

# Friday, November 13, 2009

MEMICS 2009

10:00 - 11:30 Registration

11:30 - 13:00 Lunch

Green Lounge

Attic Classroom

13:00 - 13:10 Opening Ceremony

13:10 - 14:10 *Automated Methods for Proving Program Safety and Liveness*

Andrey Rybalchenko (Invited Talk)

Chair: Tomáš Vojnar

Formal Verification 1

Chair: Petr Jančar

Computer Systems 1

Chair: Günther Raidl

14:30 - 14:55 *One-Counter Markov Decision Processes*

Tomas Brazdil, Vaclav Brozek, Kousha Etessami, Antonin Kucera and Dominik Wojtczak

*Efficient Hardware Accelerator for Symbolic Regression Problems*

Zdenek Vasicek and Lukas Sekanina

14:55 - 15:20 *Continuous-Time Stochastic Games with Time-Bounded Reachability*

Tomas Brazdil, Vojtech Forejt, Jan Krcal, Jan Kretinsky and Antonin Kucera

*Comparing the Robustness of Synchronous and Asynchronous Circuits by Fault Injection*

Jakob Lechner and Marcus Jeitler

15:20 - 15:50 Coffee Break

Formal Verification 2

Chair: Petr Hliněný

Computer Systems 2

Chair: Hana Kubátová

15:50 - 16:15 *A Quantitative Characterization of Weighted Kripke Structures in Temporal Logic*

Kim G. Larsen, Uli Fahrenberg and Claus Thrane

*Deductive Fault Simulation for Asynchronous Sequential Circuits*

Roland Dobai and Elena Gramatová

16:15 - 16:40 *Optimizing an LTS-Simulation Algorithm*

Lukas Holik and Jiri Simacek

*Reliability Models for Fault Tolerant Architectures Based on FPGA*

Martin Straka and Zdenek Kotasek

16:40 - 17:00 *Model-Checking Race-Freeness*

Frédéric Haziza

*On Properties of SAT Instances Produced by SAT-Based ATPGs*

Jiří Balcárek, Petr Fišer and Jan Schmidt

17:00 - 17:20 *Space Effective Model Checking for Component-Interaction Automata*

Nikola Benes, Milan Krivanek and Filip Stefanak

*Surface Tension Measurement of Melted Metals and Slag by the Methods of Image Analysis*

Jan Gaura, Eduard Sojka and Rostislav Dudek.

Formal Verification 3

Chair: Andrey Rybalchenko

Computer Security

Chair: Vashek Matyáš

17:40 - 18:05 *A Logic-based Framework for Reasoning about Composite Data*

Ahmed Bouajjani, Cezara Dragoi, Constantin Enea and Mihaela Sighireanu

*COPACOBANA-Assisted Cryptoanalysis of GSM Communication*

Martin Novotny

18:05 - 18:30 *Partial Order Reduction for State/Event LTL*

Nikola Benes, Lubos Brim, Ivana Cerna, Jiri Sochor, Pavlina Varekova and Barbora Buhnova

*String Kernel Based SVM for Internet Security Implementation*

Zbynek Michlovsky, Shaoning Pang and Nik Kasabov

18:30 - 18:55 *CUDA accelerated LTL Model Checking*

Jiri Barnat, Lubos Brim, Milan Ceska and Tomas Lamr

*Evolutionary design of attack strategies*

Jiri Kur, Vashek Matyas and Petr Svenda

19:30 Dinner, Wine Bar

Saturday, November 14, 2009

MEMICS 2009

Green Lounge

9:00 - 10:00

*Randomization and Other Ways to Overcome  
Determinism in Algorithms*  
Rūsiņš Freivalds (Invited Talk)

Chair: Josef Gruska

10:00 - 10:30

Coffee Break

Theoretical Computer Science

Chair: Peter Rossmanith

10:30 - 10:55

*Approximability of the Minimum Steiner Cycle Problem*

Monika Steinova

10:55 - 11:20

*The Parameterized Complexity of Oriented Colouring*

Robert Ganian

11:20 - 11:45

*Quickly finding trees with maximum leaves*

Karsten Behrmann

11:45 - 12:05

*Cop-Win Graphs and Capture-Time*  
Tomáš Gavenčíak

12:05 - 13:30

Lunch

Attic Classroom

Computer Security and Quantum Computing

Chair: Jan Bouda

*Exact Quantum Query Algorithm for Error Detection Code  
Verification*

Alina Vasilieva

*A Privacy-Aware Protocol for Sociometric Questionnaires*

Marian Novotny

*One Size Does Not Fit All -- How to Approach Intrusion  
Detection in Wireless Sensor Networks*

