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Soggetti	Matrix theory Algebra Game theory Algorithms Combinatorial analysis Mathematical optimization Operations research Decision making Linear and Multilinear Algebras, Matrix Theory Game Theory, Economics, Social and Behav. Sciences Combinatorics Optimization Operations Research/Decision Theory
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Nota di contenuto	1 Disjunctive programming and its relation to integer programming -- 2 The convex hull of a disjunctive set -- 3 Sequential convexification of disjunctive sets -- 4 Moving between conjunctive and disjunctive normal forms -- 5 Disjunctive programming and extended formulations -- 6 Lift-and-project cuts for mixed 0-1 programs -- 7 Nonlinear higher-dimensional representations -- 8 The correspondence between lift-and-project cuts and simple disjunctive cuts -- 9 Solving (CGLP) _k on the LP simplex tableau -- 10 Implementation and testing of variants -- 11 Cuts from general disjunctions -- 12 Disjunctive cuts from the V -polyhedral

representation -- 13 Unions of polytopes in different spaces --
References.

Sommario/riassunto

Disjunctive Programming is a technique and a discipline initiated by the author in the early 1970's, which has become a central tool for solving nonconvex optimization problems like pure or mixed integer programs, through convexification (cutting plane) procedures combined with enumeration. It has played a major role in the revolution in the state of the art of Integer Programming that took place roughly during the period 1990-2010. The main benefit that the reader may acquire from reading this book is a deeper understanding of the theoretical underpinnings and of the applications potential of disjunctive programming, which range from more efficient problem formulation to enhanced modeling capability and improved solution methods for integer and combinatorial optimization. Egon Balas is University Professor and Lord Professor of Operations Research at Carnegie Mellon University's Tepper School of Business. .
