



SOFSEM 2004

January 24-30, 2004, Měříň, Czech Republic

PROGRAM SOFSEM 2004

SUNDAY, JANUARY 25, 2004

Computer Science Theory (Lecture Hall A) Chairman: **Peter Van Emde Boas**

8.30 – 10.00 **Hendrik Jaap van den Herik, H. H. L. M. Donkers:**
"Games, Theory and Applications"

10.00 – 10.30 COFFEE BREAK

Database Technologies (Lecture Hall A) Chairman: **Jaroslav Pokorný**

10.30 – 12.00 **Keith G. Jeffery:**
"Database Research Issues in a WWW and GRIDs World"

12.00 – 13.30 LUNCH

13.30 – 15.30 BREAK

Web Technologies (Lecture Hall A) Chairman: **Július Štuller**

15.30 – 17.00 **Michael Schroeder, Ralf Schweimeier:**
"Rules and the Semantic Web"

17.00 – 17.30 COFFEE BREAK

Cognitive Technologies (Lecture Hall A) Chairman: **Jiří Wiedermann**

17.30 – 19.00 **Danuta Rutkowska:**
"Knowledge Aquisition and Inference in the Framework of Soft Computing and Computing with Words"

WELCOME PARTY (Lounge Hall)

19.15 **Peter Van Emde Boas & Branislav Rován:**
Opening

19.30 **Helena Illnerová:**
Academy of Sciences Bolzano Medal Awarding to Jozef Gruska

19.45 **Jozef Gruska:**
Dinner Speech

20.00 **Buffet Dinner**



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MONDAY, JANUARY 26, 2004

Computer Science Theory (Lecture Hall A) Chairman: **Hendrik Jaap van den Herik**

8.30 – 9.00 Sebastian Wernicke, Jochen Alber, Jens Gramm, Jiong Guo, Rolf Niedermeier:

"Avoiding Forbidden Submatrices by Row Deletions"

9.00 – 9.30 Aija Berzina, Andrej Dubrovsky, Rusins Freivalds, Lelde Lace, Oksana Scegulnaja:

"Quantum Query Complexity for Some Graph Problems"

9.30 – 10.00 Hiroshi Umeo, Shunsuke Akiguchi, Masashi Maeda:

"A New Design of Optimum-time Firing Squad Synchronization Algorithm for Rectangular Arrays"

Web Technologies (Lecture Room B) Chairman: **Dimitris Plexousakis**

8.30 – 9.00 Elijah Blessing, R., Rhymend Uthariaraj, V.:
"Design of Secure Multicast Models for Mobile Services"

9.00 – 9.30 Miguel-Ángel Sicilia, Elena García:
"Fuzzy Group Models for Adaptation in Cooperative Information Retrieval Contexts"

9.30 – 10.00 Tadeusz Pankowski:
"Processing XPath Expressions in Relational Databases"

Cognitive Technologies (Lecture Room C) Chairman: **Danuta Rutkowska**

8.30 – 9.00 Jiří Wiedermann:
"Building a Bridge between Mirror Neurons and Theory of Embodied Cognition"

9.00 – 9.30 Ladislava Janku:
"Artificial Perception: Auditory Decomposition of Mixtures of Environmental Sounds" – Combining Information Theoretical and Supervised Pattern Recognition Approaches"

9.30 – 10.00 Jan Smid, Marek Obitko, Václav Snášel:
"Communicating Agents and Property-Based Types versus Objects"

Database Technologies (Lecture Room D) Chairman: **Keith G. Jeffery**

8.30 – 9.00 G. Ravindra, N. Balakrishnan, K.R. Ramakrishnan:
"Multi-Document Automatic Text Summarization Using Entropy Estimates"

9.00 – 9.30 Marcel Jiřina, Marcel Jiřina, jr.:
"Features of Neighbors Spaces"

9.30 – 10.00 Ozgur Koray Sahingoz, Nadia Erdogan:
"Agvent: Agent Based Distributed Event System"

10.00 – 10.30 COFFEE BREAK



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MONDAY, JANUARY 26, 2004 – Part 2

Computer Science Theory (Lecture Hall A) Chairman: **Gerard Tel**

- 10.30 – 11.00 Dirk Bongartz:**
"Some Notes on the Complexity of Protein Similarity Search under mRNA Structure Constraints"
- 11.00 – 11.30 Christian Bachmaier, Franz. J. Brandenburg, Michael Forster:**
"Track Planarity Testing and Embedding"
- 11.30 – 12.00 Michael Forster, Christian Bachmaier:**
"Clustered Level Planarity"

