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| Livello bibliografico | Monografia |
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| Nota di contenuto | Invited Talk -- Constant-Working-Space Algorithms: How Fast Can We Solve Problems without Using Any Extra Array? -- Some Constrained Notions of Planarity -- Reachability Problems on Directed Graphs -- 1A Approximation Algorithm I -- Greedy Construction of 2-Approximation Minimum Manhattan Network -- The Complexity of Minimum Convex Coloring -- On the Complexity of Reconfiguration Problems -- Multiobjective Disk Cover Admits a PTAS -- 1B Online Algorithm -- Data Stream Algorithms via Expander Graphs -- Improving the |

Competitive Ratio of the Online OVSF Code Assignment Problem --
Optimal Key Tree Structure for Deleting Two or More Leaves --
Comparing First-Fit and Next-Fit for Online Edge Coloring -- 2A Data
Structure and Algorithm -- Selecting Sums in Arrays -- Succinct and
I/O Efficient Data Structures for Traversal in Trees -- Space-Time
Tradeoffs for Longest-Common-Prefix Array Computation -- Power
Domination in Using Reference Search Trees -- 2B Game Theory -- The
Isolation Game: A Game of Distances -- On a Non-cooperative Model
for Wavelength Assignment in Multifiber Optical Networks -- The
Complexity of Rationalizing Matchings -- A Game Theoretic Approach
for Efficient Graph Coloring -- 3A Graph Algorithm I -- Partitioning a
Weighted Tree to Subtrees of Almost Uniform Size -- An Improved
Divide-and-Conquer Algorithm for Finding All Minimum k-Way Cuts --
On the Algorithmic Effectiveness of Digraph Decompositions and
Complexity Measures -- An Efficient Scaling Algorithm for the
Minimum Weight Bibranching Problem -- The Balanced Edge Cover
Problem -- 3B Fixed Parameter Tractability -- Firefighting on Trees:
($1 + \epsilon$)-Approximation, Fixed Parameter Tractability and a
Subexponential Algorithm -- A New Algorithm for Finding Trees with
Many Leaves -- Faster Parameterized Algorithms for Minimum Fill-In
-- Graph Layout Problems Parameterized by Vertex Cover -- A Linear
Kernel for the k-Disjoint Cycle Problem on Planar Graphs -- 4A
Distributed Algorithm -- How to Guard a Graph? -- Tree
Decontamination with Temporary Immunity -- Reconfiguration of
Cube-Style Modular Robots Using $O(\log n)$ Parallel Moves -- Squaring
the Circle with Weak Mobile Robots -- 4B Database -- Evaluation of
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the Value Makes the Price -- Deductive Inference for the Interiors and
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the Trees -- 5A Approximation Algorithm II -- Deterministic Sparse
Column Based Matrix Reconstruction via Greedy Approximation of SVD
-- Minimizing Total Flow-Time: The Unrelated Case -- Approximating
the Volume of Unions and Intersections of High-Dimensional Geometric
Objects -- Space-Efficient Informational Redundancy -- 5B
Computational Biology -- Minkowski Sum Selection and Finding --
Constructing the Simplest Possible Phylogenetic Network from Triplets
-- New Results on Optimizing Rooted Triplets Consistency -- A Method
to Overcome Computer Word Size Limitation in Bit-Parallel Pattern
Matching -- 6A Computational Geometry I -- Inducing Polygons of Line
Arrangements -- Free-Form Surface Partition in 3-D -- Approximate
Nearest Neighbor Search under Translation Invariant Hausdorff
Distance -- Preprocessing Imprecise Points and Splitting Triangulations
-- Efficient Output-Sensitive Construction of Reeb Graphs -- 6B
Complexity I -- Signature Theory in Holographic Algorithms -- The
Complexity of SPP Formula Minimization -- Understanding a Non-
trivial Cellular Automaton by Finding Its Simplest Underlying
Communication Protocol -- Negation-Limited Inverters of Linear Size
-- 3-Message NP Arguments in the BPK Model with Optimal Soundness
and Zero-Knowledge -- 7A Computational Geometry II -- A Complete
Approximation Algorithm for Shortest Bounded-Curvature Paths --
Detecting Commuting Patterns by Clustering Subtrajectories -- On the
Stretch Factor of Convex Delaunay Graphs -- Covering a Simple
Polygon by Monotone Directions -- 7B Network -- On the Stability of
Web Crawling and Web Search -- Average Update Times for Fully-
Dynamic All-Pairs Shortest Paths -- Computing Frequency Dominators
and Related Problems -- Computing Best Swaps in Optimal Tree
Spanners -- 8A Optimization -- Covering a Point Set by Two Disjoint
Rectangles -- Computing the Maximum Detour of a Plane Graph in

Subquadratic Time -- Finding Long Paths, Cycles and Circuits -- Computing Best and Worst Shortcuts of Graphs Embedded in Metric Spaces -- 8B Routing -- On Labeled Traveling Salesman Problems -- Navigating in a Graph by Aid of Its Spanning Tree -- Single Vehicle Scheduling Problems on Path/Tree/Cycle Networks with Release and Handling Times -- Bidirectional Core-Based Routing in Dynamic Time-Dependent Road Networks -- 9A Graph Algorithm II -- Bandwidth of Bipartite Permutation Graphs -- König Deletion Sets and Vertex Covers above the Matching Size -- Independent Sets of Maximum Weight in Apple-Free Graphs -- Enumeration of Perfect Sequences of Chordal Graph -- From Tree-Width to Clique-Width: Excluding a Unit Interval Graph -- 9B Complexity II -- New Results on the Most Significant Bit of Integer Multiplication -- Sorting with Complete Networks of Stacks -- Quantum Query Complexity of Boolean Functions with Small On-Sets -- Unbounded-Error Quantum Query Complexity -- Super-Exponential Size Advantage of Quantum Finite Automata with Mixed States.

Sommario/riassunto

This book constitutes the refereed proceedings of the 19th International Symposium on Algorithms and Computation, ISAAC 2008, held in Gold Coast, Australia in December 2008. The 78 revised full papers together with 3 invited talks presented were carefully reviewed and selected from 229 submissions for inclusion in the book. The papers are organized in topical sections on approximation algorithms, online algorithms, data structure and algorithms, game theory, graph algorithms, fixed parameter tractability, distributed algorithms, database, approximation algorithms, computational biology, computational geometry, complexity, networks, optimization as well as routing.
