

=: SOF SEM 08 :=

Current Trends in Theory and Practice of Computer Science

High Tatras, Slovakia, January 19–25, 2008
<http://www.sofsem.sk>

Deadline for submissions of abstracts:	August	29,	2007
Deadline for submissions of papers:	September	1,	2007
Notification of acceptance or rejection:	October	25,	2007
Deadline for final versions:	November	6,	2007
Symposium:	January	20-24,	2008

(Arrival Jan 19, Departure Jan 25)

Call for Papers

SOFSEM (SOFTware SEMinar) is an annual international conference devoted to the theory and practice of Computer Science. Its aim is to get together professionals from academia and industry working in various areas of Computer Science. Proceedings containing the invited and contributed papers are planned to be published by the Springer-Verlag in the Lecture Notes in Computer Science (LNCS) series. Papers accepted to Student Research Forum will appear in a special additional local proceedings.

The program consists of a number of Invited Talks, given by prominent researchers, Contributed Talks selected by the Program Committee from submitted papers, Working Sessions discussing work-in-progress, and the Student Research Forum.

SOFSEM is organized in parallel tracks giving a unique opportunity to obtain quickly a representative overview of the areas that are selected as the topics of the year. According to the conference tradition, one of the tracks is always devoted to Foundations of Computer Science.

SOFSEM provides an ideal framework for discussions and meetings, establishing personal contacts. In order to help people socialize and exchange new ideas, SOFSEM is organised as a single-building-conference. That is, accommodation for all participants, full-board meals, together with all lecture rooms will be in Atrium Hotel, Nový Smokovec, High Tatras, Slovakia. SOFSEM is especially suited for young computer scientists.

Program Committee Chair

Viliam Geffert (Košice, Slovakia)

Conference Tracks

- Foundations of Computer Science
chair: Juhani Karhumäki (Turku, Finland)
- Computing by Nature
chair: Alberto Bertoni (Milano, Italy)
- Networks, Security, & Cryptography
chair: Bart Preneel (Leuven, the Netherlands)
- Web Technologies
chair: Pavol Návrat (Bratislava, Slovakia)
- Student Research Forum
chair: Mária Bieliková (Bratislava, Slovakia)

Foundations of Computer Science

The track is devoted to the recognized core areas forming the heart of computer science, and covering many different fields. Contributions are typically distinguished by an emphasis on mathematical background techniques, but quite often with significant impact on practical applications and systems. In other words, contributions that illustrate the value of fundamental research for applications are especially welcome. Such contributions have traditionally received a lot of attention at SOFSEM conferences, since its birth in 1974.

The list of topics includes (but is not limited to):

- algorithms and data structures, including sequential, parallel, distributed, approximation, and number-theoretic algorithms
- automata theory and languages
- complexity theory, both computational and structural
- concurrency theory
- discrete mathematics related to computer science
- grammars and formal models
- program semantics, logic, and verification

Track Chair

Juhani Karhumäki (Turku, Finland)

Invited Speakers

Juraj Hromkovič (Zürich, Switzerland)
Jarko Kari (Turku, Finland)
Wolfgang Thomas (Aachen, Germany)

Program Committee

Marie-Pierre Béal	(Marne la Vallée, France)	Damian Niwinski	(Warszawa, Poland)
Wit Foryś	(Kraków, Poland)	Alexander Okhotin	(Turku, Finland)
Viliam Geffert	(Košice, Slovakia)	Pekka Orponen	(Helsinki, Finland)
Lane A. Hemaspaandra	(Rochester/NY, USA)	Dana Pardubská	(Bratislava, Slovakia)
Hendrik J. Hoogeboom	(Leiden, the Netherlands)	Michel Rigo	(Liège, Belgium)
Oscar H. Ibarra	(Santa Barbara/CA, USA)	Sebastian Seibert	(Zürich, Switzerland)
Pawel M. Idziak	(Kraków, Poland)	Imrich Vrt'o	(Bratislava, Slovakia)
Rastislav Kráľovič	(Bratislava, Slovakia)	Jiří Wiedermann	(Praha, Czech Rep.)
Mojmir Křetínský	(Brno, Czech Rep.)	Detlef Wotschke	(Frankfurt a/M., Germany)
Luděk Kučera	(Praha, Czech Rep.)	Sheng Yu	(London/ON, Canada)
Markus Lohrey	(Stuttgart, Germany)	Wiesław Zielonka	(Paris, France)
Markus Nebel	(Kaiserslautern, Germany)		

Computing by Nature

First, the track is devoted to standard algorithms running on standard computers, but inspired by the behaviour of processes taking place in nature, such as artificial neural networks exploring computational concepts related to some characteristics of the brain, or evolutionary genetic algorithms inspired by biological evolution. Today these areas are mature, with useful applications to optimization, machine learning and control; properties of hybrid artificial models are explored and intriguing experiments on hybrid networks are proposed, in which living neurons interact with digital model neurons. Second, this area of interest concerns algorithms that are based on "primitive procedures" or data given to us by Nature, such as quantum or DNA computing. So far, the results in this area are prevalently of theoretical interest. Nevertheless, they seem to open very promising perspectives in the applications.

