Record Nr. UNINA9910483557703321 Computer Science - Theory and Applications : 8th International **Titolo** Computer Science Symposium in Russia, CSR 2013, Ekaterinburg, Russia, June 25-29, 2013, Proceedings / / edited by Andrei A. Bulatov, Arseny M. Shur Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 2013 **ISBN** 3-642-38536-2 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (XII, 445 p. 55 illus.) : digital Collana Theoretical Computer Science and General Issues, , 2512-2029 ; ; 7913 Disciplina 004.0151 Soggetti Algorithms Computer science Computer science—Mathematics Discrete mathematics Machine theory Computer Science Logic and Foundations of Programming Theory of Computation Discrete Mathematics in Computer Science Formal Languages and Automata Theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Bibliographic Level Mode of Issuance: Monograph Note generali Nota di contenuto The Lovasz Local Lemma – A Survey -- An Improved Knapsack Solver for Column Generation -- QuickHeapsort: Modifications and Improved Analysis -- Alphabetic Minimax Trees in Linear Time -- Decidability and Enumeration for Automatic Sequences: A Survey -- Walking on Data Words -- Careful Synchronization of Partial Automata with Restricted Alphabets -- Random Generation of Deterministic Acyclic Automata Using the Recursive Method -- Boolean Language Operations on Nondeterministic Automata with a Pushdown of Constant Height --

A Short Tutorial on Order-Invariant First-Order Logic -- Exponential Lower Bounds for Refuting Random Formulas Using Ordered Binary

Conjunction -- Lower and Upper Bounds for the Length of Joins in the

Decision Diagrams -- Parameterized Resolution with Bounded

Lambek Calculus -- Graph Expansion, Tseitin Formulas and Resolution Proofs for CSP -- Towards NEXP versus BPP? -- Information Lower Bounds via Self-reducibility -- On the Encoding Invariance of Polynomial Time Computable Distribution Ensembles -- Improving on Gutfreund, Shaltiel, and Ta-Shma's Paper "If NP Languages Are Hard on the Worst-Case, Then It Is Easy to Find Their Hard Instances" --Amortized Communication Complexity of an Equality Predicate -- On Coloring of Sparse Graphs -- On Recognizing Words That Are Squares for the Shuffle Product -- Cyclic Shift on Prefix-Free Languages --Weak Abelian Periodicity of Infinite Words -- Universality of Regular Realizability Problems -- Potential Functions in Strategic Games -- The Probabilistic Min Dominating Set Problem -- Dichotomy of the H-Quasi-Cover Problem -- QCSP on Partially Reflexive Cycles - The Wavy Line of Tractability -- Quantum Alternation -- Real Numbers, Chaos, and the Principle of a Bounded Density of Information -- Random Selection in Few Rounds -- One-Counter Verifiers for Decidable Languages -- More on the Complexity of Quantifier-Free Fixed-Size Bit-Vector Logics with Binary Encoding -- Composition with Algebra at the Background -- Model-Checking Bounded Multi-Pushdown Systems -- Multi-weighted Automata and MSO Logic -- Overlapping Tile Automata.

## Sommario/riassunto

This book constitutes the proceedings of the 8th International Computer Science Symposium in Russia, CSR 2013, held in Ekaterinburg, Russia, in June 2013. The 29 full papers presented in this volume were carefully reviewed and selected from 52 submissions. In addition the book contains 8 invited lectures. The papers are organized in topical sections on: algorithms; automata; logic and proof complexity; complexity; words and languages; and logic and automata.