

1. Record Nr.	UNINA9910484639703321
Titolo	Programs, Proofs, Processes : 6th Conference on Computability in Europe, CiE, 2010, Ponta Delgada, Azores, Portugal, June 30 - July 4, 2010, Proceedings / / edited by Fernando Ferreira, Benedikt Löwe, Elvira Mayordomo, Luís Mendes Gomes
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	1-280-38752-1 9786613565440 3-642-13962-0
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XIV, 450 p. 37 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 6158
Altri autori (Persone)	FerreiraFernando
Disciplina	004.0151
Soggetti	Computer programming Compilers (Computer programs) Computer science Algorithms Artificial intelligence Programming Techniques Compilers and Interpreters Theory of Computation Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Avoiding Simplicity Is Complex -- Higher-Order Containers -- On the Completeness of Quantum Computation Models -- The Ordinal of Skolem + Tetration Is ? 0 -- Proofs, Programs, Processes -- Ergodic-Type Characterizations of Algorithmic Randomness -- How Powerful Are Integer-Valued Martingales? -- A Faster Algorithm for Finding Minimum Tucker Submatrices -- Processes in Space -- Computability of Countable Subshifts -- The Limits of Tractability in Resolution-Based Propositional Proof Systems -- Haskell before Haskell: Curry's Contribution to Programming (1946–1950) -- A Miniaturisation of Ramsey's Theorem -- Graph Structures and Algorithms for Query-Log

Analysis -- On the Complexity of Local Search for Weighted Standard Set Problems -- Computational Interpretations of Analysis via Products of Selection Functions -- The Peirce Translation and the Double Negation Shift -- Counting the Changes of Random Sets -- Boole: From Calculating Numbers to Calculating Thoughts -- Approximability and Hardness in Multi-objective Optimization -- Is Not a Heyting Algebra -- Lower Bounds for Reducibility to the Kolmogorov Random Strings -- Spatial Models for Virtual Networks -- DNA Rearrangements through Spatial Graphs -- On Index Sets of Some Properties of Computable Algebras -- The Strength of the Besicovitch-Davies Theorem -- Circuit Complexity and Multiplicative Complexity of Boolean Functions -- Definability in the Subword Order -- Undecidability in Weihrauch Degrees -- Degrees with Almost Universal Cupping Property -- Incomputability in Physics -- Approximate Self-assembly of the Sierpinski Triangle -- Hairpin Lengthening -- Infinites in Quantum Field Theory and in Classical Computing: Renormalization Program -- Computational Complexity Aspects in Membrane Computing -- Computable Ordered AbelianGroups and Fields -- Focusing in Asynchronous Games -- A Note on the Least Informative Model of a Theory -- Three Roots for Leibniz's Contribution to the Computational Conception of Reason -- Development of a Bacteria Computer: From in silico Finite Automata to in vitro and in vivo -- The Complexity of Explicit Constructions -- Kolmogorov Complexity Cores -- Every -Set Is Natural, Up to Turing Equivalence -- Computable Fields and Weak Truth-Table Reducibility -- What Is the Problem with Proof Nets for Classical Logic? -- Quasi-linear Dialectica Extraction -- Computing with Concepts, Computing with Numbers: Llull, Leibniz, and Boole -- Inference Concerning Physical Systems.

Sommario/riassunto

CiE 2010: Programs, Proofs, Processes Ponta Delgada, Azores, Portugal, June 30-July 4 2010 The last few years, starting in 2005 with our inaugural conference in Amsterdam, have seen a development from an informal cooperation via an increasingly established conference series to an association, founded in 2008. While the organization form of Computability in Europe (CiE) may have changed, the scientific scope is still the same and as interdisciplinary and innovative as it was six years ago when we held the first conference. CiE aims to promote computability-related science in its broadest sense, including mathematics, computer science, applications in various natural and engineering sciences (e. g. , physics, biology, computer engineering), and also reaches out to meta-studies such as the history and philosophy of computing. Researchers at CiE conferences wish to advance our theoretical understanding of what can and cannot be computed, by any means of computation. CiE 2010 was the sixth conference of the series, held in a geographically unique and dramatic location, Europe's most westerly outpost, at the University of Azores in Ponta Delgada, Portugal. The theme of CiE 2010 "Programs, Proofs, Processes" points to the usual CiE synergy of computer science, mathematics and logic, with important computability-theoretic connections to science and the real universe. Formal systems, attendant proofs, and the possibility of their computer generation and manipulation (for instance, into programs) have been changing a whole spectrum of disciplines.
