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Nota di contenuto	Geometry. On the foundations of inversion geometry -- Cyclic affine planes -- On the number of absolute points of a correlation / with M. Newman, E.G. Straus and O. Taussky -- On unions and intersections of cones -- Binding constraints and Helly numbers -- Combinatorics. A characterization of comparability graphs and of interval graphs / with P.C. Gilmore -- Some properties of graphs with multiple edges / with D.R. Fulkerson and M.H. McAndrew -- Self-orthogonal Latin squares / R.K. Brayton and Don Coppersmith -- On partitions of a partially ordered set / with D.E. Schwartz -- Variations on a theorem of Ryser / with Dasong Cao, V. Chvátal and A. Vince -- Matrix inequalities and eigenvalues. The variation of the spectrum of a normal matrix / with H. W. Wielandt -- Some metric inequalities in the space of matrices / with Ky Fan -- On the nonsingularity of complex matrices / with Paul Camion -- Combinatorial aspects of Gerschgorin's theorem -- Linear G-functions -- On the relationship between the Hausdorff distance and matrix distances of ellipsoids / with Jean-Louis Goffin -- Bounds for the spectrum of normal matrices / with E.R. Barnes -- Linear inequalities and linear programming. On approximate solutions of systems of linear inequalities -- Cycling in the simplex algorithm -- Computational experience in solving linear programs / with M. Mannos, D. Sokolowsky and N. Wiegmann -- On abstract dual linear programs

-- A proof of the convexity of the range of a nonatomic vector measure using linear inequalities / with Uriel G. Rothblum -- A nonlinear allocation problem / with E.V. Denardo, T. Mackenzie and W.R. Pulleyblank.

Combinatorial optimization. Integral boundary points of convex polyhedra / with J.B. Kruska -- Some recent applications of the theory of linear inequalities to extremal combinatorial analysis -- Finding all shortest distances in a directed network / with S. Winograd -- On balanced matrices / with D.R. Fulkerson and Rosa Oppenheim -- A generalization of max flow-min cut -- On lattice polyhedra III: blockers and anti-blockers of lattice clutters -- Local unimodularity in the matching polytope / with Rosa Oppenheim -- A fast algorithm that makes matrices optimally sparse / with S. Thomas McCormick -- Greedy algorithms. On simple linear programming problems -- Totally balanced and greedy matrices / with A.W.J. Kolen and M. Sakarovitch -- Greedy packing and series-parallel graphs / with Alan C. Tucker -- On simple combinatorial optimization problems -- Series parallel composition of greedy linear programming problems / with Wolfgang W. Bein and Peter Brucker -- Graph spectra. On the uniqueness of the triangular association scheme -- On Moore graphs with diameters 2 and 3 / with R.R. Singleton -- On the polynomial of a graph -- On the line graph of a symmetric balanced incomplete block design / with D.K. Ray-Chaudhuri -- On eigenvalues and colorings of graphs -- eigenvalues and partitionings of the edges of a graph -- On spectrally bounded graphs -- Lower bounds for the partitioning of graphs / with W.E. Donath -- Nearest S-matrices of given rank and the Ramsey problem for eigenvalues of bipartite S-graphs / with Peter Joffe.

Sommario/riassunto

Dr Alan J. Hoffman is a pioneer in linear programming, combinatorial optimization, and the study of graph spectra. In his principal research interests, which include the fields of linear inequalities, combinatorics, and matrix theory, he and his collaborators have contributed fundamental concepts and theorems, many of which bear their names. This volume of Dr Hoffman's selected papers is divided into seven sections: geometry; combinatorics; matrix inequalities and eigenvalues; linear inequalities and linear programming; combinatorial optimization; greedy algorithms; graph spectra. Dr Hoffman has supplied background commentary and anecdotal remarks for each of the selected papers. He has also provided autobiographical notes showing how he chose mathematics as his profession, and the influences and motivations which shaped his career.
