

Contents

Invited Papers

Character-Based Phylogeny Construction and Its Application to Tumor Evolution.	3
<i>Gianluca Della Vedova, Murray Patterson, Raffaella Rizzi, and Mauricio Soto</i>	
Is there any Real Substance to the Claims for a ‘New Computationalism’?. . .	14
<i>Alberto Hernández-Espinosa, Francisco Hernández-Quiroz, and Héctor Zenil</i>	
Formalizing a Fragment of Combinatorics on Words	24
<i>Štěpán Holub and Robert Veroff</i>	
Turing’s 1949 Paper in Context	32
<i>Cliff B. Jones</i>	
Gödel’s Reception of Turing’s Model of Computability: The “Shift of Perception” in 1934.	42
<i>Juliette Kennedy</i>	
A Guided Tour to Computational Haplotyping	50
<i>Gunnar W. Klau and Tobias Marschall</i>	
Outline of Partial Computability in Computable Topology	64
<i>Margarita Korovina and Oleg Kudinov</i>	
Eliminating Unbounded Search in Computable Algebra	77
<i>Alexander G. Melnikov</i>	
Computable Transformations of Structures	88
<i>Russell Miller</i>	
Formulas with Reversal	98
<i>Narad Rampersad</i>	
Compressibility and Probabilistic Proofs	101
<i>Alexander Shen</i>	
Delayed-Input Cryptographic Protocols	112
<i>Ivan Visconti</i>	

Contributed Papers

A Deterministic Algorithm for Testing the Equivalence of Read-Once Branching Programs with Small Discrepancy	119
<i>Stefan Arnold and Jacobo Torán</i>	
Counting Substrate Cycles in Topologically Restricted Metabolic Networks . . .	129
<i>Robert D. Barish and Akira Suyama</i>	
Turing Computable Embeddings, Computable Infinitary Equivalence, and Linear Orders	141
<i>Nikolay Bazhenov</i>	
Degrees of Categoricity of Rigid Structures	152
<i>Nikolay A. Bazhenov and Mars M. Yamaleev</i>	
Flexible Indexing of Repetitive Collections	162
<i>Djamal Belazzougui, Fabio Cunial, Travis Gagie, Nicola Prezza, and Mathieu Raffinot</i>	
Admissibles in Gaps	175
<i>Merlin Carl, Bruno Durand, Grégory Lafitte, and Sabrina Ouazzani</i>	
Koepke Machines and Satisfiability for Infinitary Propositional Languages . .	187
<i>Merlin Carl, Benedikt Löwe, and Benjamin G. Rin</i>	
The Recognizability Strength of Infinite Time Turing Machines with Ordinal Parameters	198
<i>Merlin Carl and Philipp Schlicht</i>	
New Bounds on the Strength of Some Restrictions of Hindman's Theorem	210
<i>Lorenzo Carlucci, Leszek Aleksander Kołodziejczyk, Francesco Lepore, and Konrad Zdanowski</i>	
Infinite Time Busy Beavers	221
<i>Oscar Defrain, Bruno Durand, and Grégory Lafitte</i>	
Permutive One-Way Cellular Automata and the Finiteness Problem for Automaton Groups	234
<i>Martin Delacourt and Nicolas Ollinger</i>	
Towards Computable Analysis on the Generalised Real Line	246
<i>Lorenzo Galeotti and Hugo Nobrega</i>	
Finite Language Forbidding-Enforcing Systems	258
<i>Daniela Genova and Hendrik Jan Hoogeboom</i>	

Surjective H -Colouring: New Hardness Results.	270
<i>Petr A. Golovach, Matthew Johnson, Barnaby Martin, Daniël Paulusma, and Anthony Stewart</i>	
On Higher Effective Descriptive Set Theory.	282
<i>Margarita Korovina and Oleg Kudinov</i>	
Σ_2^μ is decidable for Π_2^μ	292
<i>Karoliina Lehtinen and Sandra Quickert</i>	
Dimension Spectra of Lines	304
<i>Neil Lutz and D.M. Stull</i>	
A Universal Oracle for Signal Machines	315
<i>Thierry Monteil</i>	
Game Characterizations and Lower Cones in the Weihrauch Degrees	327
<i>Hugo Nobrega and Arno Pauly</i>	
Randomness Deficiencies.	338
<i>Gleb Novikov</i>	
McShane-Whitney Pairs.	351
<i>Iosif Petrakis</i>	
Total Nondeterministic Turing Machines and a p-optimal Proof System for SAT.	364
<i>Zenon Sadowski</i>	
A One-Dimensional Physically Universal Cellular Automaton.	375
<i>Ville Salo and Ilkka Törmä</i>	
Extending Wadge Theory to k -Partitions	387
<i>Victor L. Selivanov</i>	
Erratum to: Counting Substrate Cycles in Topologically Restricted Metabolic Networks	E1
<i>Robert D. Barish and Akira Suyama</i>	
Author Index	401

Unveiling Dynamics and Complexity

13th Conference on Computability in Europe, CiE 2017,

Turku, Finland, June 12-16, 2017, Proceedings

Kari, J.; Manea, F.; Petre, I. (Eds.)

2017, XIII, 401 p. 57 illus., Softcover

ISBN: 978-3-319-58740-0