Table of Contents

Session 1: Invited Talks

Reasoning with MAD Distributed Systems 1
Lorenzo Alvisi and Edmund L. Wong

The Power of Well-Structured Systems 5
Sylvain Schmitz and Philippe Schnoebelen

Impact of Resource Sharing on Performance and Performance Prediction: A Survey 25
Andreas Abel, Florian Benz, Johannes Doerfert, Barbara Dörr, Sebastian Hahn, Florian Haupenthal, Michael Jacobs, Amir H. Moin, Jan Reineke, Bernhard Schommer, and Reinhard Wilhelm

Concurrency Meets Probability: Theory and Practice (Abstract) 44
Joost-Pieter Katoen

Session 2: Process Semantics and Modal Transition Systems

Modular Semantics for Transition System Specifications with Negative Premises 46
Martin Churchill, Peter D. Mosses, and Mohammad Reza Mousavi

Mutually Testing Processes (Extended Abstract) 61
Giovanni Bernardi and Matthew Hennessy

Hennessy-Milner Logic with Greatest Fixed Points as a Complete Behavioural Specification Theory 76
Nikola Beneš, Benoît Delahaye, Uli Fahrenberg, Jan Křetínský, and Axel Legay

Merging Partial Behaviour Models with Different Vocabularies 91
Shoham Ben-David, Marsha Chechik, and Sebastian Uchitel

Session 3: VAS and Pushdown Systems

Solving Parity Games on Integer Vectors 106
Parosh Aziz Abdulla, Richard Mayr, Arnaud Sangnier, and Jeremy Sproston

Bibliografische Informationen
http://d-nb.info/1038190487

digitalisiert durch DEUTSCHE NATIONAL BIBLIOTHEK

Well-Structured Pushdown Systems 121
Xiaojuan Cai and Mizuhito Ogawa

A Relational Trace Logic for Vector Addition Systems with Application to Context-Freeness 137
Jérôme Leroux, M. Praveen, and Grégoire Sutre

Expand, Enlarge, and Check for Branching Vector Addition Systems ... 152
Rupak Majumdar and Zilong Wang

Session 4: Pi Calculus and Interaction Nets

Symbolic Bisimulation for a Higher-Order Distributed Language with Passivation (Extended Abstract) 167
Vasileios Koutavas and Matthew Hennessy

A Theory of Name Boundedness 182
Reiner Hüchting, Rupak Majumdar, and Roland Meyer

A Hierarchy of Expressiveness in Concurrent Interaction Nets 197
Andrei Dorman and Damiano Mazza

Session 5: Linearizability and Verification of Concurrent Programs

An Epistemic Perspective on Consistency of Concurrent Computations 212
Klaus von Gleissenthall and Andrey Rybalchenko

Characterizing Progress Properties of Concurrent Objects via Contextual Refinements 227
Hongjin Liang, Jan Hoffmann, Xinyu Feng, and Zhong Shao

Aspect-Oriented Linearizability Proofs 242
Thomas A. Henzinger, Ali Sezgin, and Viktor Vafeiadis

Causality-Based Verification of Multi-threaded Programs 257
Andrey Kupriyanov and Bernd Finkbeiner

Session 6: Verifiation of Infinite Models, Model Measure and Reversibility

From Model Checking to Model Measuring 273
Thomas A. Henzinger and Jan Otop

Safety Verification of Asynchronous Pushdown Systems with Shaped Stacks 288
Jonathan Kochems and C.-H. Luke Ong

Reversibility and Asymmetric Conflict in Event Structures 303
Iain Phillips and Irek Ulidowski

The Power of Priority Channel Systems 319
Christoph Haase, Sylvain Schmitz, and Philippe Schnoebelen

Session 7: Stochastic Models

Reachability Probabilities of Quantum Markov Chains 334
Shenggang Ying, Yuan Feng, Nengkun Yu, and Mingsheng Ying

Cost Preserving Bisimulations for Probabilistic Automata 349
Holger Hermanns and Andrea Turrini

Compositional Verification and Optimization of Interactive Markov Chains 364
Holger Hermanns, Jan Krčál, and Jan Křetínský

Thermodynamic Graph-Rewriting 380
Vincent Danos, Russ Harmer, and Ricardo Honorato-Zimmer

Session 8: Message-Based Interacting Processes

Globally Governed Session Semantics 395
Dimitrios Kouzapas and Nobuko Yoshida

A General Proof System for Modalities in Concurrent Constraint Programming 410
Vivek Nigam, Carlos Olarte, and Elaine Pimentel

Compositional Choreographies 425
Fabrizio Montesi and Nobuko Yoshida

On Negotiation as Concurrency Primitive 440
Javier Esparza and Jörg Desel

Session 9: Principles of Automatic Verification

Satisfiability of CTL* with Constraints 455
Claudia Carapelle, Alexander Kartzow, and Markus Lohrey

Proof Graphs for Parameterised Boolean Equation Systems 470
Sjoerd Cranen, Bas Luttik, and Tim A.C. Willemse

Generalizing Simulation to Abstract Domains 485
Vijay D'Silva

Session 10: Games and Control Synthesis

Hyperplane Separation Technique for Multidimensional Mean-Payoff Games 500
Krishnendu Chatterjee and Yaron Velner

Borel Determinacy of Concurrent Games 516
Julian Gutierrez and Glynn Winskel

A Faster Algorithm for Solving One-Clock Priced Timed Games 531
Thomas Dueholm Hansen, Rasmus Ibsen-Jensen, and Peter Bro Miltersen

Robust Controller Synthesis in Timed Automata 546
Ocan Sankur, Patricia Bouyer, Nicolas Markey, and Pierre-Alain Reynier

Author Index 561