

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**Head of Department:** Prof. Dr. Tomáš Hruška  
 Phone +420 5 4114 1146  
 Fax +420 5 4114 1270  
 E-mail uivt@fee.vutbr.cz

### I. STAFF

#### **Professors:**

Milan Češka, Václav Dvořák, Jan M. Honzík, Tomáš Hruška, Ivo Serba

#### **Associate Professors:**

Vladimír Drábek, Zdeněk Kotásek, Jiří Kunovský, Miroslav Linhart, Alexandr Meduna,  
 Zdena Rábová, Miroslav Švéda, František Zbořil, Pavel Zemčík, Jaroslav Zendulka

#### **Lecturers:**

Miloš Eysselt, Martin Fědor, Otto Fučík, Petr Hanáček, Vladimír Janoušek, Dušan Kolář,  
 Jitka Kreslíková, Petr Peringer, Josef Schwarz, Tomáš Vojnar

#### **Technical Staff:**

Daniel Cvrček, Jiří Matuš

#### **Postgraduate Students:**

Vladimír Arnošt, Vladimír Bartík, Roman Bílek, František Bureš, Radek Burget, Daniel Čapek,  
 Jakub Černohorský, Martin Drahanský, Tomáš Dulík, Stanislav Elbel, Jakub Güttner, Adam Herout,  
 Martin Hrubý, Radek Kočí, Milan Kolka, Petr Kotásek, Marek Křejský, Bohuslav Křena,  
 Vladislav Kubíček, Vladimír Kutálek, Vladimír Marek, David Martínek, Petr Matoušek, Daniel Míka,  
 Dao Minh, Jiří Očenášek, Tomáš Ondráček, Filip Orság, Petr Peňás, Jiří Petřek, Jaroslav Ráb,  
 Richard Růžička, Ondřej Ryšavý, David Řezáč, Lukáš Sekanina, Ivan Schwarz, Azedien Sllame,  
 Petr Smolík, Jiří Staroba, Josef Strnadel, Sumec Stanislav, Lukáš Szemla, František Ščuglík,  
 Pavel Tišnovský, Michal Tomšů, Milan Urbášek, Michal Vojkůvka, Tomáš Vojta, Petr Vurm,  
 Dalibor Zacios, František Zbořil

#### **Administrative Staff:**

Marie Drábková, Eva Kapplerová, Eva Kirchnerová, Ludmila Ottová

#### **Computing centre:**

##### **Director:**

Petr Lampa

##### **Staff:**

Květa Almášiová, Rudolf Čejka, Helena Dupalová, Petr Gaďorek, Stella Habrdová, Karel Kappler,  
 Tomáš Kašpárek, František Kreslík, Bohumil Michal, Milena Nečasová, Radomíra Samsonová

### II. FACILITIES

The Computing Centre is an integral part of the Department of Computer Science and Engineering. The centre guarantees the running of computer laboratories, servers and information systems both for education and research process. Students have an unrestricted access to all systems during work and weekend days. The laboratory is equipped with various computer architecture servers: Sun Enterprise 450, HP 9000/800, IBM RS/6000, FreeBSD and Linux systems on Intel architecture servers and Novell Netware file servers. Computer network is based on Gigabit Ethernet and Layer 3 switching which provides sufficient capacity to cover sophisticated distributed computations. Computer network is connected to metropolitan network using two Gigabit Ethernet links and through national academic network backbone CESNET2 to Internet (2,5 Gbps POS connection to Prague and 1,2 Gbps POS connection to abroad).

