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Soggetti	Computer programming Computer networks Software engineering Algorithms Computer science—Mathematics Discrete mathematics Programming Techniques Computer Communication Networks Software Engineering Discrete Mathematics in Computer Science
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Note generali	"... the Second International Conference on Combinatorial Optimization and Applications (COCOA 2008),"--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Algorithms for Network Design -- Polynomial Approximation Schemes for the Max-Min Allocation Problem under a Grade of Service Provision -- A Linear Time Algorithm for Computing the Most Reliable Source on a Tree with Faulty Vertices -- A 5/3-Approximation Algorithm for Joint Replenishment with Deadlines -- A PTAS for Node-Weighted Steiner Tree in Unit Disk Graphs -- Bioinformatics -- DNA Library Screening, Pooling Design and Unitary Spaces -- Improved Algorithms for the Gene Team Problem -- Linear Coherent Bi-cluster Discovery via Line Detection and Sample Majority Voting -- Combinatorics and Its Applications -- Generalized Russian Cards Problem -- Computing the

Transitive Closure of a Union of Affine Integer Tuple Relations -- Matching Techniques Ride to Rescue OLED Displays -- Computational Geometry -- On Open Rectangle-of-Influence Drawings of Planar Graphs -- An Effective Hybrid Algorithm for the Circles and Spheres Packing Problems -- Variable-Size Rectangle Covering -- On-Line Multiple-Strip Packing -- Game Theory -- A Cost-Sharing Method for the Soft-Capacitated Economic Lot-Sizing Game -- Improved Bounds for Facility Location Games with Fair Cost Allocation -- Graph Algorithms -- Two-Level Heaps: A New Priority Queue Structure with Applications to the Single Source Shortest Path Problem -- On Construction of Almost-Ramanujan Graphs -- A  $2\log_2(n)$ -Approximation Algorithm for Directed Tour Cover -- Approximation Algorithms for Max 3-Section Using Complex Semidefinite Programming Relaxation -- Graph Theory -- Hamiltonian Decomposition of Some Interconnection Networks -- Infinite Family from Each Vertex  $k$ -Critical Graph without Any Critical Edge -- A Note on Edge Choosability and Degeneracy of Planar Graphs -- A Sufficient and Necessary Condition for the Forcing Number of a Bipartite Graph Being Equal to the Minimum Number of Trailing Vertices -- On Integrity of Harary Graphs -- A Note on  $n$ -Critical Bipartite Graphs and Its Application -- Network Models and Problems -- Real-Time Algorithm Scheme for  $n$ -Vehicle Exploration Problem -- Deterministically Estimating Data Stream Frequencies -- Positive Influence Dominating Set in Online Social Networks -- On-line Algorithms -- Optimal Algorithms for the Online Time Series Search Problem -- A Risk-Reward Competitive Analysis for the Newsboy Problem with Range Information -- Optimal Semi-online Algorithm for Scheduling on a Batch Processing Machine -- A Note on Online Scheduling for Jobs with Arbitrary Release Times -- Size-Problems -- Size-Constrained Tree Partitioning: A Story on Approximation Algorithm Design for the Multicast  $k$ -Tree Routing Problem -- On Disjoint Shortest Paths Routing on the Hypercube -- A New Approach for Rearrangeable Multicast Switching Networks -- Scheduling -- Bicriteria Scheduling on Single-Machine with Inventory Operations -- Approximation Algorithm for Minimizing the Weighted Number of Tardy Jobs on a Batch Machine -- Scheduling with Rejection to Minimize the Makespan -- Scheduling Problems in Cross Docking -- Makespan Minimization with Machine Availability Constraints -- A Mathematical Programming Approach for Online Hierarchical Scheduling -- Recoverable Robust Timetables on Trees -- Roulette Wheel Graph Colouring for Solving Examination Timetabling Problems -- Integrated Production and Delivery Scheduling with Disjoint Windows -- Wireless and Optical Networks -- Fault-Tolerant Routing:  $k$ -Inconnected Many-to-One Routing in Wireless Networks -- A Branch-and-Cut Algorithm for the Minimum Energy Symmetric Connectivity Problem in Wireless Networks -- Minimum Energy Broadcast Routing in Ad Hoc and Sensor Networks with Directional Antennas -- Approximating the Multicast Traffic Grooming Problem in Unidirectional SONET/WDM Rings -- An Algorithm with Better Approximation Ratio for Multicast Traffic in Unidirectional SONET/WDM Rings.

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### Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Conference on Combinatorial Optimization and Applications, COCOA 2009, held in Huangshan, China, in June 2009. The 50 revised full papers were carefully reviewed and selected from 103 submissions. The papers feature original research in the areas of combinatorial optimization - both theoretical issues and applications motivated by real-world problems thus showing convincingly the usefulness and efficiency of the algorithms discussed

in a practical setting.

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