Record Nr. UNINA9910484503603321 Algorithms and Computation: 19th International Symposium, ISAAC **Titolo** 2008, Gold Coast, Australia, December 15-17, 2008. Proceedings / / edited by Seok-Hee Hong, Hiroshi Nagamochi, Takuro Fukunaga Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa **ISBN** 3-540-92182-6 Edizione [1st ed. 2008.] 1 online resource (XIX, 948 p.) Descrizione fisica Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5369 Collana 005.1 Disciplina Soggetti Artificial intelligence—Data processing Computer science Mathematics—Data processing Algorithms Computer science—Mathematics Discrete mathematics Numerical analysis **Data Science** Theory of Computation Computational Mathematics and Numerical Analysis Discrete Mathematics in Computer Science Numerical Analysis 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 and index. 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???1/e)-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(logn) Parallel Moves -- Squaring the Circle with Weak Mobile Robots -- 4B Database -- Evaluation of General Set Expressions -- Computing with Priced Information: When the Value Makes the Price -- Deductive Inference for the Interiors and Exteriors of Horn Theories -- Leaf Powers and Their Properties: Using 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 Nontrivial 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.