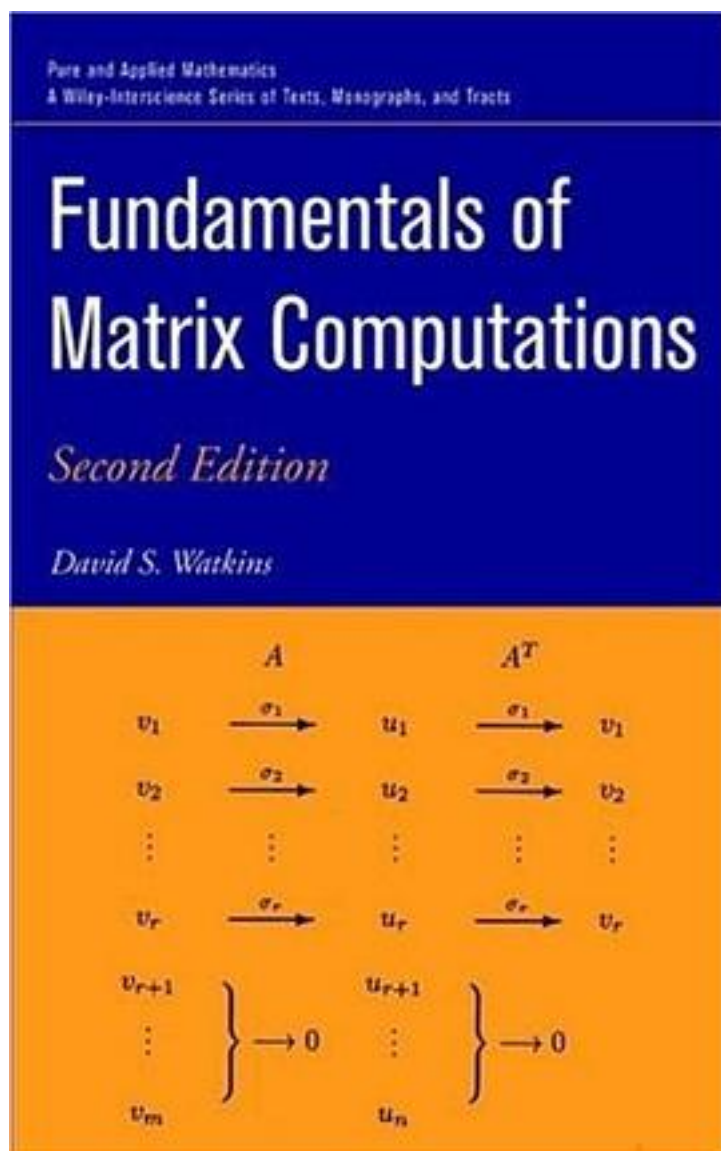


Fundamentals of Matrix Computations



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This work presents a significantly revised and improved introduction to a critical aspect of scientific computation. Matrix computations lie at the heart of most scientific computational tasks. For any scientist or engineer doing large-scale simulations, an understanding of the topic is essential. "Fundamentals of Matrix Computations, Second Edition" explains matrix computations and the accompanying theory clearly and in detail, along with useful insights. This Second Edition of a popular text has now been revised and improved to appeal to the needs of practicing scientists and graduate and advanced undergraduate students. New to this edition is the use of MATLAB for many of the exercises and examples, although the Fortran exercises in the First Edition have been kept for those who want to use them. This new edition includes: numerous examples and exercises on applications including electrical circuits, elasticity (mass-spring systems), and simple partial differential equations; early introduction of the singular value decomposition; a new chapter on iterative methods, including the powerful preconditioned conjugate-gradient method for solving symmetric, positive definite systems; and an introduction to new methods for solving large, sparse eigen value problems including the popular implicitly - restarted Arnoldi and Jacobi-Davidson methods. With in-depth discussions of such other topics as modern component wise error analysis, re-orthogonalization, and rank-one updates of the QR decomposition, "Fundamentals of Matrix Computations, Second Edition" will prove to be a versatile companion to novice and practicing mathematicians who seek mastery of matrix computation.

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Marvelous

我也不知道这书想干嘛...研究一个物理问题里涉及到大矩阵计算问题，然后找到这本书，尽管最后这个问题还是没能解决

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