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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Talks -- Using Complex Semidefinite Programming for Approximating MAX E2-LIN3 -- Hill-Climbing vs. Simulated Annealing for Planted Bisection Problems -- Web Search via Hub Synthesis -- Error-Correcting Codes and Pseudorandom Projections -- Order in Pseudorandomness -- Contributed Talks of APPROX -- Minimizing Stall Time in Single and Parallel Disk Systems Using Multicommodity Network Flows -- On the Equivalence between the Primal-Dual Schema

and the Local-Ratio Technique -- Online Weighted Flow Time and Deadline Scheduling -- An Online Algorithm for the Postman Problem with a Small Penalty -- A Simple Dual Ascent Algorithm for the Multilevel Facility Location Problem -- Approximation Schemes for Ordered Vector Packing Problems -- Incremental Codes -- A  $3/2$ -Approximation Algorithm for Augmenting the Edge-Connectivity of a Graph from 1 to 2 Using a Subset of a Given Edge Set -- Approximation Algorithms for Budget-Constrained Auctions -- Minimizing Average Completion of Dedicated Tasks and Interval Graphs -- A Greedy Facility Location Algorithm Analyzed Using Dual Fitting -- 0.863-Approximation Algorithm for MAX DICUT -- The Maximum Acyclic Subgraph Problem and Degree-3 Graphs -- Some Approximation Results for the Maximum Agreement Forest Problem -- Contributed Talks of RANDOM -- Near-optimum Universal Graphs for Graphs with Bounded Degrees -- On a Generalized Ruin Problem -- On the  $b$ -Partite Random Asymmetric Traveling Salesman Problem and Its Assignment Relaxation -- Exact Sampling in Machine Scheduling Problems -- On Computing Ad-hoc Selective Families --  $L$  Infinity Embeddings -- On Euclidean Embeddings and Bandwidth Minimization -- The Non-approximability of Non-Boolean Predicates -- On the Derandomization of Constant Depth Circuits -- Testing Parenthesis Languages -- Proclaiming Dictators and Juntas or Testing Boolean Formulae -- Equitable Coloring Extends Chernoff-Hoeffding Bounds.

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#### Sommario/riassunto

This book constitutes the joint refereed proceedings of the 4th International Workshop on Approximation Algorithms for Optimization Problems, APPROX 2001 and of the 5th International Workshop on Randomization and Approximation Techniques in Computer Science, RANDOM 2001, held in Berkeley, California, USA in August 2001. The 26 revised full papers presented were carefully reviewed and selected from a total of 54 submissions. Among the issues addressed are design and analysis of approximation algorithms, inapproximability results, on-line problems, randomization, de-randomization, average-case analysis, approximation classes, randomized complexity theory, scheduling, routing, coloring, partitioning, packing, covering, computational geometry, network design, and applications in various fields.

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