

Talk Schedule, ATVA 2012

October 3, 2012

Tutorials by Invited Speakers

08:00 - 09:00	Registration
09:00 - 10:30	SAT Based Design Debugging - Sharad Malik
10:30 - 11:00	<i>Tea/Coffee break</i>
11:00 - 12:30	Software Model Checking - Andreas Podelski
12:30 - 14:00	<i>Lunch break</i>
14:00 - 15:30	Discretizations based approaches to quantitative verification - P. S. Thiagarajan
15:30 - 16:00	<i>Tea/Coffee break</i>
16:00 - 18:00	Industry Session

October 4, 2012

Conference, Day 1

08:00 - 09:00	Registration
09:00 - 10:00	Invited Talk - Sharad Malik Verification of Computer Switching Networks: An Overview (Chair: Supratik Chakraborty)
10:00 - 10:30	<i>Tea/Coffee break</i>
	Session I: Automata Theory (Chair: K. Narayan Kumar)
10:30 - 11:00	<i>Shulamit Halamish and Orna Kupferman</i> Approximating Deterministic Lattice Automata
11:00 - 11:30	<i>Sven Schewe and Thomas Varghese</i> Tight Bounds for the Determinisation and Complementation of Generalised Buchi Automata
11:30 - 12:00	<i>Sofia Cassel, Bengt Jonsson, Falk Howar and Bernhard Steffen</i> A Succinct Canonical Register Automaton Model for Data Domains with Binary Relations
12:00 - 12:20	[Tool Paper] <i>Andreas Gaiser, Jan Kretinsky and Javier Esparza</i> Rabinizer: Small Deterministic Automata for LTL(F,G)
12:20 - 14:00	<i>Lunch break</i>

Session II: Logics and Proofs

(Chair: S. P. Suresh)

- 14:00 - 14:30 *Simoni Shah and Paritosh Pandya*
The Unary Fragments of Metric Interval Temporal Logic: Bounded versus Lower bound Constraints
- 14:30 - 15:00 *Alexandre Donzé, Oded Maler, Ezio Bartocci, Dejan Nickovic, Radu Grosu and Scott Smolka*
On Temporal Logic and Signal Processing
- 15:00 - 15:30 *Ashutosh Gupta*
Improved Single Pass Algorithms for Resolution Proof Reduction
- 15:30 - 16:00 *Tea/Coffee break*

Session III: Model Checking

(Chair: Madhavan Mukund)

- 16:00 - 16:30 *Sarai Sheinvald, Orna Grumberg and Orna Kupferman*
Model Checking Systems and Specifications with Parameterized Atomic Propositions
- 16:30 - 17:00 *Mohamed Amin Ben Sassi, Romain Testylier, Thao Dang and Antoine Girard*
Reachability Analysis of Polynomial Systems using Linear Programming Relaxations
- 17:00 - 17:30 *Mohamed Faouzi Atig, Ahmed Bouajjani, K. Narayan Kumar and Prakash Saivasan*
Linear-Time Model-Checking for Multithreaded Programs under Scope-Bounding

Banquet dinner (7 PM onwards)

Venue: Vivanta by Taj, Trivandrum

October 5, 2012

Conference, Day 2

- 09:00 - 10:00 **Invited Talk** - Andreas Podelski
Interpolant Automata
(Chair: R Venkatesh)
- 10:00 - 10:30 *Tea/Coffee break*

Session I: Software Verification

(Chair: Nishant Sinha)

- 10:30 - 11:00 *Ahmed Bouajjani, Cezara Dragoi, Constantin Enea and Mihaela Sighireanu*
Accurate Invariant Checking for Programs Manipulating Lists and Arrays with Infinite Data
- 11:00 - 11:20 [Tool Paper] *Carlo Alberto Furia*
A Verifier for Functional Properties of Sequence-Manipulating Programs
- 11:20 - 11:50 *Hossein Hojjat, Radu Iosif, Filip Konecny, Viktor Kuncak and Philipp Ruemmer*
Accelerating Interpolants
- 11:50 - 12:10 [Tool Paper] *Ondrej Sery, Grigory Fedyukovich and Natasha Sharygina*
FunFrog: Bounded Model Checking with Interpolation-based Function Summarization
- 12:10 - 14:00 *Lunch break*

Session II: Synthesis

(Chair: Paritosh Pandya)

- 14:00 - 14:30 *John Fearnley, Doron Peled and Sven Schewe*
Synthesis of Succinct Systems
- 14:30 - 15:00 *Peter Bulychev, Franck Cassez, Alexandre David, Kim Guldstrand Larsen, Jean-Francois Raskin and Pierre-Alain Reynier*
Controllers with Minimal Observation Power (Application to Timed Systems)
- 15:00 - 15:30 *Matthias Guedemann, Gwen Salaün and Meriem Ouederni*
Counterexample Guided Synthesis of Monitors for Realizability Enforcement
- 15:30 - 16:00 *Tea/Coffee break*

Session III: Verification and Parallelism

(Chair: Madhavan Mukund)

- 16:00 - 16:30 *Daniel Schwartz-Narbonne, Georg Weissenbacher and Sharad Malik*
Parallel Assertions for Architectures with Weak Memory Models
- 16:30 - 17:00 *Sami Evangelista, Alfons Laarman, Laure Petrucci and Jaco Van De Pol*
Improved Multi-Core Nested Depth-First Search
- 17:00 - 17:30 *Rodrigo T. Saad, Silvano Dal Zilio and Bernard Berthomieu*
An Experiment on Parallel Model Checking of a CTL Fragment

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- 09:00 - 10:00 **Invited Talk** - P S Thiagarajan
Dynamic Bayesian Networks: A Factored Model of Probabilistic Dynamics
(Chair: Madhavan Mukund)
- 10:00 - 10:30 *Tea/Coffee break*
- Session I: Probabilistic Verification**
(Chair: Supratik Chakraborty)
- 10:30 - 11:00 *Luis María Ferrer Fioriti, Ernst Moritz Hahn, Holger Hermanns and Björn Wachter*
Variable Probabilistic Abstraction Refinement
- 11:00 - 11:30 *Vojtech Forejt, Marta Kwiatkowska and David Parker*
Pareto Curves for Probabilistic Model Checking
- 11:30 - 12:00 *Sergio Giro and Markus N. Rabe*
Verification of partial-information probabilistic systems using counterexample-guided refinements
- 12:00 - 12:20 [Tool Paper] *Nils Jansen, Erika Abraham, Matthias Volk, Ralf Wimmer, Joost-Pieter Katoen and Bernd Becker*
The COMICS Tool - Computing Minimal Counterexamples for DTMCs
- 12:20 - 14:00 *Lunch break*
- Session II: Constraint Solving and Applications**
(Chair: Mandayam Srivas)
- 14:00 - 14:30 *Daniel Neider*
Computing Minimal Separating DFAs and Regular Invariants Using SAT and SMT Solvers
- 14:30 - 15:00 *Bernd Becker, Rüdiger Ehlers, Matthew Lewis and Paolo Marin*
ALLQBF Solving by Computational Learning
- 15:00 - 15:30 *Tea/Coffee break*
- Session III: Probabilistic Systems**
(Chair: K. Narayan Kumar)
- 15:30 - 16:00 *Krishnendu Chatterjee, Martin Chmelík and Rupak Majumdar*
Equivalence of Games with Probabilistic Uncertainty and Partial-observation Games

16:00 - 16:30	<i>Benedikt Bollig, Paul Gastin, Benjamin Monmege and Marc Zeitoun</i> A Probabilistic Kleene Theorem
16:30 - 17:00	<i>Sadegh Esmail Zadeh Soudjani and Alessandro Abate</i> Higher-Order Approximations for Verification of Stochastic Hybrid Systems
