

1. Record Nr.	UNINA9910616395903321
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Titolo	Introduction to Combinatorial Optimization // by Ding-Zhu Du, Panos M. Pardalos, Xiaodong Hu, Weili Wu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-10596-6
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (407 pages)
Collana	Springer Optimization and Its Applications, , 1931-6836 ; ; 196
Disciplina	519.64
Soggetti	Mathematical optimization Computer science Operations research Management science Algorithms Optimization Theory of Computation Operations Research, Management Science Optimització combinatòria Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction.-2. Divide-and-Conquer -- 3. Dynamic Programming and Shortest Path -- 4. Greedy Algorithm and Spanning Tree -- 5. Incremental Method and Maximum Network Flow -- 6. Linear Programming -- 7. Primal-Dual Methods and Minimum Cost Flow -- 8. NP-hard Problems and Approximation Algorithms -- 9. Restriction and Steiner Tree -- 10. Greedy Approximation and Submodular Optimization -- 11. Relaxation and Rounding. 12. Nonsubmodular Optimization -- Bibliography.
Sommario/riassunto	Introductory courses in combinatorial optimization are popular at the upper undergraduate/graduate levels in computer science, industrial engineering, and business management/OR, owed to its wide applications in these fields. There are several published textbooks that treat this course and the authors have used many of them in their own

teaching experiences. This present text fills a gap and is organized with a stress on methodology and relevant content, providing a step-by-step approach for the student to become proficient in solving combinatorial optimization problems. Applications and problems are considered via recent technology developments including wireless communication, cloud computing, social networks, and machine learning, to name several, and the reader is led to the frontiers of combinatorial optimization. Each chapter presents common problems, such as minimum spanning tree, shortest path, maximum matching, network flow, set-cover, as well as key algorithms, such as greedy algorithm, dynamic programming, augmenting path, and divide-and-conquer. Historical notes, ample exercises in every chapter, strategically placed graphics, and an extensive bibliography are amongst the gems of this textbook.