Andriy Stetsko and Vashek Matyas

*Cryptographic Applications of Pseudo-Telepathy Games*  
Ivan Fialik

Saturday, November 14, 2009

MEMICS 2009

Green Lounge

13:30 - 14:30

*Combining Metaheuristics with Mathematical Programming Techniques for Solving Difficult Network Design Problems*

Günther Raidl (Invited Talk)

Chair: Lukáš Sekanina

Formal Verification 4

Chair: Mikolaj Bojanczyk

14:40 - 15:05

*On On-the-fly Algorithms for Checking Emptiness of Buchi Automata*

Andreas Gaiser and Stefan Schwoon

15:05 - 15:30

*Automatic Verification of Integer Array Programs*

Marius Bozga, Peter Habermehl, Radu Iosif, Filip Konecny and Tomas Vojnar

15:30 - 16:00

Coffee Break

Formal Verification 5

Chair: Mojmir Křetínský

16:00 - 16:25

*On the Computational Complexity of Verifying One-Counter Processes*

Stefan Göller, Richard Mayr and Anthony Widjaja To

16:25 - 16:50

*Weighted Dynamic Pushdown Networks*

Alexander Wenner

16:50 - 17:10

*Undecidability of Coverability and Boundedness for Timed-Arc Petri Nets with Invariants*

Mikael H. Møller, Morten Jacobsen and Lasse Jacobsen

Formal Verification 6

Chair: Tomáš Brázdil

17:15 - 17:40

*Rewriting Systems over Nested Words with Data*

Ahmed Bouajjani, Cezara Dragoi, Yan Jurski and Mihaela Sighireanu

17:40 - 18:05

*Don't know for Multi-Valued Systems*

Alarico Competelli, Alexander Gruler, Martin Leucker and Daniel Thoma

19:00

Dinner, Minorite Monastery

Attic Classroom

Parallel and Distributed Algorithms 1

Chair: Zdeněk Kotásek

*GPU-Based DWT Acceleration for JPEG2000*

Jiri Matela

*GPU Accelerated Solver of Time-Dependent Air Pollutant Transport Equations*

Vaclav Simek and Radim Dvorak

Parallel and Distributed Algorithms 2

Chair: Zdeněk Říha

*FastGrid -- The Accelerated AutoGrid Potential Maps Generation for Molecular Docking*

Marek Olšák, Jiří Filipovič and Martin Prokop

*GColl: A Flexible Videoconferencing Environment for Group-to-Group Interaction*

Petr Slovak, Pavel Troubil and Petr Holub

*On Media Streams Planning Problem in CoUniverse*

Milos Liska

Computer Systems 3

Chair: Petr Hanáček

*Heuristic Synthesis of MTBDDs Based on Local Width Minimization*

Petr Mikusek and Vaclav Dvorak

*NEAT Substituted with Genetic Programming*

Zdenek Buk, Jan Koutnik and Miroslav Snorek

Sunday November 15, 2009

MEMICS 2009

Green Lounge

9:00 - 10:00 | *Automata for XML*  
Mikolaj Bojanczyk (Invited Talk) | Chair: Tony Kučera

10:00 - 10:30 | Coffee Break

Formal Verification 7

Chair: Stefan Schwoon

10:30 - 10:55 | *Checking Thorough Refinement on Modal Transition Systems Is EXPTIME-Complete*  
Nikola Benes, Jan Kretinsky, Kim G. Larsen and Jiri

10:55 - 11:20 | *Reachability in Stochastic Timed Games*  
Patricia Bouyer and Vojtech Forejt

11:20 - 11:45 | *Faster Algorithm for Mean-Payoff Games*  
Jakub Chaloupka and Luboš Brim

11:45 - 12:00

12:05 - 12:40 | Prizes Announcement,  
Information on MEMICS 2010 (Business Meeting),  
and Closing Ceremony

12:45 - 14:00 | Lunch

14:00 | Departure, Bus to Brno

Attic Classroom

Grammars and Languages

Chair: Karel Richta

*Derivation in SCG via Lazy Function Application*

Ota Jiráček and Dušan Kolář

*Weak Leftmost Derivation For Cooperative Distributed Grammar Systems*  
Filip Goldefus

*Cycle accurate profiler for ASIPs*  
Zdenek Prikryl and Tomas Hruska

*Embedded Process Functional Language*  
Marek Běháček and Petr Saloun