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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5125
Disciplina	004.0151
Soggetti	Software engineering Computer programming Computer science Computer science—Mathematics Discrete mathematics Numerical analysis Artificial intelligence—Data processing Software Engineering Programming Techniques Theory of Computation Discrete Mathematics in Computer Science Numerical Analysis Data Science
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Lectures -- Graph Structure and Monadic Second-Order Logic: Language Theoretical Aspects -- Internet Ad Auctions: Insights and Directions -- Track A: Algorithms, Automata, Complexity, and Games -- The Complexity of Boolean Formula Minimization -- Optimal Cryptographic Hardness of Learning Monotone Functions -- On Berge Multiplication for Monotone Boolean Dualization -- Diagonal Circuit

Identity Testing and Lower Bounds -- Cell-Probe Proofs and Nondeterministic Cell-Probe Complexity -- Constructing Efficient Dictionaries in Close to Sorting Time -- On List Update with Locality of Reference -- A New Combinatorial Approach for Sparse Graph Problems -- How to Explore a Fast-Changing World (Cover Time of a Simple Random Walk on Evolving Graphs) -- Networks Become Navigable as Nodes Move and Forget -- Fast Distributed Computation of Cuts Via Random Circulations -- Finding a Maximum Matching in a Sparse Random Graph in O(n) Expected Time -- Function Evaluation Via Linear Programming in the Priced Information Model -- Improved Approximation Algorithms for Budgeted Allocations -- The Travelling Salesman Problem in Bounded Degree Graphs -- Treewidth Computation and Extremal Combinatorics -- Fast Scheduling of Weighted Unit Jobs with Release Times and Deadlines -- Approximation Algorithms for Scheduling Parallel Jobs: Breaking the Approximation Ratio of 2 -- A PTAS for Static Priority Real-Time Scheduling with Resource Augmentation -- Optimal Monotone Encodings -- Polynomial-Time Construction of Linear Network Coding -- Complexity of Decoding Positive-Rate Reed-Solomon Codes -- Computational Complexity of the Distance Constrained Labeling Problem for Trees (Extended Abstract) -- The Randomized Coloring Procedure with Symmetry-Breaking -- The Local Nature of List Colorings for Graphs of High Girth -- Approximating List-Coloring on a Fixed Surface -- Asymptotically Optimal Hitting Sets Against Polynomials -- The Smoothed Complexity of Edit Distance -- Randomized Self-assembly for Approximate Shapes -- Succinct Data Structures for Retrieval and Approximate Membership (Extended Abstract) -- Competitive Weighted Matching in Transversal Matroids -- Scheduling for Speed Bounded Processors -- Faster Algorithms for Incremental Topological Ordering -- Dynamic Normal Forms and Dynamic Characteristic Polynomial -- Algorithms for ?-Approximations of Terrains -- An Approximation Algorithm for Binary Searching in Trees -- Algorithms for 2-Route Cut Problems -- The Two-Edge Connectivity Survivable Network Problem in Planar Graphs -- Efficiently Testing Sparse GF(2) Polynomials -- Testing Properties of Sets of Points in Metric Spaces -- An Expansion Tester for Bounded Degree Graphs -- Property Testing on k-Vertex-Connectivity of Graphs -- Almost 2-SAT Is Fixed-Parameter Tractable (Extended Abstract) -- On Problems without Polynomial Kernels (Extended Abstract) -- Faster Algebraic Algorithms for Path and Packing Problems -- Understanding the Complexity of Induced Subgraph Isomorphisms -- Spanners in Sparse Graphs -- Distance Oracles for Unweighted Graphs: Breaking the Quadratic Barrier with Constant Additive Error -- All-Pairs Shortest Paths with a Sublinear Additive Error -- Simpler Linear-Time Modular Decomposition Via Recursive Factorizing Permutations -- The Complexity of the Counting Constraint Satisfaction Problem -- On the Hardness of Losing Weight -- Product Theorems Via Semidefinite Programming -- Sound 3-Query PCPPs Are Long -- Approximative Methods for Monotone Systems of Min-Max-Polynomial Equations -- Recursive Stochastic Games with Positive Rewards -- Complementation, Disambiguation, and Determinization of Büchi Automata Unified -- Tree Projections: Hypergraph Games and Minimality -- Explicit Non-adaptive Combinatorial Group Testing Schemes -- Tight Lower Bounds for Multi-pass Stream Computation Via Pass Elimination -- Impossibility of a Quantum Speed-Up with a Faulty Oracle -- Superpolynomial Speedups Based on Almost Any Quantum Circuit -- The Speed of Convergence in Congestion Games under Best-Response Dynamics -- Uniform Budgets and the Envy-Free Pricing Problem -- Bayesian

Combinatorial Auctions -- Truthful Unification Framework for Packing Integer Programs with Choices -- Upper Bounds on the Noise Threshold for Fault-Tolerant Quantum Computing -- Finding Optimal Flows Efficiently -- Optimal Quantum Adversary Lower Bounds for Ordered Search -- Quantum SAT for a Qutrit-Cinquit Pair Is QMA 1-Complete -- Superpolynomial Speedups Based on Almost Any Quantum Circuit.

Sommario/riassunto

The two-volume set LNCS 5125 and LNCS 5126 constitutes the refereed proceedings of the 35th International Colloquium on Automata, Languages and Programming, ICALP 2008, held in Reykjavik, Iceland, in July 2008. The 126 revised full papers presented together with 4 invited lectures were carefully reviewed and selected from a total of 407 submissions. The papers are grouped in three major tracks on algorithms, automata, complexity and games, on logic, semantics, and theory of programming, and on security and cryptography foundations. LNCS 5125 contains 70 contributions of track A selected from 269 submissions as well as 2 invited lectures. The papers are organized in topical sections on complexity: boolean functions and circuits, data structures, random walks and random structures, design and analysis of algorithms, scheduling, codes and coding, coloring, randomness in computation, online and dynamic algorithms, approximation algorithms, property testing, parameterized algorithms and complexity, graph algorithms, computational complexity, games and automata, group testing, streaming, and quantum, algorithmic game theory, and quantum computing.