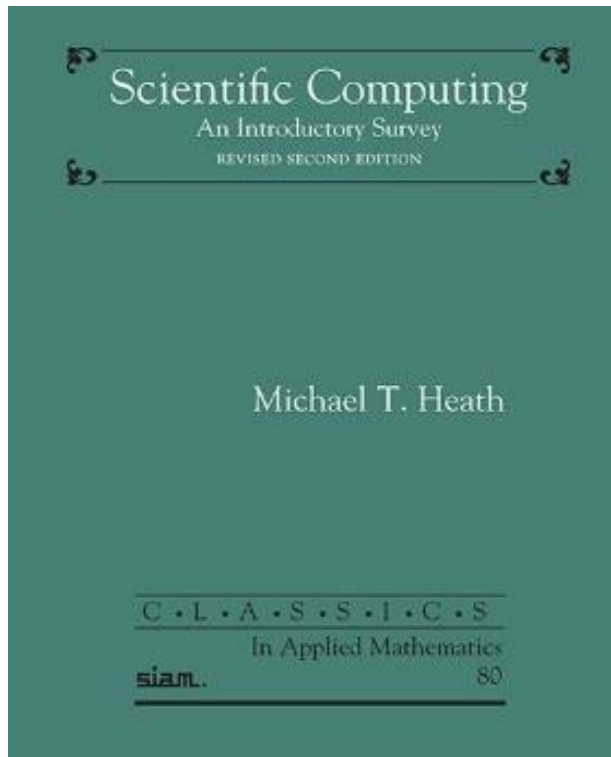
Textbook

- J. Mathews and Kurtis Fink, Numerical Methods Using MATLAB



References

- M. T. Heath, Scientific Computing - An Introductory Survey
- Trefethen, Numerical Linear Algebra, SIAM, 1997
- Press et al. Numerical Recipes – the Art of Scientific Computing
- Baidu, Zhihu, Bilibili, Stack Overflow, Math.Stackexchange.....



Evaluation

- Attendance 10% (Quiz)
 - Homework (Problems + Programming) 30%
 - Midterm Exam 25%
 - Final Exam 35%
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- You **fail** this course, if you **cheat** in exam, **plagiarize** homework, directly **copy codes** online for your programming.



Any Questions?