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Nota di contenuto	Algorithms for Energy Management -- Sofic and Almost of Finite Type Tree-Shifts -- Proof-Based Design of Security Protocols -- Approximating the Minimum Length of Synchronizing Words Is Hard -- Realizability of Dynamic MSC Languages -- The max quasi-independent set Problem -- Equilibria in Quantitative Reachability Games -- Quotient Complexity of Closed Languages -- Right-Sequential Functions on Infinite Words -- Kernelization -- Zigzags in Turing Machines -- Frameworks for Logically Classifying Polynomial-Time Optimisation Problems -- Validating the Knuth-Morris-Pratt

Failure Function, Fast and Online -- Identical Relations in Symmetric Groups and Separating Words with Reversible Automata -- Time Optimal d-List Colouring of a Graph -- The Cantor Space as a Generic Model of Topologically Presented Knowledge -- Algorithmics – Is There Hope for a Unified Theory? -- Classifying Rankwidth k-DH-Graphs -- Lower Bound on Average-Case Complexity of Inversion of Goldreich's Function by Drunken Backtracking Algorithms -- A SAT Based Effective Algorithm for the Directed Hamiltonian Cycle Problem -- Balancing Bounded Treewidth Circuits -- Obtaining Online Ecological Colourings by Generalizing First-Fit -- Classical Simulation and Complexity of Quantum Computations -- Prefix-Free and Prefix-Correct Complexities with Compound Conditions -- Monotone Complexity of a Pair -- Symbolic Models for Single-Conclusion Proof Logics -- Complexity of Problems Concerning Carefully Synchronizing Words for PFA and Directing Words for NFA -- Advancing Matrix Computations with Randomized Preprocessing -- Transfinite Sequences of Constructive Predicate Logics -- The Quantitative Analysis of User Behavior Online — Data, Models and Algorithms -- A Faster Exact Algorithm for the Directed Maximum Leaf Spanning Tree Problem.-Complexity of Propositional Proofs -- Quantization of Random Walks: Search Algorithms and Hitting Time -- Comparing Two Stochastic Local Search Algorithms for Constraint Satisfaction Problems -- Growth of Power-Free Languages over Large Alphabets -- A Partially Synchronizing Coloring -- An Encoding Invariant Version of Polynomial Time Computable Distributions -- Prehistoric Phenomena and Self-referentiality.

Sommario/riassunto

The 5th International Computer Science Symposium in Russia (CSR 2010) was held June 16-20, 2010 in Kazan, Russia, hosted by the Institute of Informatics of the Tatarstan Academy of Sciences and the Kazan State University. It was the'fth eventinthe seriesofregularinternationalmeetings,followingCSR2006 in St. Petersburg, CSR 2007 in Ekaterinburg, CSR 2008 in Moscow, and CSR 2009 in Novosibirsk. The opening lecture was given by Alexander Razborov, and seven more invited plenary lectures were given by Susanne Albers, Fedor Fomin, Juraj Hromkovi? c,RichardJozsa, PrabhakarRaghavan,Miklos Santha,and Uwe Scho- ¨ ning. This volume contains all the accepted papers and, at varying detail, the abstracts or extended abstracts of the invited talks. The scope of the proposed topics for the symposium was quite broad and covered basically all areas of the foundationsof(meaning:theoretical)computerscience. Unlikeinpreviousyears, no special application track was scheduled. We received 62 valid submissions in total, and out of these the Program Committee selected 30 for acceptance.