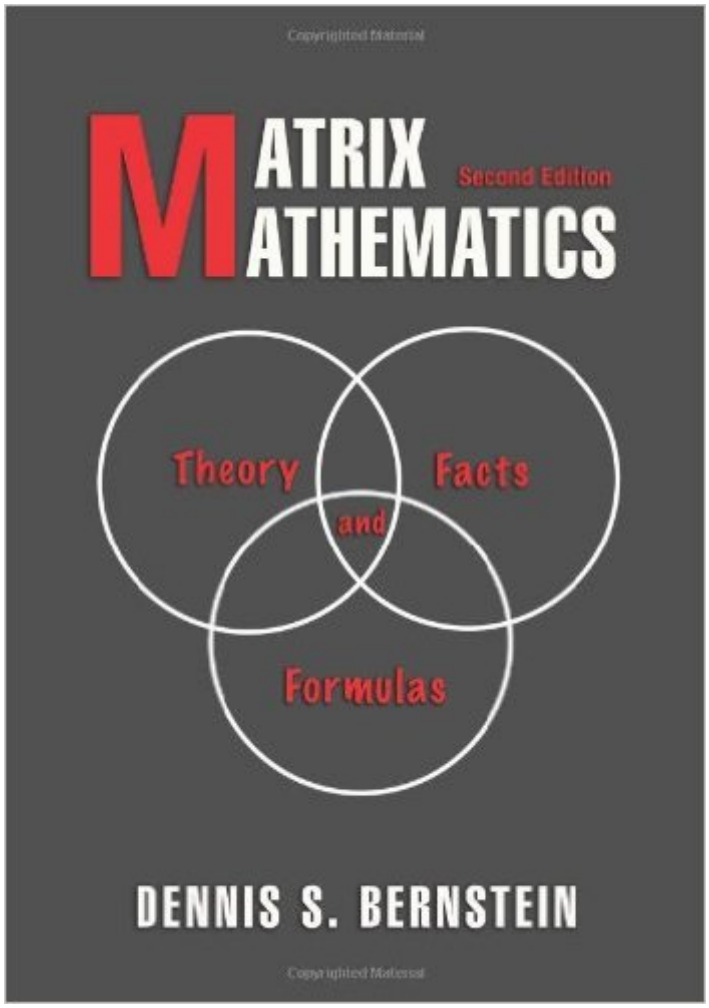
Matrix Mathematics: Theory, Facts, And Formulas, Second Edition



Synopsis

When first published in 2005, Matrix Mathematics quickly became the essential reference book for users of matrices in all branches of engineering, science, and applied mathematics. In this fully updated and expanded edition, the author brings together the latest results on matrix theory to make this the most complete, current, and easy-to-use book on matrices. Each chapter describes relevant background theory followed by specialized results. Hundreds of identities, inequalities, and matrix facts are stated clearly and rigorously with cross references, citations to the literature, and illuminating remarks. Beginning with preliminaries on sets, functions, and relations,Matrix Mathematics covers all of the major topics in matrix theory, including matrix transformations; polynomial matrices; matrix decompositions; generalized inverses; Kronecker and Schur algebra; positive-semidefinite matrices; vector and matrix norms; the matrix exponential and stability theory; and linear systems and control theory. Also included are a detailed list of symbols, a summary of notation and conventions, an extensive bibliography and author index with page references, and an exhaustive subject index. This significantly expanded edition of Matrix Mathematics features a wealth of new material on graphs, scalar identities and inequalities, alternative partial orderings, matrix pencils, finite groups, zeros of multivariable transfer functions, roots of polynomials, convex functions, and matrix norms. Covers hundreds of important and useful results on matrix theory, many never before available in any book Provides a list of symbols and a summary of conventions for easy use Includes an extensive collection of scalar identities and inequalities Features a detailed bibliography and author index with page references Includes an exhaustive subject index with cross-referencing

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Customer Reviews

The book is comprehensive and certainly worthwhile on one’s bookshelf, but only in hard copy. I bought the kindle edition in which the equations are almost illegible - sufficiently so that I will be asking for my money back as it is practically useless as a reference.

I decided to buy a copy after finding myself repeatedly borrowing a copy of the (hardback) first edition from a colleague. In terms of content, the book remains excellent, but the quality of the binding is not good. After having it a week, I am afraid it will burst in half every time I open it. Very poor for a resource I was planning to keep on my shelf for years.

This is a good book by a reputable author. However, the Kindle edition is poorly typeset. I have the printed copy and much prefer the print over the Kindle edition.

the results in each chapter require reading from the begining of the chapter. so it is not a handbook. but quite a bit of material was collected in it.examples of 2X2 matrices should be standard here. sometimes examples of 3X3 will be necessary. WITH NUMBERSExamples will be a lot more helpful than the proofsMatrices are geometry. Graphs are necessary here.Produced beautifully with white bright pages. But to keep these many pages together, the binding should be stitched

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