#### **II.1 Teaching and Research Laboratories**

- Laboratory with SUN Ultra 5 workstations
- Laboratory with personal computers and Windows NT/Linux RedHat operating system (34 computers)
- Multimedia laboratory equipped with 3D accelerators and Windows NT/Linux RedHat (42 workplaces)

- Microprocessor laboratory equipped with personal computers, microcomputers and development systems for processors by Motorola, Fujitsu, and National Semiconductors.
- Peripheral Devices laboratory (A1 HP DesignJet 488CA matrix plotter, HP ScanJet 5300 USB scanner, A3 Genius NewSketch 1812HR tablet, Advantech cards for technological environment - 2 x PCI-1710/PCL-10168/PCLD-8710).
- Graphic laboratory equipped with 3D scanner, Olympus C-3030Zoom digital camera and the workstation for the non-linear video editing with two Intel Pentium III/866 processors, 256 MB RAM, 72 GB of disc capacity, Matrox DigiSuite video editor card and Sony Digital 8 digital camera.

## II.2 Open Computer Laboratories

- Two unscheduled Internet laboratories utilised by all students of the faculty (42 computers together with two Internet connecting points for notebooks).

## II.3 Special Instrumentation and Computers

- Sun Enterprise 450 server with 4 UltraSPARC II processors, 4 GB RAM a 255 GB HDD capacity
- Novell NetWare 5 student and staff servers with 2 Intel Pentium III/800 processors, 512 MB RAM, 140 GB RAID-5 disk space and one Gigabit Ethernet network adapter.
- SGI Octane, Indy, Indigo, Sun Ultra 5 and SPARCstation 5 workstations
- Computer network based on Extreme Networks Summit 48 and Black Diamond Layer 3 Gigabit Ethernet switches.
- HP LaserJet 4MP/4000, Tektronix Phaser 740Plus network printers
- Agilent LogicWave E9340A logic analyser, 34 channels for time analysis to 250MHz and state analysis to 100MHz, Logic Wave GUI software
- HP 54622A Digital Storage Oscilloscope (2 channels, 100MHz)
- FPGA Xilinx design laboratory
- Development laboratory for prototyping the embedded systems with the FieldBus architecture, CANalyzer for Win32 V32.5 + CanCard2 V1.0/ANA + CANextender
- 3D scanner Minolta VIVID 700 – 3D scanner with automatic turntable for creation of 3D models of objects with 100x100x100mm – 1100x1100x1100mm size; acquires images with 200x200x256 (depth map) and 400x400 (RGB texture) resolution. Attached software allows export e. g. in VRML.

## II.4 Special Instrumentation and Computers

- Oracle 8 a Oracle 8i, including development tools (Oracle company university program)
- Microsoft development tools (Microsoft Academic Alliance)
- The Team Developer development tools and SQLBase database server (a gift from the “Centura Scientific Partner” program)
- Paradigm Plus CASE system from Computer Associates company
- Borland Pascal, C++, Delphi, C++ Builder
- Adobe Photoshop, Autodesk 3D studio, Caligari trueSpace
- ViewLogic development system for PLDs
- Synopsys development system for PLDs
- Xilinx Foundation development system for PLDs
- Aldec VHLD simulator
- GNU Software, TeX, Linux, FreeBSD, MySQL, Apache servers, PHP4.

## III. TEACHING

### III.1 Undergraduate and Graduate Study - First Level

Algorithms and Programming	Y1 L1, summer	3/2	Kreslíková
Programming Practice	Y1 L1, summer	0/2	Kreslíková
Programming and Computer Usage 1	Y1 L1, winter	2/2	Kunovský
Algorithms and Data Structures	Y2 L1, summer, winter	3/3	Honzík
Logic Systems	Y2 L1, summer, winter	3/2	Eysselt

Operating Systems 1	Y2 L1, summer, winter	3/2	Peringer
Software Engineering	Y2 L1, summer, winter	3/2	Zendulka

