

# Table of Contents

## Invited Papers

Semiperfect-Information Games . . . . .	1
<i>Krishnendu Chatterjee and Thomas A. Henzinger</i>	
Computational Complexity Since 1980 . . . . .	19
<i>Russell Impagliazzo</i>	
Developments in Data Structure Research During the First 25 Years of FSTTCS . . . . .	48
<i>Raimund Seidel</i>	
Inference Systems for Logical Algorithms . . . . .	60
<i>Natarajan Shankar</i>	
From Logic to Games . . . . .	79
<i>Igor Walukiewicz</i>	
Proving Lower Bounds Via Pseudo-random Generators . . . . .	92
<i>Manindra Agrawal</i>	
Erdős Magic . . . . .	106
<i>Joel Spencer</i>	

## Contributed Papers

No Coreset, No Cry: II . . . . .	107
<i>Michael Edwards and Kasturi Varadarajan</i>	
Improved Bounds on the Union Complexity of Fat Objects . . . . .	116
<i>Mark de Berg</i>	
On the Bisimulation Congruence in $\chi$ -Calculus . . . . .	128
<i>Taolue Chen, Tingting Han, and Jian Lu</i>	
Extending Howe's Method to Early Bisimulations for Typed Mobile Embedded Resources with Local Names . . . . .	140
<i>Jens Chr. Godskesen and Thomas Hildebrandt</i>	
Approximation Algorithms for Wavelength Assignment . . . . .	152
<i>Vijay Kumar and Atri Rudra</i>	
The Set Cover with Pairs Problem . . . . .	164
<i>Refael Hassin and Danny Segev</i>	

XII Table of Contents

Non-disclosure for Distributed Mobile Code . . . . .	177
<i>Ana Almeida Matos</i>	
Quantitative Models and Implicit Complexity . . . . .	189
<i>Ugo Dal Lago and Martin Hofmann</i>	
The MSO Theory of Connectedly Communicating Processes . . . . .	201
<i>P. Madhusudan, P.S. Thiagarajan, and Shaofa Yang</i>	
Reachability of Hennessy-Milner Properties for Weakly Extended PRS . .	213
<i>Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček</i>	
Decision Procedures for Queues with Integer Constraints . . . . .	225
<i>Ting Zhang, Henny B. Sipma, and Zohar Manna</i>	
The Directed Planar Reachability Problem . . . . .	238
<i>Eric Allender, Samir Datta, and Sambuddha Roy</i>	
Dimensions of Copeland-Erdős Sequences . . . . .	250
<i>Xiaoyang Gu, Jack H. Lutz, and Philippe Moser</i>	
Refining the Undecidability Frontier of Hybrid Automata . . . . .	261
<i>Venkatesh Mysore and Amir Pnueli</i>	
When Are Timed Automata Weakly Timed Bisimilar to Time Petri Nets? . . . . .	273
<i>Beatrice Bérard, Franck Cassez, Serge Haddad, Didier Lime, and Olivier H. Roux</i>	
Subquadratic Algorithms for Workload-Aware Haar Wavelet Synopses . .	285
<i>S. Muthukrishnan</i>	
Practical Algorithms for Tracking Database Join Sizes . . . . .	297
<i>Sumit Ganguly, Deepanjan Kesh, and Chandan Saha</i>	
On Sampled Semantics of Timed Systems . . . . .	310
<i>Pavel Krčál and Radek Pelánek</i>	
Eventual Timed Automata . . . . .	322
<i>Deepak D'Souza and M. Raj Mohan</i>	
Causal Closure for MSC Languages . . . . .	335
<i>Bharat Adsul, Madhavan Mukund, K. Narayan Kumar, and Vasumathi Narayanan</i>	
Reachability Analysis of Multithreaded Software with Asynchronous Communication . . . . .	348
<i>Ahmed Bouajjani, Javier Esparza, Stefan Schwoon, and Jan Strejček</i>	

Probabilistic Analysis for a Multiple Depot Vehicle Routing Problem . . .	360
<i>Andreas Baltz, Devdatt Dubhashi, Libertad Tansini, Anand Srivastav, and Sören Werth</i>	
Computing the Expected Accumulated Reward and Gain for a Subclass of Infinite Markov Chains . . . . .	372
<i>Tomáš Brázdil and Antonín Kučera</i>	
Towards a CTL* Tableau . . . . .	384
<i>Mark Reynolds</i>	
Bisimulation Quantified Logics: Undecidability . . . . .	396
<i>Tim French</i>	
Logarithmic-Time Single Deleter, Multiple Inserter Wait-Free Queues and Stacks . . . . .	408
<i>Prasad Jayanti and Srdjan Petrovic</i>	
Monitoring Stable Properties in Dynamic Peer-to-Peer Distributed Systems . . . . .	420
<i>Sathya Peri and Neeraj Mittal</i>	
On the Expressiveness of TPTL and MTL . . . . .	432
<i>Patricia Bouyer, Fabrice Chevalier, and Nicolas Markey</i>	
Modal Strength Reduction in Quantified Discrete Duration Calculus . . . .	444
<i>Shankara Narayanan Krishna and Paritosh K. Pandya</i>	
Comparing Trees Via Crossing Minimization . . . . .	457
<i>Henning Fernau, Michael Kaufmann, and Mathias Poths</i>	
On Counting the Number of Consistent Genotype Assignments for Pedigrees . . . . .	470
<i>Jiří Srba</i>	
Fixpoint Logics on Hierarchical Structures . . . . .	483
<i>Stefan Göller and Markus Lohrey</i>	
The Equivalence Problem for Deterministic MSO Tree Transducers Is Decidable . . . . .	495
<i>Joost Engelfriet and Sebastian Maneth</i>	
Market Equilibrium for CES Exchange Economies: Existence, Multiplicity, and Computation . . . . .	505
<i>Bruno Codenotti, Benton McCune, Sriram Penumatcha, and Kasturi Varadarajan</i>	
Testing Concurrent Systems: An Interpretation of Intuitionistic Logic . . .	517
<i>Radha Jagadeesan, Gopalan Nadathur, and Vijay Saraswat</i>	

XIV Table of Contents

Proofs of Termination of Rewrite Systems for Polytime Functions . . . . .	529
<i>Toshiyasu Arai and Georg Moser</i>	
On the Controller Synthesis for Finite-State Markov Decision Processes . .	541
<i>Antonín Kučera and Oldřich Stražovský</i>	
Reasoning About Quantum Knowledge . . . . .	553
<i>Ellie D'Hondt and Prakash Panangaden</i>	
<b>Author Index</b> . . . . .	565