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Soggetti	Matrix theory Algebra Linear and Multilinear Algebras, Matrix Theory
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Nota di contenuto	Preliminaries -- Incidence Matrix -- Adjacency Matrix -- Laplacian Matrix -- Cycles and Cuts -- Regular Graphs -- Line Graph of a Tree -- Algebraic Connectivity -- Distance Matrix of a Tree -- Resistance Distance -- Laplacian Eigenvalues of Threshold Graphs -- Positive Definite Completion Problem -- Matrix Games Based on Graphs.
Sommario/riassunto	This new edition illustrates the power of linear algebra in the study of graphs. The emphasis on matrix techniques is greater than in other texts on algebraic graph theory. Important matrices associated with graphs (for example, incidence, adjacency and Laplacian matrices) are treated in detail. Presenting a useful overview of selected topics in algebraic graph theory, early chapters of the text focus on regular graphs, algebraic connectivity, the distance matrix of a tree, and its generalized version for arbitrary graphs, known as the resistance matrix. Coverage of later topics include Laplacian eigenvalues of threshold graphs, the positive definite completion problem and matrix games based on a graph. Such an extensive coverage of the subject area provides a welcome prompt for further exploration. The inclusion of exercises enables practical learning throughout the book. In the new edition, a new chapter is added on the line graph of a tree, while some results in Chapter 6 on Perron-Frobenius theory are reorganized. Whilst this book will be invaluable to students and researchers in graph theory and combinatorial matrix theory, it will also benefit readers in the

sciences and engineering.