The list of topics includes (but is not limited to):

- ant colony optimization
- artificial immune system
- bioinformatics
- DNA computing
- evolutionary computation
- hybrid models, neural, fuzzy, or genetic
- membrane computing
- neural networks
- quantum computing
- swarm intelligence

Track Chair

Alberto Bertoni (Milano, Italy)

Invited Speakers

Andris Ambainis (Waterloo/ON, Canada)
Natasha Jonoska (Tampa/FL, USA)

Program Committee

Gabriela Andrejková	(Košice, Slovakia)	Giancarlo Mauri	(Milano, Italy)
Bartłomiej Beliczynski	(Warszawa, Poland)	Carlo Mereghetti	(Milano, Italy)
Christian Choffrut	(Paris, France)	Ashwin Nayak	(Waterloo/ON, Canada)
Marco Dorigo	(Bruxelles, Belgium)	Bernardete Ribeiro	(Coimbra, Portugal)
Rūsiņš Freivalds	(Rīga, Latvia)	John G. Taylor	(London, UK)
Rudolf Freund	(Wien, Austria)	György Vaszil	(Budapest, Hungary)
Pascal Koiran	(Lyon, France)	Ingo Wegener	(Dortmund, Germany)
Věra Kůrková	(Praha, Czech Rep.)		

Networks, Security, & Cryptography

The track focuses on a number of topics related to information security. First, the area of interest concerns cryptographic algorithms, protocols, and their implementation. Second, the track is devoted to architectures and protocols for communication networks, with special focus on security issues. In this context, an area of growing interest is formed by traffic analysis and privacy enhancing technologies. Finally, the track looks at issues in computer security and, in particular, trusted computing and application software security.

The list of topics includes (but is not limited to):

- cryptographic algorithms and protocols
- network security
- privacy enhancing technologies
- software security
- traffic analysis
- trusted computing

Track Chair

Bart Preneel (Leuven, the Netherlands)

Invited Speakers

Yoram Ofek (Trento, Italy)
Ahmad Sadeghi (Bochum, Germany)

Program Committee

Tuomas Aura	(Cambridge, UK)	Vlastimil Klíma	(Praha, Czech Rep.)
Michael Backes	(Saarbrücken, Germany)	Chris Mitchell	(London, UK)
Dan Bailey	(Bedford/MA, USA)	David Naccache	(Paris, France)
Bruno Crispo	(Trento, Italy)	Mats Näslund	(Stockholm, Sweden)
George Danezis	(Leuven, Belgium)	Frank Piessens	(Leuven, Belgium)
Ian Goldberg	(Waterloo/ON, Canada)	Ahmad Sadeghi	(Bochum, Germany)
Marc Joye	(Cesson-Sévigné, France)	Pim Tuyls	(Eindhoven, the Netherlands)
Aggelos Kiayias	(Storrs/CT, USA)		

Web Technologies

The track is devoted to all aspects of the World Wide Web, but primarily to methods and algorithms for building it, developing it, mining it, weaving it, and using it, as well as to methods and languages for representing and organizing it, including Semantic Web. The basis for the emerging technologies lays in the methods developed for acquiring information, representing its semantics and annotation. An important aspect is adaptation, in particular with respect to a potential user.

The list of topics includes (but is not limited to):

- convergence of educational standards and the Semantic Web
- data mining and machine learning for intelligent information retrieval, classification and personalization
- design, composition and management of Web services
- information content and navigation adaptation
- information recommendation and filtering
- intelligent information retrieval
- model-driven development of Web applications
- novel browsing and navigational paradigms
- user modelling methods and techniques
- web-based collaboration and social networks

Track Chair

Pavol Návrat (Bratislava, Slovakia)

Invited Speakers

Peter Brusilovsky (Pittsburgh/PA, USA)
Peter Dolog (Aalborg, Denmark)
Martin Džbor (Milton Keynes, UK)

Program Committee

András Benczur	(Budapest, Hungary)	Ján Paralič	(Košice, Slovakia)
Mária Bieliková	(Bratislava, Slovakia)	Dimitris Plexousakis	(Heraklion, Greece)
Paul Brna	(Glasgow, UK)	Jaroslav Pokorný	(Praha, Czech Rep.)
Peter Brusilovsky	(Pittsburgh/PA, USA)	Karel Richta	(Praha, Czech Rep.)
Alexandra I. Cristea	(Warwick, UK)	Petr Šaloun	(Ostrava, Czech Rep.)
Peter Dolog	(Aalborg, Denmark)	Július Štuller	(Praha, Czech Rep.)
Ladislav Hluchý	(Bratislava, Slovakia)	Peter Vojtáš	(Praha, Czech Rep.)
Geert-Jan Houben	(Bruxelles, Belgium)	Bartosz Walter	(Poznań, Poland)
Wolfgang Nejdl	(Hannover, Germany)	Jaroslav Zendulka	(Brno, Czech Rep.)

Student Research Forum

Track chair: Mária Bieliková (Bratislava, Slovakia)

An integral part of the SOFSEM 2008 will be the Student Research Forum, organized with the aim to publish and discuss student projects in the field of theory and practice of Computer Science. The forum will offer students a unique opportunity to receive feedback on both the originality of their results and the work in progress. The papers will be reviewed and selected by the SOFSEM 2008 Program Committee. For discussion of new ideas and exchange of experience, sufficient space will be provided during the forum itself, as well as throughout the conference.

The best paper of the SOFSEM 2008 Student Research Forum will be selected by the Program Committee and published in Springer LNCS Proceedings. Moreover, the SOFSEM participants will vote for the best student presentation. To be eligible, all authors of the paper must be students, except possibly for their advisors. (However, the main author should be a student. It is also assumed that the presentation at the conference will be given by a student.)

Conference Location

In order to help people socialize and exchange new ideas, SOFSEM 2008 will be organised as a single-building-conference. That is, accommodation for all participants, full-board meals, together with all lecture rooms will be in Atrium Hotel, Nový Smokovec, High Tatras, Slovakia.

Smokovec is an administrative centre (actually, a tiny town) of Tatra National Park, the most compact mountains in Europe, i.e., of alpine type, but occupying a very small area. Among others, the High Tatras offer exceptionally clean air. During winters, the area is visited by tourists searching for best ski slopes, suitable for children and skiing beginners as well as for ski champions. (See e.g. www.tanap.sk or www.tatry.net)

Instruction for Authors

The length of a submission should not exceed 12 pages (possibly with an optional appendix), using the page size format of a proceedings in Lecture Notes in Computer Science (LNCS) series.

Simultaneous submissions to other conferences with published proceedings are not allowed.

To obtain more technical details for preparing a manuscript or for sending your submission, visit the SOFSEM website,

www.sofsem.sk, item 'For Authors'

Participating Institutions

SOFSEM 2008 is jointly organised by the Institute of Computer Science of P.J.Šafárik University, Košice, Slovakia, by the Slovak Society for Computer Science, by the Institute of Computer Science of the Czech Academy of Sciences, and by the Czech Society for Cybernetics and Informatics. The conference is sponsored by the European Research Consortium for Informatics and Mathematics (ERCIM).

Steering Committee

Mária Bieliková	(Slovak University of Technology, Slovakia)
Bernadette Charron-Bost	(Ecole Polytechnique, France)
Keith Jeffery	(CCLRC, UK)
Antonín Kučera	(Masaryk University Brno, Czech Rep.)
Jan van Leeuwen	(Utrecht University, the Netherlands)
Branislav Rován	(Comenius University in Bratislava, Slovakia)
Július Štuller	(Institute of Computer Science, Czech Rep., chair)
Petr Tůma	(Charles University in Praha, Czech Rep.)

Organising Committee

Gabriela Andrejková, Jozef Gajdoš, František Galčík, Viliam Geffert, Michal Mati, Peter Mlynárčik, Gabriel Semanišin (chair), Eva Trenklerová. (All members from Košice, Slovakia).

Website and Contacts

More detailed on-line information will be displayed at

www.sofsem.sk,

personal inquires should be sent to

sofsem08@ics.upjs.sk,

or to

SOFSEM 2008 Organising Committee
Institute of Computer Science
P.J.Šafárik University
Jesenná 5
04001 Košice
Slovakia