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Titolo	Matrix inequalities for iterative systems // by Hanjo Taubig
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ISBN	1-315-16613-5 1-351-67909-0 1-4987-7779-1
Edizione	[First edition.]
Descrizione fisica	1 online resource (219 pages)
Disciplina	512.9/434
Soggetti	Matrix inequalities
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	part INTRODUCTION -- chapter 1 Notation and Basic Facts -- chapter 2 Motivation -- chapter 3 Diagonalization and Spectral Decomposition -- part UNDIRECTED GRAPHS / HERMITIAN MATRICES -- chapter 4 General Results -- chapter 5 Restricted Graph Classes -- part DIRECTED GRAPHS / NONSYMMETRIC MATRICES -- chapter 6 Walks and Alternating Walks in Directed Graphs -- chapter 7 Powers of Row and Column Sums -- part APPLICATIONS -- chapter 8 Bounds for the Largest Eigenvalue -- chapter 9 Iterated Kernels.
Sommario/riassunto	The book reviews inequalities for weighted entry sums of matrix powers. Applications range from mathematics and CS to pure sciences. It unifies and generalizes several results for products and powers of sesquilinear forms derived from powers of Hermitian, positive-semidefinite, as well as nonnegative matrices. It shows that some inequalities are valid only in specific cases. How to translate the Hermitian matrix results into results for alternating powers of general rectangular matrices? Inequalities that compare the powers of the row and column sums to the row and column sums of the matrix powers are refined for nonnegative matrices. Lastly, eigenvalue bounds and derive results for iterated kernels are improved.