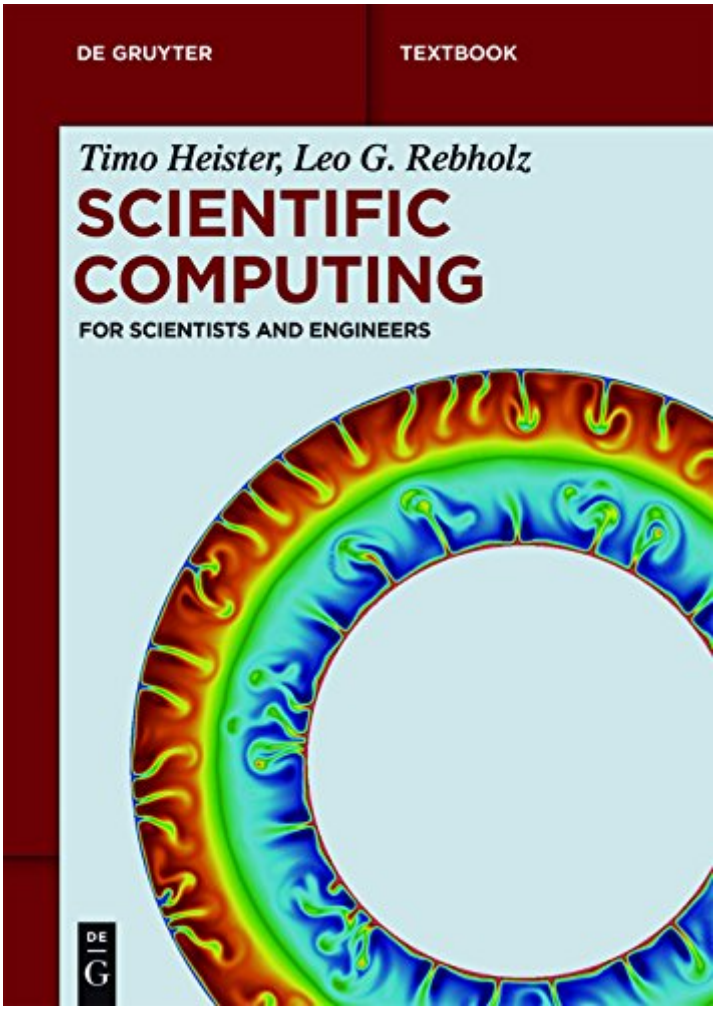
Scientific Computing: For Scientists And Engineers (De Gruyter Textbook)



Synopsis

Scientific Computing for Scientists and Engineers is designed to teach undergraduate students relevant numerical methods and required fundamentals in scientific computing. Most problems in science and engineering require the solution of mathematical problems, most of which can only be done on a computer. Accurately approximating those problems requires solving differential equations and linear systems with millions of unknowns, and smart algorithms can be used on computers to reduce calculation times from years to minutes or even seconds. This book explains: How can we approximate these important mathematical processes? How accurate are our approximations? How efficient are our approximations? Scientific Computing for Scientists and Engineers covers: An introduction to a wide range of numerical methods for linear systems, eigenvalue problems, differential equations, numerical integration, and nonlinear problems; Scientific computing fundamentals like floating point representation of numbers and convergence; Analysis of accuracy and efficiency; Simple programming examples in MATLAB to illustrate the algorithms and to solve real life problems; Exercises to reinforce all topics.

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Customer Reviews

as expected

Easy to read, and the coding is explained well.

I’m not sure if this book is not the most helpful or my teacher is insane.

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