

9:00 - 10:45 Registration

**Green Lounge**

10:45 - 11:00 Opening Ceremony

11:00 - 12:00 *Computational Trust*  
Mogens Nielsen (Invited Talk)

Chair: Antonín Kučera

12:00 - 13:30 Lunch

13:30 - 14:30 *Metric Embeddings and Algorithms*  
Jiří Matoušek (Invited Talk)

Chair: Petr Hliněný

**Theoretical Computer Science 1**

Chair: Peter Rossmanith

14:40 - 15:05 *Approximative Methods for Monotone Systems of min-max-Polynomial Equations,* Javier Esparza,  
Thomas Gawlitza, Stefan Kiefer and Helmut Seidl15:05 - 15:30 *Automata Approach to Graphs of Bounded Rank-width*  
Robert Ganian, Petr Hliněný

15:30 - 16:00 Coffee Break

**Theoretical Computer Science 2**

Chair: Jiří Matoušek

16:00 - 16:25 *Characterizations of Branching-time Future Temporal Logics on Finite Trees,*  
Ivan Szabolcs16:25 - 16:50 A Practical Approach to Courcelle's Theorem  
Joachim Kneis, Alexander Langer16:50 - 17:10 *Digraph Complexity Measures and Applications in Formal Language Theory*  
Hermann Gruber17:10 - 17:30 *TRIPS To the Semantic EDGE*  
Ales Kozumplik, Martin Krivanek, and Antoine Madet**Formal Methods of Design and Verification 1**

Chair: Mogens Nielsen

17:40 - 18:05 *A Uniform (Bi-)Simulation-Based Framework for Reducing Tree Automata*  
Parosh A. Abdulla, Lukáš Holík, Lisa Kaati, Tomáš Vojnar18:05 - 18:30 *Efficiently Representing Existential Dependency Sets for Expansion-based QBF Solvers*  
Florian Lonsing and Armin Biere18:35 - 19:00 *A tool for an Automatic Analysis of Security Protocols by Logics of Belief*  
Marián Novotný

19:30 Dinner, Wine Bar

**Attic Classroom****Computer Systems 1**

Chair: Hana Kubátová

*Polymorphic Circuit Design*

Zbyšek Gajda

*Power Conscious RTL Test Scheduling*

Jaroslav Škarvada, Zdeněk Kotásek, Tomáš Herrman

**Computer Systems 2**

Chair: Petr Fišer

*On Lookup Table Cascade-Based Realizations of Arbiters*

Petr Mikušek, Václav Dvořák

*Can the Performance of GPGPU Really Beat CPU in Evolutionary Design Task?*  
Václav Šimek, Karel Slaný, Zdeněk Vašíček*Design of FPGA-Based Dependable Systems*

Martin Straka

*On Implementation of Word-Based Compression Methods*  
Jakub Jaroš, Petr Procházka, Jan Holub**Computer Systems 3**

Chair: Zdeněk Kotásek

*Data Distribution Algorithms for Reliable Parallel Storage on Flash Memories*

Kathrin Peter

*Emulation of SEU Effect In Bitstream of FPGA*

Jiří Kvasnička, Hana Kubátová

*Wireless Sensor Network Agent Platform with Support for Cryptographic Protocols*  
Peter Pecho, František Zbořil

