

# Table of Contents

On Behavioral Programming . . . . .	1
<i>David Harel</i>	
Verifying Real-Time Software Is Not Reasonable (Today) . . . . .	2
<i>Edward A. Lee</i>	
SMT in Verification, Modeling, and Testing at Microsoft . . . . .	3
<i>Nikolaj Bjørner</i>	
Reducing Costs While Increasing Quality . . . . .	4
<i>Orna Raz</i>	
Special Session on Security Verification . . . . .	5
<i>Alex Goryachev</i>	
Circuit Primitives for Monitoring Information Flow and Enabling Redundancy . . . . .	6
<i>Ryan Kastner</i>	
Formal Analysis of Security Data Paths in RTL Design . . . . .	7
<i>Jamil Mazzawi and Ziyad Hanna</i>	
Precise Detection of Atomicity Violations . . . . .	8
<i>Ricardo J. Dias, Vasco Pessanha, and João M. Lourenço</i>	
Proving Mutual Termination of Programs . . . . .	24
<i>Dima Elenbogen, Shmuel Katz, and Ofer Strichman</i>	
Knowledge Based Transactional Behavior . . . . .	40
<i>Saddek Bensalem, Marius Bozga, Doron Peled, and Jean Quilbeuf</i>	
Repair with On-The-Fly Program Analysis . . . . .	56
<i>Robert Könighofer and Roderick Bloem</i>	
Computing Interpolants without Proofs . . . . .	72
<i>Hana Chockler, Alexander Ivrii, and Arie Matsliah</i>	
MaxSAT-Based MCS Enumeration . . . . .	86
<i>Antonio Morgado, Mark Liffiton, and Joao Marques-Silva</i>	
Automated Reencoding of Boolean Formulas . . . . .	102
<i>Norbert Manthey, Marijn J.H. Heule, and Armin Biere</i>	

Leveraging Accelerated Simulation for Floating-Point Regression . . . . .	118
<i>John Paul, Elena Guralnik, Anatoly Koyfman, Amir Nahir, and Subrat K. Panda</i>	
Coverage-Based Trace Signal Selection for Fault Localisation in Post-silicon Validation . . . . .	132
<i>Charlie Shucheng Zhu, Georg Weissenbacher, and Sharad Malik</i>	
A Novel Approach for Implementing Microarchitectural Verification Plans in Processor Designs . . . . .	148
<i>Yoav Katz, Michal Rimon, and Avi Ziv</i>	
Statistical Model Checking for Safety Critical Hybrid Systems: An Empirical Evaluation . . . . .	162
<i>Youngjoo Kim, Moonzoo Kim, and Tai-Hyo Kim</i>	
A New Test-Generation Methodology for System-Level Verification of Production Processes . . . . .	178
<i>Allon Adir, Alex Goryachev, Lev Greenberg, Tamer Salman, and Gil Shurek</i>	
Defining and Model Checking Abstractions of Complex Railway Models Using CSP  B . . . . .	193
<i>Faron Moller, Hoang Nga Nguyen, Markus Roggenbach, Steve Schneider, and Helen Treharne</i>	
Word Equations with Length Constraints: What's Decidable? . . . . .	209
<i>Vijay Ganesh, Mia Minnes, Armando Solar-Lezama, and Martin Rinard</i>	
Environment-Friendly Safety . . . . .	227
<i>Orna Kupferman and Sigal Weiner</i>	
Deterministic Compilation of Temporal Safety Properties in Explicit State Model Checking . . . . .	243
<i>Kristin Yvonne Rozier and Moshe Y. Vardi</i>	
FoREnSiC– An Automatic Debugging Environment for C Programs . . . . .	260
<i>Roderick Bloem, Rolf Drechsler, Görschwin Fey, Alexander Finder, Georg Hofferek, Robert Könighofer, Jaan Raik, Urmaz Repinski, and André Sülflow</i>	
Towards Beneficial Hardware Acceleration in HAVEN: Evaluation of Testbed Architectures . . . . .	266
<i>Marcela Šimková and Ondřej Lengál</i>	
Using Domain Specific Languages to Support Verification in the Railway Domain . . . . .	274
<i>Phillip James, Arnold Beckmann, and Markus Roggenbach</i>	

From Fault Injection to Mutant Injection: The Next Step for Safety Analysis? .....	276
<i>Guillermo Rodriguez-Navas, Patrick Graydon, and Iain Bate</i>	
Test Case Generation by Grammar-Based Fuzzing for Model-Driven Engineering .....	278
<i>Magdalena Widl</i>	
<b>Author Index</b> .....	281