**III.2 Undergraduate Study (BSc) - Second Level**

Computer Graphics	Y1 L2, summer	3/3	Zemčík
Computer Organization and Architecture	Y1 L2, summer	3/2	Drábek
Data Communications and Computer Networks	Y1 L2, summer	3/2	Švéda
Peripheral Devices 1	Y1 L2, summer	3/2	Kotásek
Personal Computers, Technical Maintenance	Y1 L2, summer	2/3	Kotásek
Post-Relational Databases	Y1 L2, summer	3/2	Kolář
C and C++ Languages	Y1 L2, winter	3/2	Peringer
Data Modelling and Database Design	Y1 L2, winter	3/2	Zendulka
Diagnosis and Safe Systems	Y1 L2, winter	3/2	Drábek
Modelling and Simulation of Systems	Y1 L2, winter	3/2	Rábová
Principles of Computer Graphics	Y1 L2, winter	3/2	Zemčík
BSc Project	Y2 L2, winter	0/6	Rábová
Computability and Complexity	Y2 L2, winter	3/2	Janoušek
Computer Networks and Communication Protocols	Y2 L2, winter	3/2	Švéda
Information Systems Design	Y2 L2, winter	3/2	Hruška

**III.3 Graduate Study (MSc) - Second Level**

Advanced Computer Applications	Y1 L2, summer	3/2	Kunovský
Computer Graphics	Y1 L2, summer	3/3	Serba
Computer Organization and Architecture	Y1 L2, summer	3/2	Drábek
Principles of Compiler Design	Y1 L2, summer	3/2	Meduna
Programming Languages	Y1 L2, summer	3/2	Hruška
Software Architectures and Components	Y1 L2, summer	2/3	Honzík
Assembly Languages	Y1 L2, winter	3/2	Zbořil sr.
Data Modelling and Database Design	Y1 L2, winter	3/2	Zendulka
Digital and Impulse Circuits	Y1 L2, winter	2/3	Schwarz
Principles of Computer Graphics	Y1 L2, winter	2/3	Zemčík
Theoretical Computer Science 1	Y1 L2, winter	3/2	Češka
Applied Microcomputers	Y2 L2, summer	2/3	Schwarz
Artificial Intelligence	Y2 L2, summer	3/2	Zbořil sr.
Computer Security and Cryptography	Y2 L2, summer	2/3	Hanáček
Data Communication and Computer Networks	Y2 L2, summer	3/2	Švéda
Multimedia	Y2 L2, summer	2/3	Zemčík
OO Languages for Rapid Prototyping	Y2 L2, summer	3/2	Janoušek
Operating Systems 2	Y2 L2, summer	3/2	Lampa
Practical Parallel Programming	Y2 L2, summer	3/2	Dvořák
Year Project 2	Y2 L2, summer	0/2	Rábová
Computability and Complexity	Y2 L2, winter	3/2	Janoušek
Functional and Logic Programming	Y2 L2, winter	3/2	Kolář
Human-Machine Interface	Y2 L2, winter	2/3	Zemčík
Modelling and Simulation of Systems	Y2 L2, winter	3/2	Rábová
Peripheral Devices 2	Y2 L2, winter	3/2	Kotásek
Year Project 1	Y2 L2, winter	0/2	Rábová
Fault-Tolerant Systems	Y3 L2, summer	3/2	Drábek
MSc-Thesis Project	Y3 L2, summer	0/10	Rábová
Personal Computers, Technical Maintenance	Y3 L2, summer	2/2	Kotásek

Theoretical Computer Science 2	Y3 L2, summer	3/2	Češka
Advanced Computer Architectures	Y3 L2, winter	3/2	Dvořák
Computer Communication and Interfacing	Y3 L2, winter	3/2	Švéda
Computer Networks and Communication Protocols	Y3 L2, winter	3/2	Švéda
Diagnosis and Safe Systems	Y3 L2, winter	3/2	Drábek
Graphical and Multimedia Processors	Y3 L2, winter	3/2	Drábek
Information Systems Design	Y3 L2, winter	3/2	Hruška
Neural Networks	Y3 L2, winter	3/2	Zbořil sr.
Parallel and Distributed Algorithms	Y3 L2, winter	3/2	Hanáček
Term Project	Y3 L2, winter	0/3	Rábová

