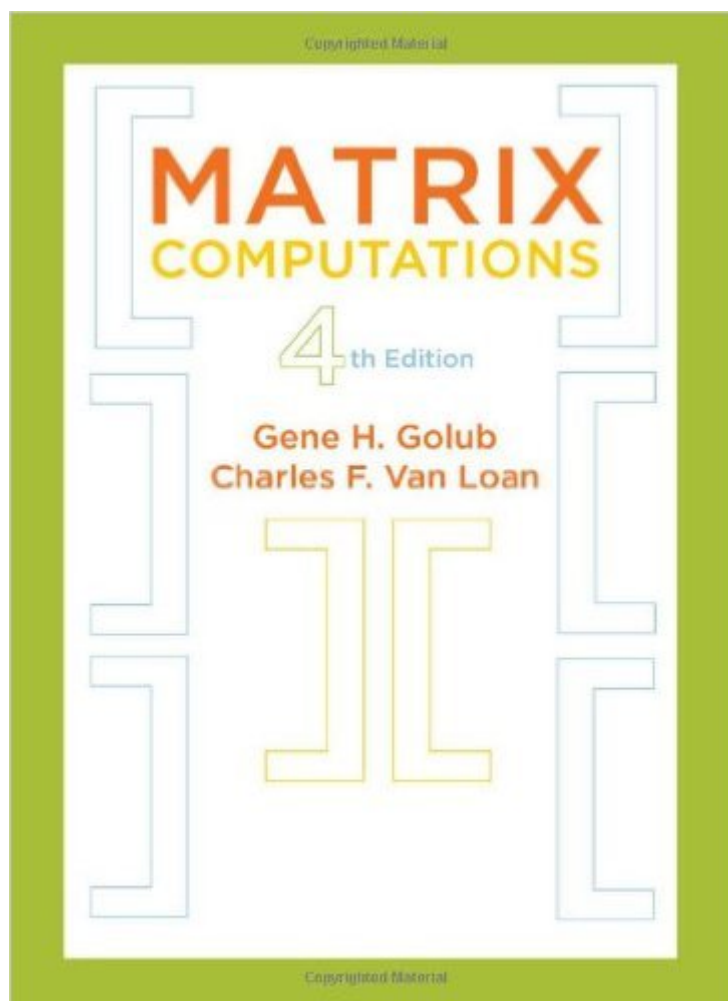


The book was found

Matrix Computations (Johns Hopkins Studies In The Mathematical Sciences)



Synopsis

The fourth edition of Gene H. Golub and Charles F. Van Loan's classic is an essential reference for computational scientists and engineers in addition to researchers in the numerical linear algebra community. Anyone whose work requires the solution to a matrix problem and an appreciation of its mathematical properties will find this book to be an indispensable tool. This revision is a cover-to-cover expansion and renovation of the third edition. It now includes an introduction to tensor computations and brand new sections on fast transforms, parallel LU, discrete Poisson solvers, pseudospectra, structured linear equation problems, structured eigenvalue problems, large-scale SVD methods, polynomial eigenvalue problems. Matrix Computations is packed with challenging problems, insightful derivations, and pointers to the literature—everything needed to become a matrix-savvy developer of numerical methods and software.

Book Information

Series: Johns Hopkins Studies in the Mathematical Sciences (Book 3)

Hardcover: 784 pages

Publisher: Johns Hopkins University Press; fourth edition edition (December 27, 2012)

Language: English

ISBN-10: 1421407949

ISBN-13: 978-1421407944

Product Dimensions: 7 x 1.8 x 10 inches

Shipping Weight: 3.9 pounds (View shipping rates and policies)

Average Customer Review: 4.3 out of 5 stars [See all reviews](#) (19 customer reviews)

Best Sellers Rank: #118,884 in Books (See Top 100 in Books) #6 in [Books > Science & Math > Mathematics > Matrices](#) #815 in [Books > Science & Math > Mathematics > Applied](#) #1186 in [Books > Textbooks > Science & Mathematics > Mathematics](#)

Customer Reviews

Golub/Van Loan is not written in a very compelling style (very formal), but it is a great reference to understand how and why numerical matrix computation work. I've used it extensively for developing my own Singular Value Decomposition (SVD) routine, as well as routines for general eigenvalue problems. It's not great to use as a textbook for novices, but it is essential for use as a reference and as a teaching tool when doing anything related to numerical matrix computations. A good companion to this book is Trefethen/Bau 'Numerical Linear Algebra'.

