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Nota di contenuto	Invited Talks -- A Calculus and Algebra for Distributed Data Management -- The Büchi Complementation Saga -- Speed-Up Techniques for Shortest-Path Computations -- Session 1A -- Compact Forbidden-Set Routing -- A New Bound for Pure Greedy Hot Potato Routing -- Wavelength Management in WDM Rings to Maximize the Number of Connections -- Session 1B -- A First Investigation of Sturmian Trees -- On the Size of the Universal Automaton of a Regular Language -- Correlations of Partial Words -- Session 2A -- Testing Convexity Properties of Tree Colorings -- Why Almost All k-Colorable Graphs Are Easy -- Session 2B -- On Defining Integers in the Counting Hierarchy and Proving Arithmetic Circuit Lower Bounds -- A New Rank Technique for Formula Size Lower Bounds -- Session 3A -- Hard

Metrics from Cayley Graphs of Abelian Groups -- Broadcasting vs. Mixing and Information Dissemination on Cayley Graphs -- Light Orthogonal Networks with Constant Geometric Dilation -- Session 3B -- Admissibility in Infinite Games -- Pure Stationary Optimal Strategies in Markov Decision Processes -- Symmetries and the Complexity of Pure Nash Equilibrium -- Session 4A -- Computing Representations of Matroids of Bounded Branch-Width -- Characterizing Minimal Interval Completions -- Session 4B -- The Complexity of Unions of Disjoint Sets -- Kolmogorov-Loveland Stochasticity and Kolmogorov Complexity -- Session 5A -- Bounded-Hop Energy-Efficient Broadcast in Low-Dimensional Metrics Via Coresets -- On the Complexity of Affine Image Matching -- Session 5B -- On Fixed Point Equations over Commutative Semirings -- An Exponential Lower Bound for Prefix Gröbner Bases in Free Monoid Rings -- Session 6A -- A Cubic Kernel for Feedback Vertex Set -- The Union of Minimal Hitting Sets: Parameterized Combinatorial Bounds and Counting -- An Optimal, Edges-Only Fully Dynamic Algorithm for Distance-Hereditary Graphs -- Session 6B -- A Search Algorithm for the Maximal Attractor of a Cellular Automaton -- Universal Tilings -- On the Complexity of Unary Tiling-Recognizable Picture Languages -- Session 7A -- A Characterization of Strong Learnability in the Statistical Query Model -- On the Consistency of Discrete Bayesian Learning -- Session 7B -- VPSPACE and a Transfer Theorem over the Reals -- On Symmetric Signatures in Holographic Algorithms -- Session 8A -- Randomly Rounding Rationals with Cardinality Constraints and Derandomizations -- Cheating to Get Better Roommates in a Random Stable Matching -- A Deterministic Algorithm for Summarizing Asynchronous Streams over a Sliding Window -- Session 8B -- Arithmetizing Classes Around NC 1 and L -- The Polynomially Bounded Perfect Matching Problem Is in NC 2 -- Languages with Bounded Multiparty Communication Complexity -- Session 9A -- New Approximation Algorithms for Minimum Cycle Bases of Graphs -- On Completing Latin Squares -- Small Space Representations for Metric Min-Sum k-Clustering and Their Applications -- Session 9B -- An Optimal Tableau-Based Decision Algorithm for Propositional Neighborhood Logic -- Bounded-Variable Fragments of Hybrid Logics -- Rank-1 Modal Logics Are Coalgebraic -- Session 10A -- An Efficient Quantum Algorithm for the Hidden Subgroup Problem in Extraspecial Groups -- Weak Fourier-Schur Sampling, the Hidden Subgroup Problem, and the Quantum Collision Problem -- Quantum Network Coding -- Session 10B -- Reachability in Unions of Commutative Rewriting Systems Is Decidable -- Associative-Commutative Deducibility Constraints -- On the Automatic Analysis of Recursive Security Protocols with XOR -- Session 11A -- Improved Online Algorithms for the Sorting Buffer Problem -- Cost Sharing Methods for Makespan and Completion Time Scheduling -- Session 11B -- Planar Graphs: Logical Complexity and Parallel Isomorphism Tests -- Enumerating All Solutions for Constraint Satisfaction Problems.

Sommario/riassunto

This book constitutes the refereed proceedings of the 24th Annual Symposium on Theoretical Aspects of Computer Science, STACS 2007, held in Aachen, Germany in February 2007. The 56 revised full papers presented together with 3 invited papers were carefully reviewed and selected from about 400 submissions. The papers address the whole range of theoretical computer science including algorithms and data structures, automata and formal languages, complexity theory, logic in computer science, semantics, specification, and verification of programs, rewriting and deduction, as well as current challenges like biological computing, quantum computing, and mobile and net

computing.