Web Technologies (Lecture Room B) Chairman: **Peter Vojtáš**

- 10.30 – 11.00 Mária Bielíková, Ivan Noris:**
"A Model of Versioned Web Sites"
- 11.00 – 11.30 Martin Kavalec, Alexander Maedche, Vojtěch Svátek:**
"Discovery of Lexical Entries for Non-taxonomic Relations in Ontology Learning"
- 11.30 – 12.00 Alberto Méndez-Torreblanca, Aurelio López-López:**
"An Ontology based Agent for Web Resource Pre-processing and Discovery"

Cognitive Technologies (Lecture Room C) Chairman: **Ivan M. Havel**

- 10.30 – 11.00 Lukáš Sekanina:**
"Evolving Constructors for Infinitely Growing Sorting Networks and Medians"
- 11.00 – 11.30 Vladimír Kvasnička, Jiří Pospíchal:**
"Replicator Theory of Coevolution of Chomsky's Universal Grammars and Grammars"
Generative
- 11.30 – 12.00 Kazushi Ikeda, Tsutomu Aoishi:**
"Learning Curves of Support Vector Machines with Soft Margins"

Database Technologies (Lecture Room D) Chairman: **Igor Prívára**

- 10.30 – 11.00 Misook Bae, Buhyun Hwang:**
"The Consistency Preserving Technique Based on the Replica Tree in the Partially Replicated Databases"
- 11.00 – 11.30 B. Bebel, Tadeusz Morzy, Robert Wrembel:**
"Querying a Multiversion Data Warehouse"
- 11.30 – 12.00 Andrzej Jodkowski, Jacek Płodzie?, Ewa Stemposz, Kazimierz Subieta**
"Role-Specific Operators in the SBQL Query Language"
- 12.00 – 13.30 LUNCH**
- 13.30 – 15.30 BREAK**

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PROGRAM SOFSEM 2004**MONDAY, JANUARY 26, 2004 – Part 3****Computer Science Theory** (Lecture Hall A) Chairman: **Branislav Rován**

- 15.30 – 16.00 **Daniel Sawitzki:**
"Implicit Flow Maximization by Iterative Squaring"
- 16.00 – 16.30 **K. Subramani, L. Kovalchick, D. Desovski:**
"A Comprehensive Empirical Analysis of Greedy Strategies for Detecting Negative Cost Cycles in Networks"
- 16.30 – 17.00 **Ning Chen, Jie Meng, Hong Zhu:**
"Approximation for Dominating Set Problem with Measure Functions"

Web Technologies (Lecture Room B) Chairman: **Mária Bieliková**

- 15.30 – 16.00 **Sérgio Miguel Fernandes, João Cachopo, António Rito Silva:**
"Supporting Evolution in Workflow Definition Languages"
- 16.00 – 16.30 **Yu Wang, Feng Jin, Yunfa Hu:**
"On the Mechanism and the Detecting Algorithm of Workflow Hang-up"
- 16.30 – 17.00 **Rosella Aiello, Giancarlo Nota, Giacomo Franco, Maria P. Di Gregorio:**
"Multi-Agent Based Workflow Evaluation"

Cognitive Technologies (Lecture Room C) Chairman: **Vladimír Kvasnička**

- 15.30 – 16.00 **Matej Makula, Michal Šerňanský, Ľubica Beňušková:**
"Approaches Based on Markovian Architectural Bias in Recurrent Neural Networks"
- 16.00 – 16.30 **Michal Šerňanský, Matej Makula, Ľubica Beňušková:**
"Processing Symbolic Sequences by Recurrent Neural Networks Trained by Kalman Filter Based Algorithms"
- 16.30 – 17.00 **Fevzullah Temurtas, Rustu Gunturkun, Nejat Yumusak, Hasan Temurtas, Abdurrahman Unsal:**
"An Application of Elman's Recurrent Neural Networks to Harmonic Detection"
- 17.00 – 17.30 COFFEE BREAK
- 17.30 – 18.30 **CACIO (Deloitte & Touche)** (Lecture Hall A)
- 19.00 – 20.00 DINNER
- 20.00 – **30TH ANNIVERSARY OF SOFSEM** (Lounge Hall)



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TUESDAY, JANUARY 27, 2004

Database Technologies (Lecture Hall A) Chairman: **Jaroslav Pokorný**

8.30 – 10.00 **Vijay Kumar:**
"Integration, Diffussion and Merging in Information Management Discipline"

10.00 – 10.30 COFFEE BREAK

Computer Science Theory (Lecture Hall A) Chairman: **Jan Pavelka**

10.30 – 11.00 **Josep Silva, J. Guadalupe Ramos and Germán Vidal:**
"An Embedded Language Approach to Router Specification in Curry"

