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Nota di contenuto	Invited Talks -- Regular Labelings and Geometric Structures -- Algorithmic Aspects of Secure Computation and Communication -- Session 1A. Approximation Algorithm I -- Faster Algorithms for Feedback Arc Set Tournament, Kemeny Rank Aggregation and Betweenness Tournament -- A 3/2-Approximation Algorithm for Generalized Steiner Trees in Complete Graphs with Edge Lengths 1 and 2 -- Approximate Periodicity -- Approximating the Average Stretch

Factor of Geometric Graphs -- Session 1B. Complexity I -- Satisfiability with Index Dependency -- Anonymous Fuzzy Identity-Based Encryption for Similarity Search -- Improved Randomized Algorithms for 3-SAT -- Quantum Counterfeit Coin Problems -- Session 2A. Data Structure and Algorithm I -- Priority Range Trees -- Should Static Search Trees Ever Be Unbalanced? -- Levelwise Mesh Sparsification for Shortest Path Queries -- Unit-Time Predecessor Queries on Massive Data Sets -- Session 2B. Combinatorial Optimization -- Popularity at Minimum Cost -- Structural and Complexity Aspects of Line Systems of Graphs -- Neighbor Systems, Jump Systems, and Bisubmodular Polyhedra -- Generating Trees on Multisets -- Session 3A. Graph Algorithm I -- Seidel Minor, Permutation Graphs and Combinatorial Properties -- Simultaneous Interval Graphs -- Unbalanced Graph Partitioning -- On the Intersection of Tolerance and Cocomparability Graphs -- Flows in One-Crossing-Minor-Free Graphs -- Session 3B. Complexity II -- From Holant to #CSP and Back: Dichotomy for Holant c Problems -- Computing Sparse Multiples of Polynomials -- Fractal Parallelism: Solving SAT in Bounded Space and Time -- Interpretation of Stream Programs: Characterizing Type 2 Polynomial Time Complexity -- New Upper Bounds on the Average PTF Density of Boolean Functions -- Session 4A. Computational Geometry I -- An Optimal Algorithm for Computing Angle-Constrained Spanners -- Approximating Minimum Bending Energy Path in a Simple Corridor -- Session 4B. Graph Coloring I -- Analysis of an Iterated Local Search Algorithm for Vertex Coloring -- Bounded Max-colorings of Graphs -- Session 5A. Fixed Parameter Tractability -- Parameterized Algorithms for Boxicity -- On Tractable Cases of Target Set Selection -- Combining Two Worlds: Parameterised Approximation for Vertex Cover -- Listing All Maximal Cliques in Sparse Graphs in Near-Optimal Time -- Session 5B. Optimization -- Lower Bounds for Howard's Algorithm for Finding Minimum Mean-Cost Cycles -- Solving Two-Stage Stochastic Steiner Tree Problems by Two-Stage Branch-and-Cut -- An Optimal Algorithm for Single Maximum Coverage Location on Trees and Related Problems -- A Faster Algorithm for the Maximum Even Factor Problem.

Sommario/riassunto

This volume contains the proceedings of the 21st Annual International Symposium on Algorithms and Computations (ISAAC 2010), held in Jeju, Korea during December 15-17, 2010. Past editions have been held in Tokyo, Taipei, Nagoya, Hong Kong, Beijing, Cairns, Osaka, Singapore, Taejeon, Chennai, Taipei, Christchurch, Vancouver, Kyoto, Hong Kong, Hainan, Kolkata, Sendai, Gold Coast, and Hawaii over the years 1990-2009. ISAAC is an annual international symposium that covers the very wide range of topics in algorithms and computation. The main purpose of the symposium is to provide a forum for researchers working in algorithms and the theory of computation where they can exchange ideas in this active research community. In response to the call for papers, ISAAC 2010 received 182 papers. Each submission was reviewed by at least three Program Committee members with the assistance of external referees. Since there were many high-quality papers, the Program Committee's task was extremely difficult. Through an extensive discussion, the Program Committee accepted 77 of the submissions to be presented at the conference. Two special issues, one of *Algorithmica* and one of the *International Journal of Computational Geometry and Applications*, were prepared with selected papers from ISAAC 2010. The best paper award was given to "From Holant to #CSP and Back: c Dichotomy for Holant Problems" by Jin-Yi Cai, Sangxia Huang and Pinyan Lu, and the best student paper award to "Satisfiability with Index Dependency" by Hongyu Liang and Jing He. Two eminent invited speakers, David Eppstein from University of California,

Irvine, and Matt Franklin from University of California, Davis, also
contributed to this volume.
