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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 4835
Disciplina	005.1
Soggetti	Computer science Algorithms Computer science—Mathematics Discrete mathematics Numerical analysis Computer networks Computer graphics Theory of Computation Discrete Mathematics in Computer Science Numerical Analysis Computer Communication Networks Computer Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Invited Talk -- Modeling and Analyzing Massive Terrain Data Sets -- Coloring Triangle-Free Graphs on Surfaces -- Best Paper Award Presentation -- Integer Representation and Counting in the Bit Probe Model -- 1A Graph Algorithms I -- Minimum Degree Orderings -- Greedy Approximation for Source Location Problem with Vertex-Connectivity Requirements in Undirected Graphs -- Dynamic Distance Hereditary Graphs Using Split Decomposition -- Unifying Two Graph Decompositions with Modular Decomposition -- 1B Computational Geometry I -- Escaping Off-Line Searchers and a Discrete Isoperimetric

Theorem -- Geometric Spanner of Segments -- Dilation-Optimal Edge Deletion in Polygonal Cycles -- 2A Complexity I -- Unbounded-Error Classical and Quantum Communication Complexity -- A Spectral Method for MAX2SAT in the Planted Solution Model -- On the Expressive Power of Planar Perfect Matching and Permanents of Bounded Treewidth Matrices -- The 1-Versus-2 Queries Problem Revisited -- 2B Graph Drawing -- Approximating the Crossing Number of Toroidal Graphs -- Width-Optimal Visibility Representations of Plane Graphs -- Computing Upward Topological Book Embeddings of Upward Planar Digraphs -- Algorithms for the Hypergraph and the Minor Crossing Number Problems -- 3A Distributed Algorithms -- On Mixing and Edge Expansion Properties in Randomized Broadcasting -- Linear Reconfiguration of Cube-Style Modular Robots -- Fast Message Dissemination in Random Geometric Ad-Hoc Radio Networks -- Sensor Network Gossiping or How to Break the Broadcast Lower Bound -- On the Complexity of the "Most General" Undirected Firing Squad Synchronization Problem -- 3B Optimization I -- Capacitated Domination Problem -- The Complexity of Finding Subgraphs Whose Matching Number Equals the Vertex Cover Number -- New Bounds for the Nearly Equitable Edge Coloring Problem -- Approximation to the Minimum Cost Edge Installation Problem -- Approximability of Packing Disjoint Cycles -- 4A Data Structure I -- Succinct Representation of Labeled Graphs -- More Efficient Algorithms and Analyses for Unequal Letter Cost Prefix-Free Coding -- Kinetic Maintenance of Mobile  $k$ -Centres on Trees -- Checking Value-Sensitive Data Structures in Sublinear Space -- 4B Game Theory -- Manipulation in Games -- Using Nash Implementation to Achieve Better Frugality Ratios -- The Price of Nash Equilibria in Multicast Transmissions Games -- 5A Database Applications -- An Efficient Algorithm for Enumerating Pseudo Cliques -- Fast Adaptive Diagnosis with a Minimum Number of Tests -- Dynamic Structures for Top- $k$  Queries on Uncertain Data -- Separating Populations with Wide Data: A Spectral Analysis -- 5B Online Algorithms -- A Constant-Competitive Algorithm for Online OVFS Code Assignment -- Average-Case Analysis of Online Topological Ordering -- Energy Efficient Deadline Scheduling in Two Processor Systems -- On the Relative Dominance of Paging Algorithms -- 6A I/O Algorithms -- I/O-Efficient Map Overlay and Point Location in Low-Density Subdivisions -- Geometric Streaming Algorithms with a Sorting Primitive -- External Memory Range Reporting on a Grid -- Approximate Range Searching in External Memory -- 6B Networks -- Faster Treasure Hunt and Better Strongly Universal Exploration Sequences -- Hardness and Approximation of Traffic Grooming -- Depth of Field and Cautious-Greedy Routing in Social Networks -- Locating Facilities on a Network to Minimize Their Average Service Radius -- 7A Optimization II -- Faster Combinatorial Algorithms for Determinant and Pfaffian -- A Polynomial-Time-Delay and Polynomial-Space Algorithm for Enumeration Problems in Multi-criteria Optimization -- The Parameterized Complexity of the Unique Coverage Problem -- Bounded Tree-Width and CSP-Related Problems -- 7B Computational Geometry II -- Covering Points by Unit Disks of Fixed Location -- Geodesic Disks and Clustering in a Simple Polygon -- An  $O(n \log n)$  Time Algorithm for Computing Shortest Paths Amidst Growing Discs in the Plane -- Optimal Triangulation with Steiner Points -- 8A Geometric Applications -- New Algorithm for Field Splitting in Radiation Therapy -- In-Place Algorithm for Image Rotation -- Higher Order Voronoi Diagrams of Segments for VLSI Critical Area Extraction -- 8B Data Structures II -- Distributed Relationship Schemes for Trees -- Fast Evaluation of Union-Intersection Expressions -- A Sub-cubic

Time Algorithm for the k-Maximum Subarray Problem -- 9A  
Computational Geometry III -- Compressing Spatio-temporal  
Trajectories -- Finding Popular Places -- Maintaining Extremal Points  
and Its Applications to Deciding Optimal Orientations -- 9B Complexity  
II -- The Monomial Ideal Membership Problem and Polynomial Identity  
Testing -- On the Fault Testing for Reversible Circuits -- The Space  
Complexity of k-Tree Isomorphism -- 10A String -- Algorithms for  
Computing the Length-Constrained Max-Score Segments with  
Applications to DNA Copy Number Data Analysis -- Space Efficient  
Indexes for String Matching with Don't Cares -- 2-Stage Fault Tolerant  
Interval Group Testing -- Approximate String Matching with Swap and  
Mismatch -- 10B Graph Algorithms II -- Minimum Fill-In and Treewidth  
of Split+?ke and Split+?kv Graphs -- Weighted Treewidth Algorithmic  
Techniques and Results -- Spanning Trees with Many Leaves in Regular  
Bipartite Graphs -- Problem Kernels for NP-Complete Edge Deletion  
Problems: Split and Related Graphs.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 18th  
International Symposium on Algorithms and Computation, ISAAC 2007,  
held in Sendai, Japan, in December 2007. The 77 revised full papers  
presented together with 2 invited talks were carefully reviewed and  
selected from 220 submissions. The papers are organized in topical  
sections on graph algorithms, computational geometry, complexity,  
graph drawing, distributed algorithms, optimization, data structure,  
game theory, database applications, online algorithms, I/O algorithms,  
networks, geometric applications, and string.

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