## Green Lounge

- 9:00 - 10:00 *Concurrent Bugs: How to Eliminate Them or Render Them Harmless*  
Shmuel Ur (Invited Talk)  
Chair: Bohuslav Křena
- 10:00 - 10:30 Coffee Break
- Formal Methods of Design and Verification 2  
Chair: Jan Strejček
- 10:30 - 10:55 *Model Checking of Control-User Component-Based Parametrised Systems*  
Pavčina Moravcová Vařeková, Ivana Černá
- 10:55 - 11:20 *Language for Reconfiguring Runtime Infrastructure of Component-based Systems*  
Michal Malohlava, Tomáš Bureš
- 11:20 - 11:45 *Formal Model-Driven Design of Distributed Algorithms*  
Morten Kühnrich
- 11:45 - 12:05 *Strategies for Memory Accounting of Cooperating Pi-Calculus Processes*  
Matej Košík, Jiří Šafařík
- 12:00 - 13:30 Lunch
- 13:30 - 14:30 *Parameterized Verification via Monotonic Abstraction*  
Parosh Aziz Abdulla (Invited Talk)  
Chair: Tomáš Vojnar
- Formal Methods of Design and Verification 3  
Chair: Mojmír Křetínský
- 14:40 - 15:05 *Discounted Properties of Probabilistic Pushdown Automata*  
Tomáš Brázdil, Václav Brožek, Jan Holeček, Antonín Kučera
- 15:05 - 15:30 *Controller Synthesis and Verification for Markov Decision Processes with Qualitative Branching Time Objectives*  
Tomáš Brázdil, Vojtěch Forejt, Antonín Kučera
- 15:30 - 16:00 Coffee Break
- Formal Methods of Design and Verification 4  
Chair: Parosh Aziz Abdulla
- 16:00 - 16:25 *Normed BPA vs. Normed BPP Revisited*  
Martin Kot, Petr Jančar, Zdeněk Sawa
- 16:25 - 16:50 *Regularity in PDA Games Revisited*  
Václav Brožek
- Formal Methods of Design and Verification 4  
Chair: Petr Jančar
- 17:00 - 17:25 *Semi-External LTL Model Checking*  
Pavel Šimeček, Stefan Edelkamp and Peter Sanders
- 17:25 - 17:45 *CEGAR for Communicating FIFO Machines*  
Alexander Heußner, Tristan Le Gall, Grégoire Sutre
- 17:45 - 18:05 *Algorithms for Computing Coverability Graphs for Hybrid Petri Nets*  
Petr Novosad, Milan Česka
- 18:45 Dinner, Wine Cellar Lechovice

## Attic Classroom

- Computer Security and Quantum Computing  
Chair: Josef Gruska
- Generating Random Sequences from Fingerprints*  
Shkodran Gerguri, Václav Matyáš,  
Zdeněk Říha, Luděk Smolík
- Co-operative Network Mitigation*  
Bob Bowden
- Noise and the Mermin-GHZ Game*  
Ivan Fialík
- Biometrics Hash Functions against Quantum Adversaries*  
Koji Kojima
- Parallel and Distributed Simulation  
Chair: Jiří Šafařík
- The Lookahead in a User-Transparent Conservative Parallel Simulator*  
Viliam Solčány
- Sparse Synchronized Traffic Flow Characteristics Transfer in Distributed Simulation of Road Traffic*  
Tomáš Potužák
- Parallel and Distributed Algorithms 1  
Chair: Eva Hladká
- A Self-organized System for Large-scale Content-based Information Retrieval*  
Jan Sedmidubský
- DiProNN Resource Management System*  
Tomáš Rebock
- Parallel and Distributed Algorithms 1  
Chair: Thilo Kielmann
- Dealing with Uncertainties in Grids through the Event-based Scheduling Approach*  
Dalibor Klusáček
- Continuous Queries over Federated Social Networks*  
Stefan Plantikow, Mikael Höggqvist
- Parallel Implementation of Recursive Background Modeling Technique in CUDA for Tracking Moving Objects in Video Traffic Surveillance*  
Tomáš Fabián, Jan Gaura

**Green Lounge**

- 9:00 - 10:00 *Programming Models for Grid Applications and Systems*  
Thilo Kielmann (Invited Talk)  
Chair: Eva Hladká
- 10:00 - 10:30 Coffee Break
- Artificial Intelligence  
Chair: Milan Češka
- 10:30 - 10:55 *PNagent: a Framework for Modelling BDI Agents using Object Oriented Petri Nets*  
Zdeněk Maza| Radek Kočí, Vladimír Janoušek, František Zbořil
- 10:55 - 11:20 *Presentation of Hybrid Evolution of Heterogeneous Neural Networks*  
Zdeněk Buk, Miroslav Šnorek
- 11:20 - 11:40 *Speaker Identification Using Pulse Coupled Neural Network*  
Matuš Jurečka
- 11:40 - 12:00
- 12:10 - 12:30 Closing Ceremony and Prizes Announcement
- 12:30 - 14:00 Lunch
- 14:15 Departure, Bus to Brno

**Attic Classroom**

Algorithms and Data Structures

Chair: Petr Hanáček

- Sparse Matrix Computations using the Quadtree Storage Format*  
Ivan Šimeček
- Chan and Vese Level Set Method with Modeling the Brightness of Background*  
Jan Gaura, Eduard Sojka, Michal Krumnikl
- Faster Algorithm for RNA Family Filter Weight-matrix calculation*  
Michal Mati. Maria Palušáková
- Versioning with Security Enhancement in Standard Relational Databases*  
Ján Máté, Jiří Šafařík