

Table of Contents

Frontispiece: Zohar Manna

Pæan to Zohar Manna	1
<i>Nachum Dershowitz</i>	

Technical Papers

A Logic of Object-Oriented Programs	11
<i>Martín Abadi, K. Rustan M. Leino</i>	
Formal Analysis of Hierarchical State Machines	42
<i>Rajeev Alur</i>	
Abstraction as the Key for Invariant Verification	67
<i>Saddek Bensalem, Susanne Graf, Yassine Lakhnech</i>	
Domain Engineering: a “Radical Innovation” for Software and Systems Engineering? A Biased Account	100
<i>Dines Bjørner</i>	
The ASM Ground Model Method as a Foundation for Requirements Engineering	145
<i>Egon Börger</i>	
A Functional Calculus for Specification and Verification of Nondeterministic Interactive Systems	161
<i>Manfred Broy</i>	
Notes from the Logbook of a Proof-Checker’s Project	182
<i>Domenico Cantone, Eugenio G. Omodeo, Jacob T. Schwartz, Pietro Ursino</i>	
Counterexamples Revisited: Principles, Algorithms, Applications	208
<i>Edmund Clarke, Helmut Veith</i>	
Easy Intruder Deductions	225
<i>Hubert Comon-Lundh, Ralf Treinen</i>	
Verification by Abstract Interpretation	243
<i>Patrick Cousot</i>	
Game Models for Open Systems	269
<i>Luca de Alfaro</i>	

A Compositional Operational Semantics for <i>Java_{MT}</i>	290
<i>Erika Ábrahám, Frank S. de Boer, Willem-Paul de Roever, Martin Steffen</i>	
Bounded Fairness	304
<i>Nachum Dershowitz, D.N. Jayasimha, Seungjoon Park</i>	
Efficient Boundary Values Generation in General Metric Spaces for Software Component Testing	318
<i>Alfredo Ferro, Rosalba Giugno, Alfredo Pulvirenti</i>	
Extreme Model Checking	332
<i>Thomas A. Henzinger, Ranjit Jhala, Rupak Majumdar, Marco A.A. Sanvido</i>	
Automata Mista	359
<i>Gérard Huet</i>	
Aspect Validation Using Model Checking	373
<i>Shmuel Katz, Marcelo Sihman</i>	
Qualitative Theorem Proving in Linear Constraints	395
<i>Vijay Chandru, Jean-Louis Lassez</i>	
Some Institutional Requirements for Temporal Reasoning on Dynamic Reconfiguration of Component Based Systems	407
<i>Nazareno Aguirre, Tom Maibaum</i>	
A Formal Basis for Reasoning on Programmable QoS	436
<i>Rocco De Nicola, Gianluigi Ferrari, Ugo Montanari, Rosario Pugliese, Emilio Tuosto</i>	
A Hierarchical Completeness Proof for Propositional Temporal Logic	480
<i>Ben Moszkowski</i>	
Computational Proof as Experiment: Probabilistic Algorithms from a Thermodynamic Perspective	524
<i>Krishna V. Palem</i>	
Unit Checking: Symbolic Model Checking for a Unit of Code	548
<i>Elsa Gunter, Doron Peled</i>	
Colimits for Concurrent Collectors	568
<i>Dusko Pavlovic, Peter Pepper, Doug Smith</i>	
TLPVS: A PVS-Based LTL Verification System	598
<i>Amir Pnueli, Tamara Arons</i>	
Binary Extensions of S1S and the Composition Method	626
<i>Enrico Marzano, Angelo Montanari, Alberto Policriti</i>	

Deriving Efficient Graph Algorithms.....	645
<i>John H. Reif, William L. Scherlis</i>	
Petri Net Analysis Using Invariant Generation.....	682
<i>Sriram Sankaranarayanan, Henny Sipma, Zohar Manna</i>	
Fair Equivalence Relations.....	702
<i>Orna Kupferman, Nir Piterman, Moshe Y. Vardi</i>	
Digital Algebra and Circuits.....	733
<i>Jean Vuillemin</i>	
Program Synthesis for Multi-agent Question Answering.....	747
<i>Richard Waldinger, Peter Jarvis, Jennifer Dungan</i>	
Combining Sets with Elements.....	762
<i>Calogero G. Zarba</i>	
Author Index	783