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Nota di contenuto	Skew Spectrum of the Cartesian Product of an Oriented Graph with an Oriented Hypercube -- Notes on Explicit Block Diagonalization -- The Third Immanant of q-Laplacian Matrices of Trees and Laplacians of Regular Graphs -- Matrix Product of Graphs -- Determinant of the Laplacian Matrix of Weighted Directed Graphs -- From Multivariate Skewed Distributions to Copulas -- Revisiting the BLUE in a Linear Model via Proper Eigenvectors -- Inference in Error Orthogonal Models -- On the Entries of Orthogonal Projection Matrices -- Moore-Penrose Inverse of Perturbed Operators on Hilbert Spaces -- The Reverse Order Law in Indefinite Inner Product Spaces -- Generalized Inverses and Approximation Numbers -- On the Level-2 Condition Number for Moore-Penrose Inverse in Hilbert Space -- Products and Sums of Idempotent Matrices over Principal Ideal Domain -- Perfect Semiring of Nonnegative Matrices -- Regular Matrices over an Incline -- Matrix

Partial Orders associated with Space Preorder -- An Illustrated Introductionto Some Old Magic Squares from India -- Appendix: Report on CMTGIM 2012, Manipal -- Index.

Sommario/riassunto

This book consists of eighteen articles in the area of `Combinatorial Matrix Theory' and `Generalized Inverses of Matrices'. Original research and expository articles presented in this publication are written by leading Mathematicians and Statisticians working in these areas. The articles contained herein are on the following general topics: `matrices in graph theory', `generalized inverses of matrices', `matrix methods in statistics' and `magic squares'. In the area of matrices and graphs, speci_c topics addressed in this volume include energy of graphs, q-analog, immanants of matrices and graph realization of product of adjacency matrices. Topics in the book from `Matrix Methods in Statistics' are, for example, the analysis of BLUE via eigenvalues of covariance matrix, copulas, error orthogonal model, and orthogonal projectors in the linear regression models. Moore-Penrose inverse of perturbed operators, reverse order law in the case of inde_nite inner product space,approximation numbers, condition numbers, idempotent matrices, semiring of nonnegative matrices, regular matrices over incline and partial order of matrices are the topics addressed under the area of theory of generalized inverses. In addition to the above traditional topics and a report on CMTGIM 2012 as an appendix, we have an article on old magic squares from India.