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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5257
Disciplina	004
Soggetti	Machine theory Computer science Algorithms Computer science - Mathematics Discrete mathematics Formal Languages and Automata Theory Theory of Computation Discrete Mathematics in Computer Science Symbolic and Algebraic Manipulation
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Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	Invited Talks -- Iteration Semirings -- Various Aspects of Finite Quantum Automata -- On the Hardness of Determining Small NFA's and of Proving Lower Bounds on Their Sizes -- Selected Ideas Used for Decidability and Undecidability of Bisimilarity -- The Frobenius Problem and Its Generalizations -- Well Quasi-orders in Formal Language Theory -- Contributed Papers -- On the Non-deterministic Communication Complexity of Regular Languages -- General Algorithms for Testing the Ambiguity of Finite Automata -- Emptiness of Multi-pushdown Automata Is 2ETIME-Complete -- The Average State Complexity of the Star of a Finite Set of Words Is Linear -- On the Computational Capacity of Parallel Communicating Finite Automata -- On a Generalization of Standard Episturmian Morphisms -- Universal Recursively Enumerable Sets of Strings -- Algorithmically Independent

Sequences -- Relationally Periodic Sequences and Subword Complexity  
-- Bounds on Powers in Strings -- When Is Reachability Intrinsically Decidable? -- Some New Modes of Competence-Based Derivations in CD Grammar Systems -- The Synchronization Problem for Strongly Transitive Automata -- On the Decidability of the Equivalence for  $k$ -Valued Transducers -- Decidable Properties of 2D Cellular Automata -- Fixed Point and Aperiodic Tilings -- Extended Multi Bottom-Up Tree Transducers -- Derivation Tree Analysis for Accelerated Fixed-Point Computation -- Tree Automata with Global Constraints -- Bad News on Decision Problems for Patterns -- Finding the Growth Rate of a Regular of Context-Free Language in Polynomial Time -- More Concise Representation of Regular Languages by Automata and Regular Expressions -- A Taxonomy of Deterministic Forgetting Automata -- Provably Shorter Regular Expressions from Deterministic Finite Automata -- Large Simple Binary EqualityWords -- On the Relation between Periodicity and Unbordered Factors of Finite Words -- Duplication in DNA Sequences -- On the State Complexity of Complements, Stars, and Reversals of Regular Languages -- On the State Complexity of Operations on Two-Way Finite Automata -- On the Size Complexity of Rotating and Sweeping Automata -- An Analysis and a Reproof of Hmelevskii's Theorem -- Hierarchies of Piecewise Testable Languages -- Construction of Tree Automata from Regular Expressions -- Balance Properties and Distribution of Squares in Circular Words -- MSO Logic for Unambiguous Shared-Memory Systems -- Complexity of Topological Properties of Regular ?-Languages.

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#### Sommario/riassunto

This book constitutes the refereed proceedings of the 12th International Conference on Developments in Language Theory, DLT 2008, held in Kyoto, Japan, September 2008. The 36 revised full papers presented together with 6 invited papers were carefully reviewed and selected from 102 submissions. All important issues in language theory are addressed including grammars, acceptors and transducers for words, trees and graphs; algebraic theories of automata; algorithmic, combinatorial and algebraic properties of words and languages; variable length codes; symbolic dynamics; cellular automata; polyominoes and multidimensional patterns; decidability questions; image manipulation and compression; efficient text algorithms; relationships to cryptography, concurrency, complexity theory and logic; bio-inspired computing; quantum computing.

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