11.00 – 11.30 **Bernadette Charron-Bost and Fabrice Le Fessant:**
"Validity Conditions in Agreement Problems and Time Complexity"

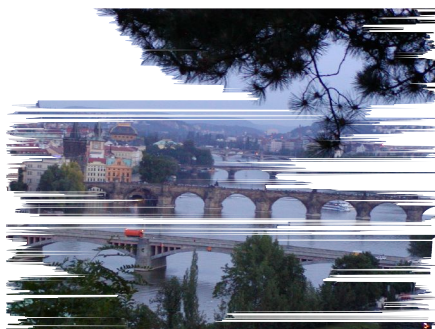
11.30 – 12.00 **George Boukeas, Constantinos Halatsis, Vassilis Zissimopoulos, Panagiotis Stamatopoulos:**
"Measures of Intrinsic Hardness for Constraint Satisfaction Problem Instances"

Web Technologies (Lecture Room B) Chairman: **Petr T?ma**

10.30 – 11.00 **Du Zeng-Kai, Ju Jiu-Bin:**
"Decentralized Content-aware Dispatching Algorithms for Web Clusters"

12.00 – 13.30 LUNCH

13.00 – 18.30 **EXCURSIONS TO PRAGUE / OND?EJOV OBSERVATORY**
MEETING POINT AT THE HOTEL RECEPTION



19.00 – 20.00 DINNER



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WEDNESDAY, JANUARY 28, 2004

Web Technologies (Lecture Hall A) Chairman: Vijay Kumar

8.30 – 10.00 **Natasa Milic-Frayling:**
"Web Challenges: Supporting Users in Search and Navigation"

10.00 – 10.30 COFFEE BREAK

Computer Science Theory (Lecture Hall A) Chairman: Miroslav Bartošek

10.30 – 11.00 **Kohtaro Tadaki, Tomoyuki Yamakami, Jack C. H. Lin:**
"Theory of One Tape Linear Time Turing Machines"

11.00 – 11.30 **R?si?š Freivalds, Marats Golovkins and Arnolds ?ikusts:**
"On the Properties of Probabilistic Reversible Automata"

11.30 – 12.00 **Ning Chen, Hong Zhu:**
"Fully Truthful Mechanisms"

12.00 – 13.30 LUNCH

13.30 – 15.30 BREAK

PhD Forum (Lounge Hall) Chairman: Mária Bielíková

15.30 – 17.30 **David Antoš, Jan Ko?enek:**
"String Matching for IPv6 Routers"
Dušan Bernát:
"Synchronisation and Concurrency"
Roman Szarowski, Karel Muller:
"Building CORBA Clusters Using MIOP Protocol"
Miroslav K?ipa?:
"Efficient Data Sharing within Database Clusters"
Jakub Güttner:
"An Object Database Over the Semantic Web"
Dániel Szeg?:
"Using Description Logics in Web Document Processing"

16.30 – 17.30 COFFEE BREAK

Computer Science Theory (Lecture Hall A) Chairman: R?si?š Freivalds

17.30 – 18.00 **Haiming Chen and Yunmei Dong:**
"Incorporating Static Type-Checking into Functions Defined on Context-Free Languages"

18.00 – 18.30 **S?awomir Leszczy?ski:**
"When Small Number of Alternations Is Not Enough"

18.30 – 19.00 Microsoft

19.15 – COUNTRY EVENING & BBQ



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THURSDAY, JANUARY 29, 2004

Web Technologies (Lecture Hall A) Chairman: **Július Štuller**

8.30 – 10.00 **Peter Lockemann:**
"Flexibility through Multiagent Systems: Solution or Illusion"

10.00 – 10.30 COFFEE BREAK

Web Technologies (Lecture Hall A) Chairman: **Anton Scheber**

10.30 – 12.00 **Dimitris Plexousakis:**
"Querying and Viewing the Semantic Web: An RDF-Based Perspective"

12.00 – 13.30 LUNCH

13.30 – 15.30 BREAK

Database Technologies (Lecture Hall A) Chairman: **Jaroslav Pokorný**

15.30 – 17.00 **Pavel Zezula, Frederica Mandreoli, Riccardo Martoglia:**
"Tree Signatures and Unordered XML Pattern Matching"

17.00 – 17.30 COFFEE BREAK

Computer Science Theory (Lecture Hall A) Chairman: **Peter Van Emde Boas**

17.30 – 19.00 **Peter Sanders:**
"Algorithms for Scalable Storage Servers"

19.15 – 20.00 DINNER

20.00 – **ANTISOFSEM 2004** (Lecture Hall A)