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Nota di contenuto	Deterministic Graphical Games Revisited -- Program Schemes with Deep Pushdown Storage -- Herbrand Theorems and Skolemization for Prenex Fuzzy Logics -- Decidability of Hybrid Logic with Local Common Knowledge Based on Linear Temporal Logic LTL -- Pure Iteration and Periodicity -- Programming Experimental Procedures for Newtonian Kinematic Machines -- Linear, Polynomial or Exponential? Complexity Inference in Polynomial Time -- A Summation Algorithm from 11th Century China -- Sequential Automatic Algebras -- The Role of

Classical Computation in Measurement-Based Quantum Computation -- The Algebraic Counterpart of the Wagner Hierarchy -- Computing by Observing: A Brief Survey -- A Quantum Information-Theoretic Proof of the Relation between Horn's Problem and the Littlewood-Richardson Coefficients -- Pell Equations and Weak Regularity Principles -- Computable Categoricity of Graphs with Finite Components -- P Automata: Membrane Systems as Acceptors -- On the Processing Power of Protozoa -- Computing Equilibria in Large Games We Play -- A Week-End Off: The First Extensive Number-Theoretical Computation on the ENIAC -- Phase Transitions for Weakly Increasing Sequences -- Succinct NP Proofs from an Extractability Assumption -- Describing the Wadge Hierarchy for the Alternation Free Fragment of λ -Calculus (I) -- Subrecursive Complexity of Identifying the Ramsey Structure of Posets -- Solving Simple Stochastic Games -- The Shrinking Property for NP and coNP -- On the Hardness of Truthful Online Auctions with Multidimensional Constraints -- Effective Dimensions and Relative Frequencies -- Reachability in Linear Dynamical Systems -- Hybrid Functional Interpretations -- The Algorithm Concept – Tool for Historiographic Interpretation or Red Herring? -- Adversarial Scheduling Analysis of Game-Theoretic Models of Norm Diffusion -- A Simple P-Matrix Linear Complementarity Problem for Discounted Games -- Implementing Spi Calculus Using Nominal Techniques -- An Enhanced Theory of Infinite Time Register Machines -- Many Facets of Complexity in Logic -- On the Computational Power of Enhanced Mobile Membranes -- Recursion in Higher Types and Resource Bounded Turing Machines -- Computability and Complexity in Self-assembly -- Extraction in Coq: An Overview -- Joining to High Degrees -- Factoring Out Intuitionistic Theorems: Continuity Principles and the Uniform Continuity Theorem -- Interpreting Localized Computational Effects Using Operators of Higher Type -- Uniform Algebraic Reducibilities between Parameterized Numeric Graph Invariants -- Updatable Timed Automata with Additive and Diagonal Constraints -- First-Order Model Checking Problems Parameterized by the Model -- Domain Theory and the Causal Structure of Space-Time -- Recursion on Nested Datatypes in Dependent Type Theory -- Perfect Local Computability and Computable Simulations -- Complete Determinacy and Subsystems of Second Order Arithmetic -- Internal Density Theorems for Hierarchies of Continuous Functionals -- Two-by-Two Substitution Systems and the Undecidability of the Domino Problem -- The Relative Consistency of the Axiom of Choice — Mechanized Using Isabelle/ZF -- Upper Semilattices in Many-One Degrees -- Union of Reducibility Candidates for Orthogonal Constructor Rewriting -- The Quantum Complexity of Markov Chain Monte Carlo -- Topological Dynamics of 2D Cellular Automata -- Complexity of Aperiodicity for Topological Properties of Regular λ -Languages -- λ -Degree Spectra -- Cupping Classes of Enumeration Degrees -- Principal Typings for Explicit Substitutions Calculi -- How We Think of Computing Today.

Sommario/riassunto

This book constitutes the refereed proceedings of the 4th International Conference on Computability in Europe, CiE 2008, held in Athens, Greece, in June 2008. The 36 revised full papers presented together with 25 invited tutorials and lectures were carefully reviewed and selected from 108 submissions. Among them are papers of 6 special sessions entitled algorithms in the history of mathematics, formalising mathematics and extracting algorithms from proofs, higher-type recursion and applications, algorithmic game theory, quantum algorithms and complexity, and biology and computation.
