

Games and Decisions for Rigorous Systems Engineering

Seminar Program

Monday, 12 November, 2012

9:00 - 9:30 Welcome and Introduction

Chair: Krishnendu Chatterjee

9:30 - 10:30 Laurent Doyen: Tutorial on Games

10:30 - 11:00 Coffee break

Chair: Krishnendu Chatterjee

11:00 - 11:30 Laurent Doyen: Tutorial on Games

11:30 - 12:00 David A. Parker: Automated Game-theoretic Verification for Probabilistic Systems

12:15 - 14:00 Lunch

Chair: Laura Kovács

14:00 - 15:30 Albert Oliveras: Tutorial on SMT

15:30 - 16:00 Coffee break

Chair: Nikolaj Bjørner

16:00 - 16:30 Alberto Griggio: Deciding Floating-Point Logic with Systematic Abstraction

16:30 - 17:00 Albert Rubio: Proving termination of C-like programs using MAX-SMT

16:30 - 17:00 Dirk Beyer: Conditional Model Checking: A Technique to Pass Information between Verifiers

17:30 - 18:00 Discussion

18:00 - 19:00 Dinner

19:00 - Reinhard Wilhelm: History of Dagstuhl

Tuesday, 13 November, 2012

Chair: Rupak Majumdar

9:00 - 10:30 Bernd Finkbeiner: Tutorial on Synthesis

10:30 - 11:00 Coffee break

Chair: Rupak Majumdar

11:00 - 11:30 Tomas Brazdil: Efficient Controller Synthesis for Consumption Games with Multiple Resource Types

11:30 - 12:00 Discussion on Games and Synthesis: Benchmarks and Competition

12:15 - 14:00 Lunch

Chair: Laura Kovács
14:00 - 15:30 Andrei Voronkov: Tutorial on First-Order Theorem Proving
15:30 - 16:00 Coffee break

Chair: Alberto Griggio
16:00 - 16:30 Konstantin Korovin: Preprocessing for first-order logic with applications to hardware verification
16:30 - 17:00 Georg Weissenbacher: Labelled Interpolation Systems
17:00 - 17:30 Thomas Wies: Complete Instantiation-Based Interpolation
17:30 - 18:00 Discussion

18:00 - 19:00 Dinner

Wednesday, 14 November, 2012

Chair: Helmut Seidl
9:00 - 9:20 Anca Muscholl: Asynchronous Games over Tree Architectures
9:20 - 9:40 Armando Solar-Lezama: Introduction to the Sketch Synthesis System
9:40 - 10:00 Aarti Gupta: Concurrent Test Generation using Concolic Multi-Trace Analysis
10:00 - 10:30 Coffee break

Chair: Thomas Wies
10:30 - 10:50 Joel Ouaknine: Decision Problems for Linear Recurrence Sequences
10:50 - 11:10 Radu Iosif: Under-approximating Procedure Summaries for Recursive Integer Programs
11:10 - 11:30 Tomas Vojnar: Verification of Low Level List Manipulation
11:30 - 12:00 Discussion

12:15 - 14:00 Lunch

15:30 - 22:00 Social Programme

Thursday, 15 November, 2012

Chair: Dirk Beyer
9:00 - 9:20 Swarat Chaudhuri: Stochastic Program Synthesis with Smoothed Numerical Search
9:20 - 9:40 Azadeh Farzan: Inductive Data Flow Graphs
9:40 - 10:00 Helmut Veith: Secure Two-Party Computation in ANSI C
10:00 - 10:30 Coffee break

Chair: Arie Gurfinkel
10:30 - 10:50 Andrey Rybalchenko: Program verification as constraint solving (also for CTL* properties)
10:50 - 11:10 Nikolaj Bjorner: Horn Satisfiability for symbolic software model-checking and an algorithm based on IC3/PDR
11:10 - 11:30 Rupak Majumdar: IC3 for Petri Nets
11:30 - 12:00 Dirk Beyer: SV-Comp and benchmarks

12:15 - 14:00 Lunch

Chair: Radu Iosif
14:00 - 14:20 Francesco Alberti: Lazy Abstraction with Interpolants for Arrays
14:20 - 14:40 Jochen Hoenicke: Proof Tree Preserving Interpolation
14:40 - 15:00 Arie Gurfinkel: VINTA: Verification with Interpolation and Abstract Interpretation
15:00 - 15:30 Discussion
15:30 - 16:00 Coffee break

Chair: Konstantin Korovin
16:00 - 16:20 Moa Johansson: Proving Properties about Functional Programs
16:20 - 16:40 Brigitte Pientka: Programming coinductive proofs
16:40 - 17:00 Eugenia Ternovska: A Semantic Account for Modularity in Multi-language Modelling of Search Problems
17:00 - 17:20 Natasha Sharygina: Incremental Upgrade Checking by Means of Interpolation-based Function Summaries
17:20 - 18:00 Discussion

Friday, 16 November, 2012

Chair: Nikolaj Bjørner

9:00 - 9:20 Martina Seidl: QBFs and Certificates
9:20 - 9:40 Uwe Egly: A new learning scheme for QDPLL solvers
9:40 - 10:00 Discussions

10:00 - 10:30 Coffee break

Chair: Georg Weissenbacher

10:30 - 10:50 Ana Sokolova: Quantitatively Relaxed Concurrent Data Structures
10:40 - 11:10 Josef Widder: Parameterized Model Checking of Fault-tolerant Distributed Algorithms
11:10 - 12:00 Discussions and concluding remarks