### III.3 Graduate Study - PhD Level

Advanced Methods of 3D Scene	summer	42 hrs.	Zemčík
Highly Sophisticated Computations	summer	42 hrs.	Kunovský
Parallel and Distributed Computing	summer	42 hrs.	Dvořák
Selected Topics of OO Modelling	summer	42 hrs.	Hruška
Theory and Application of Petri Nets	summer	48 hrs.	Češka
Computer Graphics	winter	42 hrs.	Serba
Knowledge Discovery in Databases	winter	50 hrs.	Zendulka
Modelling and Simulation	winter	52 hrs.	Rábová
Modern Theoretical Computer Science	winter	42 hrs.	Meduna
Parallel and Distributed Programming	winter	42 hrs.	Dvořák
Principles of Testable Design Synthesis	winter	42 hrs.	Kotásek
Specification of Embedded Systems	winter	42 hrs.	Švéda
Theory of Programming Languages	winter	42 hrs.	Hruška

### III.4 Study in English Language (International students)

Algorithms and Programming	1.r.1.st., letní	3/2	Kreslíková
Programming and Computer Usage 1	1.r.1.st., zimní	2/2	Kunovský
Operating Systems 1	2.r.1.st., letní	3/2	Staroba
Software Engineering	2.r.1.st., letní	3/2	Zendulka
Algorithms and Data Structures	2.r.1.st., zimní	3/3	Honzík
Logic Systems	2.r.1.st., zimní	3/2	Eysselt
Computer Organization and Architecture	1.r.2.st., letní	4/1	Drábek
Principles of Compiler Design	1.r.2.st., letní	3/2	Kolář
Programming Languages	1.r.2.st., letní	4/1	Hruška
Data Modelling and Database Design	1.r.2.st., zimní	3/2	Zendulka
Digital and Impulse Circuits	1.r.2.st., zimní	4/1	Schwarz
Principles of Computer Graphics	1.r.2.st., zimní	4/1	Fědor
Theoretical Computer Science 1	1.r.2.st., zimní	3/2	Češka
Artificial Intelligence	2.r.2.st., letní	4/1	Zbořil st.
Data Communication and Computer Net.	2.r.2.st., letní	4/1	Švéda
Object Oriented Modelling and Prototyp.	2.r.2.st., letní	4/1	Janoušek
Operating Systems 2	2.r.2.st., letní	4/1	Lampa
Year Project 2	2.r.2.st., letní	0/2	Zemčík
Computability and Complexity	2.r.2.st., zimní	4/1	Češka
Graphical and Multimedia Processors	2.r.2.st., zimní	4/1	Drábek
Modelling and Simulation of Systems	2.r.2.st., zimní	4/1	Zbořil st.
Multimedia	2.r.2.st., zimní	4/1	Zemčík
Advanced Computer Architecture	3.r.2.st., zimní	4/1	Dvořák
Computer Networks and Communication	3.r.2.st., zimní	4/1	Švéda
Information Systems Design	3.r.2.st., zimní	4/1	Hruška
Parallel and Distributed Algorithms	3.r.2.st., zimní	4/1	Hanáček
Peripheral Devices 1	3.r.2.st., zimní	4/1	Kotásek

Personal Computers, Technical Mainten.	3.r.2.st., zimní	4/1	Kotásek
Term Project	3.r.2.st., zimní	0/3	Zemčík
Year Project 1	2.r.2.st., zimní	0/2	Zendulka

## **IV. RESEARCH PROJECTS**

### **IV.1 Projects**

#### **Modelling, Verifying, and Prototyping Distributed Applications Using Petri Nets**

GAČR 102/00/1017, Prof. Dr. Milan Češka

#### **Formal Approaches in Digital Design Diagnostics - Testable Design Verification**

GAČR 102/01/1531 Assoc. Prof. Dr. Zdeněk Kotásek.

#### **Neural Heteroassociative Memories (Educational Project)**

FRVŠ 0173/2001/G1, Dao anh Minh, MSc.

#### **The Parallelization of Bayesian Optimization Algorithm (Educational Project)**

FRVŠ 0171/2001/G1, Jiří Očenášek, MSc.

