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Titolo	Computational Combinatorial Optimization : Optimal or Provably Near-Optimal Solutions // edited by Michael Jünger, Denis Naddef
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ISBN	3-540-45586-8
Edizione	[1st ed. 2001.]
Descrizione fisica	1 online resource (X, 310 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2241
Disciplina	519.7
Soggetti	Mathematical optimization Computer science—Mathematics Algorithms Information technology Business—Data processing Data structures (Computer science) Combinatorics Optimization Discrete Mathematics in Computer Science Algorithm Analysis and Problem Complexity IT in Business Data Structures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	General Mixed Integer Programming: Computational Issues for Branch-and-Cut Algorithms -- Projection and Lifting in Combinatorial Optimization -- Mathematical Programming Models and Formulations for Deterministic Production Planning Problems -- Lagrangian Relaxation -- Branch-and-Cut Algorithms for Combinatorial Optimization and Their Implementation in ABACUS -- Branch, Cut, and Price: Sequential and Parallel -- TSP Cuts Which Do Not Conform to the Template Paradigm.
Sommario/riassunto	This tutorial contains written versions of seven lectures on

Computational Combinatorial Optimization given by leading members of the optimization community. The lectures introduce modern combinatorial optimization techniques, with an emphasis on branch and cut algorithms and Lagrangian relaxation approaches. Polyhedral combinatorics as the mathematical backbone of successful algorithms are covered from many perspectives, in particular, polyhedral projection and lifting techniques and the importance of modeling are extensively discussed. Applications to prominent combinatorial optimization problems, e.g., in production and transport planning, are treated in many places; in particular, the book contains a state-of-the-art account of the most successful techniques for solving the traveling salesman problem to optimality.
