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Descrizione fisica	1 online resource (XLII, 1072 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2380
Disciplina	511.3
Soggetti	Artificial intelligence Software engineering Automatic control Computers Computer science—Mathematics Computer graphics Artificial Intelligence Software Engineering/Programming and Operating Systems Control and Systems Theory Theory of Computation Mathematics of Computing Computer Graphics
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 at the end of each chapters and index.
Nota di contenuto	Invited Talks -- Molecular Assembly and Computation: From Theory to Experimental Demonstrations -- Towards a Predictive Computational Complexity Theory -- Equivariant Syntax and Semantics -- $L(A) = L(B)$ ? Decidability Results from Complete Formal Systems -- Discrete Tomography: Reconstruction under Periodicity Constraints -- Local and Global Methods in Data Mining: Basic Techniques and Open Problems -- Program Debugging and Validation Using Semantic Approximations and Partial Specifications -- Best Papers -- Inapproximability Results

for Equations over Finite Groups -- A Faster All-Pairs Shortest Path Algorithm for Real-Weighted Sparse Graphs -- On Families of Graphs Having a Decidable First Order Theory with Reachability -- Contributions -- Heuristically Optimized Trade-Offs: A New Paradigm for Power Laws in the Internet -- The Structure and Complexity of Nash Equilibria for a Selfish Routing Game -- Control Message Aggregation in Group Communication Protocols -- Church-Rosser Languages vs. UCFL -- Intersection of Regular Languages and Star Hierarchy -- On the Construction of Reversible Automata for Reversible Languages -- Priority Queues, Pairing, and Adaptive Sorting -- Exponential Structures for Efficient Cache-Oblivious Algorithms -- Bounded-Depth Frege Systems with Counting Axioms Polynomially Simulate Nullstellensatz Refutations -- On the Complexity of Resolution with Bounded Conjunctions -- Cryptographic Hardness Based on the Decoding of Reed-Solomon Codes -- Perfect Constant-Round Secure Computation via Perfect Randomizing Polynomials -- Exponential Lower Bound for Static Semi-algebraic Proofs -- Paths Problems in Symmetric Logarithmic Space -- Scheduling Search Procedures -- Removable Online Knapsack Problems -- New Bounds for Variable-Sized and Resource Augmented Online Bin Packing -- The Quest for Small Universal Cellular Automata -- Hyperbolic Recognition by Graph Automata -- Quantum and Stochastic Branching Programs of Bounded Width -- Spanning Trees with Bounded Number of Branch Vertices -- Energy Optimal Routing in Radio Networks Using Geometric Data Structures -- Gossiping with Bounded Size Messages in ad hoc Radio Networks -- The Kolmogorov-Loveland Stochastic Sequences Are Not Closed under Selecting Subsequences -- The Nondeterministic Constraint Logic Model of Computation: Reductions and Applications -- Constraint Satisfaction Problems in Non-deterministic Logarithmic Space -- Cache Oblivious Distribution Sweeping -- One-Probe Search -- New Algorithms for Subset Query, Partial Match, Orthogonal Range Searching, and Related Problems -- Measuring the Probabilistic Powerdomain -- Games Characterizing Levy-Longo Trees -- Comparing Functional Paradigms for Exact Real-Number Computation -- Random Sampling from Boltzmann Principles -- On the Average Performance of Orthogonal Range Search in Multidimensional Data Structures -- Bialgebraic Modelling of Timed Processes -- Testing Labelled Markov Processes -- Why Computational Complexity Requires Stricter Martingales -- Correspondence Principles for Effective Dimensions -- A Total Approach to Partial Algebraic Specification -- Axiomatising Divergence -- A Spatial Logic for Querying Graphs -- Improving Time Bounds on Maximum Generalised Flow Computations by Contracting the Network -- Approximation Hardness of Bounded Degree MIN-CSP and MIN-BISECTION -- Improved Bounds and New Trade-Offs for Dynamic All Pairs Shortest Paths -- Synthesis of Uninitialized Systems -- Infinite-State High-Level MSCs: Model-Checking and Realizability -- Universal Inherence of Cycle-Free Context-Free Ambiguity Functions -- Histogramming Data Streams with Fast Per-Item Processing -- Finding Frequent Items in Data Streams -- Symbolic Strategy Synthesis for Games on Pushdown Graphs -- Strong Bisimilarity and Regularity of Basic Process Algebra Is PSPACE-Hard -- Solving the String Statistics Problem in Time  $(n \log n)$  -- A PTAS for Distinguishing (Sub)string Selection -- On the Theory of One-Step Rewriting in Trace Monoids -- Navigating with a Browser -- Improved Results for Stackelberg Scheduling Strategies -- Call Control in Rings -- Preemptive Scheduling in Overloaded Systems -- The Equivalence Problem of Finite Substitutions on  $ab^*c$ , with Applications -- Deciding DPDA Equivalence Is Primitive Recursive -- Two-Way

Alternating Automata and Finite Models -- Approximating Huffman Codes in Parallel -- Seamless Integration of Parallelism and Memory Hierarchy -- The Communication Complexity of Approximate Set Packing and Covering -- Antirandomizing the Wrong Game -- Fast Universalization of Investment Strategies with Provably Good Relative Returns -- Randomized Pursuit-Evasion in Graphs -- The Essence of Principal Typings -- Complete and Tractable Local Linear Time Temporal Logics over Traces -- An Elementary Expressively Complete Temporal Logic for Mazurkiewicz Traces -- Random Numbers and an Incomplete Immune Recursive Set -- A Banach-Mazur Computable But Not Markov Computable Function on the Computable Real Numbers -- Polynomial-Time Approximation Schemes for the Euclidean Survivable Network Design Problem -- Finding a Path of Superlogarithmic Length -- Linear Time Algorithms on Chordal Bipartite and Strongly Chordal Graphs -- Improved Inapproximability Results for Vertex Cover on  $k$ -Uniform Hypergraphs -- Efficient Testing of Hypergraphs -- Optimal Net Surface Problems with Applications -- Wagner's Theorem on Realizers -- Circular Arrangements.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 29th International Colloquium on Automata, Languages and Programming, ICALP 2002, held in Malaga, Spain, in July 2002. The 83 revised full papers presented together with 7 invited papers were carefully reviewed and selected from a total of 269 submissions. All current aspects of theoretical computer science are addressed and major new results are presented.

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