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Soggetti	Artificial intelligence Computers Computer science Algorithms Computer logic Mathematical logic Artificial Intelligence Computation by Abstract Devices Computer Science, general Algorithm Analysis and Problem Complexity Logics and Meanings of Programs Mathematical Logic and Formal Languages
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Nota di contenuto	Invited Lectures -- Automata for Specifying Component Interfaces -- Automata on Words -- Regular Papers -- Symbolic Synthesis of Finite-State Controllers for Request-Response Specifications -- Timing Parameter Characterization of Real-Time Systems -- Constructing Büchi Automata from Linear Temporal Logic Using Simulation Relations for Alternating Büchi Automata -- From Regular Weighted Expressions to Finite Automata -- Bideterministic Automata and Minimal Representations of Regular Languages -- Succinct Descriptions of

Regular Languages with Binary ?-NFAs -- An Efficient Pre-determinization Algorithm -- Introducing Vaucanson -- WFSC — A New Weighted Finite State Compiler -- Ternary Directed Acyclic Word Graphs -- Running Time Complexity of Printing an Acyclic Automaton -- Reducing the Time Complexity of Testing for Local Threshold Testability -- Branching Automata with Costs — A Way of Reflecting Parallelism in Costs -- New Complexity Results for Some Linear Counting Problems Using Minimal Solutions to Linear Diophantine Equations -- TCTL Inevitability Analysis of Dense-Time Systems -- Conversation Protocols: A Formalism for Specification and Verification of Reactive Electronic Services -- Boolean Operations for Attribute-Element Constraints -- XML Schema Containment Checking Based on Semi-implicit Techniques -- Weak Minimization of DFA — An Algorithm and Applications -- Bag Automata and Stochastic Retrieval of Biomolecules in Solution -- An Optimal Algorithm for Maximum-Sum Segment and Its Application in Bioinformatics -- Robust Parsing Using Dynamic Programming -- LR Parsing for Global Index Languages (GILs) -- The Ehrenfeucht-Mycielski Sequence -- Poster Paper -- The Longest Common Subsequence Problem A Finite Automata Approach -- AVA: An Applet for Visualizing FRACTRAN and Other Automata -- Preliminary Experiments in Hardcoding Finite Automata -- Computational Linguistic Motivations for a Finite-State Machine Hierarchy -- The Effect of Rewriting Regular Expressions on Their Accepting Automata -- Building Context-Sensitive Parsers from CF Grammars with Regular Control Language -- Finite-State Molecular Computing.

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#### Sommario/riassunto

Automata theory is the foundation of computer science. Its applications have spread to almost all areas of computer science and many other disciplines. In addition, there is a growing number of software systems designed to manipulate automata, regular expressions, grammars, and related structures. This volume contains 24 regular papers from the 8th International Conference on Implementation and Application of Automata (CIAA 2003) held in Santa Barbara, CA, USA, in July 2003 covering various topics in the theory, implementation, and application of automata and related structures. It also includes the abstracts of two invited lectures as well as the abstracts of the poster papers displayed during the conference.

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