This is now the best and most up-to-date textbook for numerical linear algebra at the graduate level, which I have been teaching for seven years. In the past, I always liked its third edition as a reference book, but hesitated to use it as a textbook, because it was difficult for students to study. The fourth edition reads much clearer, and I also like the new organization of the chapters very much. The fourth edition is much more friendly for self-study by matured students. I highly recommend it to students and practitioners who already have some basic understanding of linear algebra and would like to learn more about numerical algorithms in linear algebra for computational sciences. A word of caution: This book is not meant to be an introduction to linear algebra for self-study or at the undergraduate level. There are good books specifically for that purpose, such as *Linear Algebra and Its Applications* by Gilbert Strang.

This book is a true gem. It contains a huge amount of useful and up to date (2012) content from leading publications related to matrix computations. This book is a must for a researcher or an algorithm developer dealing with scientific computing. Not only it is highly detailed and can be used as a "cookbook" for algorithms, but *mostly* because it discusses theoretical aspects from both pure mathematical points of view and applied point of view (computational cost, accuracy, floating points, condition number, etc.) and brings useful insights that help the reader to understand what he really needs.

The classical book on matrix analysis. 4-th edition includes all the classical stuff and a lot of new topics; the illustrations are now provided as snippets of MATLAB code. Must have for all people working in linear algebra, matrix and numerical analysis.

The book has errors. I do not mean typos, but errors in programs and algorithms. I used two previous editions and order the newest hoping that it would be more error-free. What is disappointing, this book is a great source of reference and some codes and methods are really hard to find anywhere else, and are never explained as systematically. The style is not the easiest to digest, but once you passed enough numerical analysis classes, you mostly need a reference, and how attractive is this: everything in one book? I appreciate switching from fortran to matlab.

This is an amazing resource for understanding the numerical problems associated with implementations of matrix algorithms. I use it regularly for writing source code for solving problems that require the concepts discussed in the book.

Amazing book. You can find absolutely anything you want in it. But heads-up: it's not a good book if you don't know anything about what you are going to read. It should be a "support", but not the first book you read in this field.

It is exactly what it says on the cover. A great piece of work. I have owned the 2nd & 3rd editions too, and this is a very helpful extension of the previous works.

[Download to continue reading...](#)

Matrix Computations (Johns Hopkins Studies in the Mathematical Sciences) Johns Hopkins Patients' Guide to Brain Cancer (Johns Hopkins Medicine) Johns Hopkins Patient Guide to Colon and Rectal Cancer (Johns Hopkins Patients' Guide) Johns Hopkins Patients' Guide to Leukemia (Johns Hopkins Medicine) Johns Hopkins Patients' Guide To Lymphoma (Johns Hopkins Medicine) Handbook of Paleozoology (Johns Hopkins studies in Earth and planetary sciences) Matrix Algebra: Theory, Computations, and Applications in Statistics (Springer Texts in Statistics) Fundamentals of Matrix Computations When Champagne Became French: Wine and the Making of a National Identity (The Johns Hopkins University Studies in Historical and Political Science) Inventing American Broadcasting, 1899-1922 (Johns Hopkins Studies in the History of Technology) American Iron, 1607-1900 (Johns Hopkins Studies in the History of Technology) Of Bondmen and Rebels (Johns Hopkins Studies in Atlantic History and Culture) The Formation of a Colonial Society: Belize, From Conquest to Crown Colony (Johns Hopkins Studies in Atlantic History and Culture) A History of the Guyanese Working People, 1881-1905 (Johns Hopkins Studies in Atlantic History and Culture) Alabi's World (Johns Hopkins Studies in Atlantic History and Culture) The Guiana Maroons: A Historical and Bibliographical Introduction (Johns Hopkins Studies in Atlantic History and Culture) The Essential Guide to the ACT Matrix: A Step-by-Step Approach to Using the ACT Matrix Model in Clinical Practice A Survey of Matrix Theory and Matrix Inequalities (Dover Books on Mathematics) Studies in linear and non-linear programming, (Stanford mathematical studies in the social sciences) Seizures and Epilepsy in Childhood: A Guide (Johns Hopkins Press Health Books (Hardcover))

[Dmca](#)