#### **Realization of a Geographical Information System (Educational Project)**

FRVŠ 0221/2001/G1, Pavel Tišnovský, MSc

#### **A Program Set for Modeling of a System for the Risk Analysis (Educational Project)**

FRVŠ 0172/2001/G1, Assoc. Prof. Dr. Zdeňka Rábová

#### **Selection of Methods for Formal Specification and Verification of Communication Protocols (Edu. Project)**

FRVŠ 0099/2001/G1, Jaroslav Ráb, MSc.

### **IV.2 Participation in research projects of other departments**

#### **Research and Applications of Heterogenous Models**

GAČR 02/98/0552 (grant holder: Prof. Dr. Petr Vavřín UAMT FEECS VUT) – Prof. Dr. Milan Češka, Dr. Petr Hanáček, Prof. Dr. Tomáš Hruška, Dr. Vladimír Janoušek, Dr. Petr Peringer, Assoc. Prof. Dr. Jiří Kunovský, Assoc. Prof. Dr. Zdena Rábová, Assoc. Prof. Dr. František Zbořil.

#### **Pressure Analyzer TLAKAN**

GAČR 102/00/0938 (grant holder: Prof. Ing. Radimír Vrba, CSc. UMEL FEECS VUT)  
– Assoc. Prof. Dr. Miroslav Švéda.

### **IV.3 Participation in the Faculty Research Intentions**

#### **Information and Control System Resesarch**

MSM 262200012 (grant holder: Prof. Dr. Jan M. Honzík, UIVT)  
- mainly, but not limited to Prof. Dr. Milan Češka, Prof. Dr. Václav Dvořák, Prof. Dr. Tomáš Hruška, Assoc. Prof. Dr. Vladimír Drábek, Assoc. Prof. Dr. Zdeněk Kotásek, Assoc. Prof. Dr. Jiří Kunovský, Assoc. Prof. Dr. Alexandr Meduna, Assoc. Prof. Dr. Zdena Rábová, Assoc. Prof. Dr. Miroslav Švéda, Assoc. Prof. Dr. František Zbořil, Assoc. Prof. Dr. Pavel Zemčík, Assoc. Prof. Dr. Jaroslav Zendulka, Dr. Daniel Cvrček, Dr. Miloš Eysselet, Dr. Otto Fučík, Dr. Petr Hanáček, Dr. Vladimír Janoušek, Dr. Dušan Kolář, Dr. Jitka Kreslíková, Dr. Petr Peringer, Dr. Josef Schwarz, Martin Fědor, MSc., Dr. Tomáš Vojnar.

## **V. COOPERATIONS**

### **V.1 Cooperations in the Czech Republic**

- Auris CZ. s.r.o., Ostrava
- Camea, s. r. o., Brno
- MP-Soft, s.r.o. Brno
- UNIS, s. r. o., Brno
- Centre of Applied Cybernetics Prague
- Departemnt of Informatics, FEEL, VŠB - TU Ostrava
- Department of Computers FEE, ČVUT Prague

### **V.2 International Cooperation**

- Siemens AG Österreich, Wien, Austria
- DWL Electronische Systeme, GmbH, Germany

- Applied Dynamics International Ltd., Wellingborough, Great Britain
- Rapid Data Ltd., Great Britain
- Rolls-Royce Military Aero Engines Ltd., Great Britain
- Boeing North American, USA
- Lord Corporation Inc., Erie, Pennsylvania, USA
- University of Lingby, Denmark
- Helsinki University of Technology, Helsinki, Finland
- Lappeenranta University of Technology, Lappeenranta, Department of Information Technology, Finland
- University of Joensuu, Joensuu, Department of Computer Science, Finland
- Universidade Trás-os-Montes e Alto Douro, Vila Real, Department of Computer Science, Portugal
- University of Vienna, Austria
- University of Bristol, Bristol, Department of Computer Science, Great Britain
- University of Stirling, Stirling, Great Britain
- University of Surrey, Guildford, Center for Vision, Speech, and Signal Processing, Great Britain
- University of Huddersfield, Huddersfield, Department of Computer Science, Great Britain
- University of Malta, Malta
- University of Arizona, Tuscon, Arizona, USA
- University of Michigan, USA
- Center for Intelligent Systems, Binghamton University, USA
- University of California LA, USA
- Pennsylvania State University
- University of Wyoming

