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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Shifting and Lifting of Cellular Automata -- Learning as Data Compression -- Reachability Problems: An Update -- RZ: A Tool for Bringing Constructive and Computable Mathematics Closer to Programming Practice -- Producer/Consumer in Membrane Systems and Petri Nets -- A Minimal Pair in the Quotient Structure M/NCup -- Constructive Dimension and Weak Truth-Table Degrees -- A Classification of Viruses Through Recursion Theorems -- Borel Complexity of Topological Operations on Computable Metric Spaces -- Colocatedness and Lebesgue Integrability -- Computing with Genetic Gates -- Resource Restricted Computability Theoretic Learning: Illustrative Topics and Problems -- Characterizing Programming Systems Allowing Program Self-reference -- K-Trivial Closed Sets and Continuous Functions -- Pseudojump Operators and Classes -- Sofic Trace Subshift of a Cellular Automaton -- Thin Maximal Antichains in

the Turing Degrees -- Effective Computation for Nonlinear Systems -- On Rules and Parameter Free Systems in Bounded Arithmetic -- The New Promise of Analog Computation -- Comparing C.E. Sets Based on Their Settling Times -- Time-Complexity Semantics for Feasible Affine Recursions -- Algebraic Model of an Arithmetic Unit for TTE-Computable Normalized Rational Numbers -- Feasible Depth -- Abstract Geometrical Computation and the Linear Blum, Shub and Smale Model -- A Continuous Derivative for Real-Valued Functions -- Refocusing Generalised Normalisation -- The Complexity Ecology of Parameters: An Illustration Using Bounded Max Leaf Number -- Parameterized Complexity and Logic -- Index Sets of Computable Structures with Decidable Theories -- Minimal Representations for Majority Games -- Linear Transformations in Boolean Complexity Theory -- Exact Pair Theorem for the ?-Enumeration Degrees -- Operational Semantics for Positive Relevant Logics Without Distribution -- Multi-valued Logics, Effectiveness and Domains -- Internal Computability -- Post's Problem for Ordinal Register Machines -- Unique Existence and Computability in Constructive Reverse Mathematics -- Input-Dependence in Function-Learning -- Some Notes on Degree Spectra of the Structures -- Confluence of Cut-Elimination Procedures for the Intuitionistic Sequent Calculus -- The Polynomial and Linear Hierarchies in V0 -- The Uniformity Principle for ?-Definability with Applications to Computable Analysis -- Circuit Complexity of Regular Languages -- Definability in the Homomorphic Quasiorder of Finite Labeled Forests -- Physics and Computation: The Status of Landauer's Principle -- Strict Self-assembly of Discrete Sierpinski Triangles -- Binary Trees and (Maximal) Order Types -- A Weakly 2-Random Set That Is Not Generalized Low -- Speed-Up Theorems in Type-2 Computation -- The Complexity of Quickly ORM-Decidable Sets -- On Accepting Networks of Splicing Processors of Size 3 -- Liquid Computing -- Quotients over Minimal Type Theory -- Hairpin Completion Versus Hairpin Reduction -- Hierarchies in Fragments of Monadic Strict NP -- Membrane Systems and Their Application to Systems Biology -- Some Aspects of a Complexity Theory for Continuous Time Systems -- Enumerations and Torsion Free Abelian Groups -- Locally Computable Structures -- Logic and Control -- Nash Stability in Additively Separable Hedonic Games Is NP-Hard -- Comparing Notions of Computational Entropy -- From Logic to Physics: How the Meaning of Computation Changed over Time -- Theories and Ordinals: Ordinal Analysis -- Computable Riemann Surfaces -- Rank Lower Bounds for the Sherali-Adams Operator -- Infinite Computations and a Hierarchy in ? 3 -- Natural Computing: A Natural and Timely Trend for Natural Sciences and Science of Computation -- Biochemical Reactions as Computations -- Doing Without Turing Machines: Constructivism and Formal Topology -- Problems as Solutions -- A Useful Undecidable Theory -- On the Computational Power of Flip-Flop Proteins on Membranes -- Computability and Incomputability -- A Jump Inversion Theorem for the Degree Spectra -- Cupping Enumeration Degrees to 0 e ? -- What Is the Lesson of Quantum Computing? -- Does the Cell Compute? -- Computational Complexity of Constraint Satisfaction -- Finding Most Likely Solutions -- Turing Unbound: Transfinite Computation -- Computability in Amorphous Structures -- The Complexity of Small Universal Turing Machines -- Approximating Generalized Multicut on Trees -- (Short) Survey of Real Hypercomputation -- Characterizing Programming Systems Allowing Program Self-reference.

Sienna, Italy, in June 2007. The 50 revised full papers presented together with 36 invited papers were carefully reviewed and selected from 167 submissions.
