Contents

Full Papers

A Framework for Asynchronous Circuit Modeling and Verification in ACL2 ................................................ 3
  Cuong Chau, Warren A. Hunt Jr., Marly Roncken, and Ivan Sutherland

Modeling Undefined Behaviour Semantics for Checking Equivalence Across Compiler Optimizations .............................. 19
  Manjeet Dahiya and Sorav Bansal

Deferrability Analysis for JavaScript ........................................... 35
  Johannes Kloos, Rupak Majumdar, and Frank McCabe

A Verifier of Directed Acyclic Graphs for Model Checking with Memory Consistency Models .............................. 51
  Tatsuya Abe

Trace-based Analysis of Memory Corruption Malware Attacks .................. 67
  Zhixing Xu, Aarti Gupta, and Sharad Malik

Trace-Based Run-Time Analysis of Message-Passing Go Programs ........ 83
  Martin Sulzmann and Kai Stadtmüller

  Dirk Beyer and Thomas Lemberger

A Supervisory Control Algorithm Based on Property-Directed Reachability .............................................. 115
  Koen Claessen, Jonatan Kilhamn, Laura Kovács, and Bengt Lennartson

SMT-based Synthesis of Safe and Robust PID Controllers for Stochastic Hybrid Systems ........................................ 131
  Fedor Shmarov, Nicola Paoletti, Ezio Bartocci, Shan Lin, Scott A. Smolka, and Paolo Zuliani

A Symbolic Approach to Safety LTL Synthesis ............................. 147
  Shufang Zhu, Lucas M. Tabajara, Jianwen Li, Geguang Pu, and Moshe Y. Vardi
An Interaction Concept for Program Verification Systems
with Explicit Proof Object .................................................. 163

*Bernhard Beckert, Sarah Grebing, and Mattias Ulbrich*

PRuning Through Satisfaction .............................................. 179

*Marijn J.H. Heule, Benjamin Kiesl, Martina Seidl, and Armin Biere*

LRA Interpolants from No Man’s Land ................................. 195

*Leonardo Alt, Antti E.J. Hyvärinen, and Natasha Sharygina*

**Tool Papers**

ACAT: A Novel Machine-Learning-Based Tool for Automating
Android Application Testing. ............................................. 213

*Ariel Rosenfeld, Odaya Kardashov, and Orel Zang*

MicroTESK: Specification-Based Tool for Constructing Test
Program Generators. .......................................................... 217

*Mikhail Chupilko, Alexander Kamkin, Artem Kotsynyak,
and Andrei Tatarnikov*

Embedded Functions for Test Design Automation .................... 221

*George B. Sherwood*

KERIS: A CT Tool of the Linux Kernel with Dynamic Memory
Analysis Capabilities .......................................................... 225

*Bernhard Garn, Fabian Würfl, and Dimitris E. Simos*

RATCOP: Relational Analysis Tool for Concurrent Programs ........ 229

*Suvam Mukherjee, Oded Padon, Sharon Shoham, Deepak D’Souza,
and Noam Rinetzky*

**Posters**

More Adaptive Does not Imply Less Safe (with Formal Verification) .... 237

*Luca Pulina and Armando Tacchella*

APSL: A Light Weight Testing Tool for Protocols
with Complex Messages ..................................................... 241

*Tom Tervoort and I.S.W.B. Prasetya*

Towards Verification of Robot Design for Self-localization ........... 245

*Ryo Watanabe, Kozo Okano, and Toshifusa Sekizawa*

Probabilistic Model of Control-Flow Altering Based Malicious Attacks:
(Poster Submission) ......................................................... 249

*Sergey Frenkel*

**Author Index** ............................................................... 253
Hardware and Software: Verification and Testing
13th International Haifa Verification Conference, HVC
2017, Haifa, Israel, November 13-15, 2017,
Proceedings
Strichman, O.; Tzoref-Brill, R. (Eds.)
2017, XXII, 253 p. 47 illus., Softcover
ISBN: 978-3-319-70388-6