### V.2.1 Visitors to the Department

- Dr. Ralph Ford, Pennsylvania State University, The Behrend College, USA, 4 days
- Prof. Masaaki Hashimoto, Kyushu Institute of Technology, Faculty of Computer Science and Systems, Japan, 2 days
- Dr. Toyohiko Hirota, Kyushu Institute of Technology, Faculty of Computer Science and Systems, Japan, 2 days
- Dr. Michael Frydrych, Lappeenranta University of Technology, Lappeenranta, Finsko, Department of Information Technology, 5 days
- Prof. Dr. Jussi Parkkinen, University of Joensuu, Joensuu, Finsko, Department of Computer Science, 5 days
- Dr. Markku Hauta-Kasari, University of Joensuu, Joensuu, Finsko, Department of Computer Science, 8 days

### V.2.2 Visits of Staff Members to Foreign Institutions

- Lukáš Sekanina, MSc., Pennsylvania State University, The Behrend College, USA – 4 months
- Lukáš Sekanina, MSc., Department of Informatics, University of Oslo, Norway – 2 months
- Dr. Tomáš Vojnar, laboratory LIAFA, University Paris 7 - Denis Diderot – 1 year
- Martin Fědor, MSc., University of Bristol, Bristol, Great Britain, 2 weeks
- Assoc. Prof. Dr. Pavel Zemčík, University of Bristol, Bristol, Great Britain, 1 week (twice)
- Assoc. Prof. Dr. Pavel Zemčík, University of Manchester, Manchester, Great Britain, 1 day
- Assoc. Prof. Dr. Pavel Zemčík, University of Joensuu, Joensuu, Finsko, 1 week
- Dr. Otto Fučík, University of Bristol, Bristol, Velká Británie, 1 week
- Dr. Otto Fučík, University of Manchester, Manchester, Great Britain, 1 day

### V.3 Contracts

- Memorandum of Agreement between The Friedrich Schiller University of Jena, Faculty of Mathematics and Informatics (contact person Prof. Dr. Wilhelm Rossak) and The Brno University of Technology, Faculty of Electrical Engineering and Computer Science (contact person Assoc. Prof. Miroslav Švéda, PhD.) to establish a long-term relationship to broaden opportunities for academic cooperation.

**V.4 Membership in International Organizations and Societies**

- Prof. Dr. Milan Češka: ACM (USA)
- Prof. Dr. Milan Češka: TC10 IFIP, WG 10.1 (Austria)
- Prof. Dr. Milan Češka: Research Board of Advisers, The American Bibliographical Institute, Inc. (USA)
- Prof. Dr. Milan Češka: Gesellschaft für Informatik (Germany)
- Prof. Dr. Milan Češka: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Vladimír Drábek: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Prof. Dr. Václav Dvořák: IEEE Computer Society (USA)
- Dr. Miloš Eysselt: Czech and Slovak Simulation Society (member of EUROSIM)
- Dr. Miloš Eysselt: IGIP (Internationale Gesellschaft fuer Ingenieurpaedagogik) (Austria)
- Martin Fědor, MSc.: ACM (USA)
- Dr. Otto Fučík: IEEE Computer Society (USA)
- Dr. Petr Hanáček: ACM (USA)
- Dr. Petr Hanáček: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Dr. Petr Hanáček: Centrum pro elektronický obchod (Czech Republic)
- Prof. Dr. Jan Honzík: IGIP (Internationale Gesellschaft fuer Ingenieurpaedagogik) (Austria)
- Prof. DR. Jan Honzík: TC9 IFIP, Holland
- Prof. Dr. Tomáš Hruška: ACM (USA)
- Prof. Dr. Tomáš Hruška: IFIP, WG 10.1 (Austria)
- Prof. Dr. Tomáš Hruška: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Dr. Vladimír Janoušek: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Dr. