

=: SOF SEM 08 :=

Current Trends in Theory and Practice of Computer Science

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

Regular Early Registration	November 16, 2007
Student Early Registration	November 23, 2007
Expiration of Early Registration	December 1, 2007

First Call for Participation

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 will be published by the Springer-Verlag in the Lecture Notes in Computer Science (LNCS) series, volume number 4910. Papers accepted to Student Research Forum will appear in a special additional local proceedings.

The program consists of 10 invited talks given by prominent researchers, contributed talks selected by the Program Committee from 162 submitted papers, and student papers selected by the Program Committee for 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. The conference provides an ideal framework for discussions and meetings, establishing personal contacts. 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, Belgium)
- 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)

Program Committee

Marie-Pierre Béal	(Marne la Vallée, France)	Damian Niwinski	(Warszawa, Poland)
Wit Forys	(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)		

List of Invited Lectures

- Juraĳ Hromkovič (Zürich, Switzerland, with Hans-Joachim Böckenhauer, Tobias Mömke, and Peter Widmayer): *On the Hardness of Reoptimization*
- Jarkko Kari (Turku, Finland): *Undecidability of the Tiling Problem*
- Wolfgang Thomas (Aachen, Germany, with Florian Horn and Nico Wallmeier): *Optimizing Winning Strategies in Regular Infinite Games*

Computing by Nature

First, the track is devoted to standard algorithms running on standard computers, but inspired by the behavior 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)

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.)		

List of Invited Lectures

- Andris Ambainis (Waterloo/Ontario, Canada): *Quantum Random Walks — New Method for Designing Quantum Algorithms*
- Nataša Jonoska (Tampa/Florida, USA): *Biomolecular Tiles for Computing*

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, Belgium)

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)		

List of Invited Lectures

- Yoram Ofek (Trento, Italy): *Remote Entrusting by Run-Time Software Authentication*
- Ahmad-Reza Sadeghi (Bochum, Germany): *Trusted Computing — State of the Art and Challenges*

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 modeling methods and techniques
- web-based collaboration and social networks

Track Chair

Pavol Návrát (Bratislava, Slovakia)

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.)

List of Invited Lectures

- Peter Brusilovsky (Pittsburgh/Pennsylvania, USA): *Social Information Access: The Other Side of the Social Web*
- Peter Dolog (Aalborg, Denmark): *Designing Adaptive Web Applications*
- Martin Džbor (Milton Keynes, United Kingdom): *Best of Both: Using Semantic Web Technologies to Enrich User Interaction with the Web, and Vice-Versa*

Student Research Forum

Track chair:

Mária Bieliková (Bratislava, Slovakia)

An integral part of SOFSEM 2008 is 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 offers students a unique opportunity to receive feedback on both the originality of their results and the work in progress. The papers are 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 SOFSEM participants will vote for the best student presentation.

Conference Events

All participants and accompanying persons are invited to take part in the following events:

Sunday, January 20 — Welcome party

Tuesday, January 22 — Sledge-ride from Hrebienok (afternoon) and Concert (evening)

Thursday, January 24 — Farewell party

Conference Location

In order to help people socialize and exchange new ideas, SOFSEM 2008 will be organized 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 center (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, 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.)

Getting There

The entry point for the High Tatras area is the railway station in the city of Poprad. Since most of the airlines, trains and buses will have changed their timetables by January 19, 2008, we can provide very general information only. Please check the timetables on the web.

By Air: The nearest airport is Poprad (www.airport-poprad.sk/english.html), however only a few flights land there. Therefore we recommend flying to Bratislava (www.airportbratislava.sk), Košice (eng.airportkosice.sk) or Vienna, Austria (www.viennaairport.com). From these points you can take a direct IC express or a fast train to Poprad.

By Train to Poprad-Tatry: There is a direct connection by IC express or fast trains to Poprad from the following cities:

Bratislava — 4 hours, departures approximately every 2 hours

Košice — 2 hours, departures approximately every 2 hours

Vienna (Austria) — 6 hours, two direct trains a day, but approximately every 2 hours with changing trains in Bratislava

Prague — 7–9 hours, there are four direct trains a day, three of them being overnight trains with sleeping wagons, and several other connections with changing trains either in Bratislava or in Žilina.

Timetables can be found at: www.db.de.

From Poprad-Tatry to Nový Smokovec: Take a direct connection from the Poprad railway station by Tatra's Electrical Railways (a mountain narrow-gauge train). The access to the platform for this train is *upstairs from the hall in the railway station building*. Take the trains directed to Štrbské Pleso. When you get to the station Starý Smokovec, prepare yourself for getting off at the next stop, which is Nový Smokovec (New Smokovec). After getting off, you will find yourself 50 meters from the entrance to the Atrium hotel.

Timetables for the mountain train can be found at: www.jizdnirady.cz.

Taxi: A taxi from the airport or bus/train station in Poprad costs about 320–700 SKK (ask in advance).

By Car: Please note, that if you want to use highways in Slovakia, you need to have a highway-toll ticket, which can be bought at every petrol station. Moreover, because of low winter temperatures (-25°C to 10°C) and snow, you must have *tires for winter season* and also *chains* for the tires.

- Coming from the **west by Road E50 or D1**, i.e. from Žilina, you have to follow E50 up to Tatranská Štrba where you turn to the left in the direction to Štrbské Pleso. Then drive in the direction to Starý Smokovec/Smokovce. After passing by the sign announcing the city limits of Nový Smokovec/Smokovce you will see the Atrium hotel on your left after some 500 meters.

- Coming from the **east by Road E50**, i.e. from Prešov or Košice, you will first pass through Poprad where you should watch for the signs navigating you to Starý Smokovec/Smokovce. After coming to Starý Smokovec/Smokovce and crossing the railroad, turn immediately to the left, follow the main street in Smokovce for about 1 km and watch for the Atrium hotel on your right.

- Coming from the **north**, i.e. from Poland, crossing the border in Lysa Polana/Javorina, follow the signs for Tatranská Lomnica and then to Starý Smokovec/Smokovce. After crossing the city limits of Horný Smokovec/Smokovce, follow the main street for about 2 km and watch for the Atrium hotel on your right.

Entry Visa

Citizens of most European countries, U.S.A. and Canada do not need entry visas. If you are not quite sure, check with the nearest Slovak consulate.

Climate

The weather is usually very cold in the winter and snow is almost certain. The temperatures range from -25°C to 10°C (-13°F to 50°F).

Registration and Fees

Participants are requested to fill in registration form at the SOFSEM 2008 website

www.sofsem.sk, item 'Registration'.

Registration and room reservation will be confirmed.

Registration Fee: The *regular registration fee* covers a copy of the Springer LNCS (Lecture Notes in Computer Science) proceedings, a copy of the SRF (Student Research Forum) proceedings, other conference materials, trip activities with insurance, receptions (upgrade of fees charged for corresponding dinners), coffee breaks, local tax, and other expenses of the organizers, like e.g. fees for the conference rooms. The *student fee* covers a copy of the SRF proceedings, other conference materials, trip activities with insurance, receptions, coffee breaks, and a local tax. To qualify for an *early registration*, your fee should arrive to the conference bank account not later than on *December 1*, or a filled and signed form for credit card payment to the organizers by *November 26*.

The conference expenses for SISp (Slovak Society for Computer Science) and SKI (Czech Society for Cybernetics and Informatics) members are partially sponsored (up to 4 000 SKK for a regular member and up to 5 000 SKK for a student). Membership will be verified.

The fees are listed below. All prices shown here are in Slovak Crowns (SKK) and should arrive to the conference bank account in SKK, free of bank charges.

	Early	Late
Regular	12 800 SKK (by Nov 16)	14 000 SKK
Student	9 000 SKK (by Nov 23)	10 000 SKK

Accommodation Fee: The prices shown below are per person and per night, including breakfast.

Single Room	2 125 SKK	
Double Room	1 415 SKK	(one bed in a double room)

Full Board Meals: The price per one meal (lunch, dinner) is 350 SKK. Full board meals begin with dinner on the day of your arrival and end by breakfast on the day of your departure.

Extras:

Additional LNCS Proceedings 1 100 SKK each
Additional SRF Proceedings 270 SKK each

Accompanying Person(s): The fee for one accompanying person consists of 1 780 SKK for registration — conference souvenirs, trip activities with insurance, receptions (upgrade of fees charged for corresponding dinners), and a local tax, 350 SKK for dinner per day, and 2 125 SKK or 1 415 SKK per night for accommodation. The total fee depends on the type of accommodation and arrival/departure dates of the registered participant. Lunches can be obtained on site, at extra cost.

Payment

You can pay either by Bank Transfer or by Credit Card (VISA, EuroCard/MasterCard).

If you choose bank transfer: Please pay the required amount to the following account (do not forget to fill in Details of Payment when transferring the fee)

Beneficiary: Slovak Society for
Computer Science
Address: FMFI UK
Mlynská dolina
842 48 Bratislava, Slovakia
Account number: 26 2679 3160/1100
Bank: TATRA BANKA a.s.
Vajanského nábr. 5
810 06 Bratislava, Slovakia
SWIFT Code: TATR SK BX
IBAN Code: SK18 1100 0000 0026 2679 3160
Details of Payment: SOFSEM08 - name surname

If you choose credit card: For the increased security of your credit card number, you have to fill in the form (generated for you automatically, upon registration) and send it (signed) to SOFSEM 2008 organizers either by fax to

++421 +55 62 209 49

or by surface mail to

SOFSEM 2008 - Registration
Institute of Computer Science
P. J. Šafárik University
Jesenná 5
040 01 Košice
Slovakia

Participating Institutions

SOFSEM 2008 is jointly organized 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.

Sponsors

SOFSEM 2008 is sponsored by Asseco Slovakia, the European Research Consortium for Informatics and Mathematics (ERCIM), Ness Slovakia, Siemens Slovakia, and SOFTEC.

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, Peter Gurský, Tomáš Horváth, Michal Mati, Peter Mlynářík, Dana Pardubská, Gabriel Semanišin (chair), Eva Trenklerová

Conference Site

The registration office will be located at the reception desk in the Atrium Hotel. It will be open from 14:00 to 22:00 on Saturday, January 19, and from 7:30 to 9:00 on Sunday, January 20.

ATRIUM HOTEL
Nový Smokovec 42
062 01 Vysoké Tatry, Slovakia
Phone: ++421 +52 44 22 342
GSM: ++421 +903 990 105
 ++421 +905 881 276
Fax: ++421 +52 44 22 304

Website and Contacts

More detailed on-line information is displayed at

www.sofsem.sk,

personal inquires should be sent to

sofsem08@ics.upjs.sk,

or to

SOFSEM 2008 Organizing Committee
Institute of Computer Science
P. J. Šafárik University
Jesenná 5
040 01 Košice
Slovakia