

Table of Contents

Challenges in System-Level Design	1
<i>Wayne Wolf</i>	
Generating Fast Multipliers Using Clever Circuits	6
<i>Mary Sheeran</i>	
Verification of Analog and Mixed-Signal Circuits Using Hybrid System Techniques.....	21
<i>Thao Dang, Alexandre Donz�e, and Oded Maler</i>	
A Methodology for the Formal Verification of FFT Algorithms in HOL ...	37
<i>Behzad Akbarpour and Sofi�ene Tahar</i>	
A Functional Approach to the Formal Specification of Networks on Chip ..	52
<i>Julien Schmaltz and Dominique Borrione</i>	
Proof Styles in Operational Semantics	67
<i>Sandip Ray and J. Strother Moore</i>	
Integrating Reasoning About Ordinal Arithmetic into ACL2.....	82
<i>Panagiotis Manolios and Daron Vroon</i>	
Combining Equivalence Verification and Completion Functions	98
<i>Mark D. Aagaard, Vlad C. Ciubotariu, Jason T. Higgins, and Farzad Khalvati</i>	
Synchronization-at-Retirement for Pipeline Verification	113
<i>Mark D. Aagaard, Nancy A. Day, and Robert B. Jones</i>	
Late Design Changes (ECOs) for Sequentially Optimized Esterel Designs	128
<i>Laurent Arditi, Gerard Berry, and Michael Kishinevsky</i>	
Non-miter-based Combinational Equivalence Checking by Comparing BDDs with Different Variable Orders	144
<i>In-Ho Moon and Carl Pixley</i>	
Scalable Automated Verification via Expert-System Guided Transformations	159
<i>Hari Mony, Jason Baumgartner, Viresh Paruthi, Robert Kanzelman, and Andreas Kuehlmann</i>	

Simple Yet Efficient Improvements
of SAT Based Bounded Model Checking 174
Emmanuel Zarpas

Simple Bounded LTL Model Checking 186
Timo Latvala, Armin Biere, Keijo Heljanko, and Tommi Junttila

QUBE++: An Efficient QBF Solver 201
Enrico Giunchiglia, Massimo Narizzano, and Armando Tacchella

Bounded Probabilistic Model Checking with the Mur ϕ Verifier 214
*Giuseppe Della Penna, Benedetto Intrigila, Igor Melatti,
Enrico Tronci, and Marisa Venturini Zilli*

Increasing the Robustness of Bounded Model Checking
by Computing Lower Bounds on the Reachable States 230
Mohammad Awedh and Fabio Somenzi

Bounded Verification of Past LTL 245
Alessandro Cimatti, Marco Roveri, and Daniel Sheridan

A Hybrid of Counterexample-Based and Proof-Based Abstraction 260
Nina Amla and Ken L. McMillan

Memory Efficient All-Solutions SAT Solver and Its Application
for Reachability Analysis 275
Orna Grumberg, Assaf Schuster, and Avi Yadgar

Approximate Symbolic Model Checking for Incomplete Designs 290
Tobias Nopper and Christoph Scholl

Extending Extended Vacuity 306
Arie Gurfinkel and Marsha Chechik

Parameterized Vacuity 322
Marko Samer and Helmut Veith

An Operational Semantics for Weak PSL 337
Koen Claessen and Johan Mårtensson

Accepting Predecessors Are Better than Back Edges
in Distributed LTL Model-Checking 352
Luboš Brim, Ivana Černá, Pavel Moravec, and Jiří Šimša

Bloom Filters in Probabilistic Verification 367
Peter C. Dillinger and Panagiotis Manolios

A Simple Method for Parameterized Verification
of Cache Coherence Protocols 382
Ching-Tsun Chou, Phanindra K. Mannava, and Seungjoon Park

A Partitioning Methodology for BDD-Based Verification	399
<i>Debashis Sahoo, Subramanian Iyer, Jawahar Jain, Christian Stangier, Amit Narayan, David L. Dill, and E. Allen Emerson</i>	
Invariant Checking Combining Forward and Backward Traversal	414
<i>Christian Stangier and Thomas Sidle</i>	
Variable Reuse for Efficient Image Computation	430
<i>Zijiang Yang and Rajeev Alur</i>	
Author Index	445