## Talk Schedule, ATVA 2012

### October 3, 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>Registration</td>
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<tr>
<td>09:00 - 10:30</td>
<td>SAT Based Design Debugging - Sharad Malik</td>
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<tr>
<td>10:30 - 11:00</td>
<td>Tea/Coffee break</td>
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<tr>
<td>11:00 - 12:30</td>
<td>Software Model Checking - Andreas Podelski</td>
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<td>12:30 - 14:00</td>
<td>Lunch break</td>
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<tr>
<td>14:00 - 15:30</td>
<td>Discretizations based approaches to quantitative verification - P. S. Thiagarajan</td>
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<tr>
<td>15:30 - 16:00</td>
<td>Tea/Coffee break</td>
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<tr>
<td>16:00 - 18:00</td>
<td>Industry Session</td>
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### October 4, 2012

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<tr>
<td>08:00 - 09:00</td>
<td>Registration</td>
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<tr>
<td>09:00 - 10:00</td>
<td><strong>Invited Talk</strong> - Sharad Malik</td>
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<td></td>
<td>Verification of Computer Switching Networks: An Overview (Chair: Supratik Chakraborty)</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Tea/Coffee break</td>
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**Session I: Automata Theory**

(Chair: K. Narayan Kumar)

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<th>Time</th>
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<tr>
<td>10:30 - 11:00</td>
<td>Shulamit Halamish and Orna Kupferman</td>
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<td>Approximating Deterministic Lattice Automata</td>
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<td>11:00 - 11:30</td>
<td>Sven Schewe and Thomas Varghese</td>
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<td>Tight Bounds for the Determinisation and Complementation of Generalised Buchi Automata</td>
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<td>11:30 - 12:00</td>
<td>Sofia Cassel, Bengt Jonsson, Falk Howar and Bernhard Steffen</td>
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<td>A Succinct Canonical Register Automaton Model for Data Domains with Binary Relations</td>
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<td>12:00 - 12:20</td>
<td>[Tool Paper] Andreas Gaiser, Jan Kretinsky and Javier Esparza</td>
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<td>Rabinizer: Small Deterministic Automata for LTL(F,G)</td>
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<tr>
<td>12:20 - 14:00</td>
<td>Lunch break</td>
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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 Salaïn 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
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  Benedikt Bollig, Paul Gastin, Benjamin Monmege and Marc Zeitoun
A Probabilistic Kleene Theorem

16:30 - 17:00  Sadegh Esmaeil Zadeh Soudjani and Alessandro Abate
Higher-Order Approximations for Verification of Stochastic Hybrid Systems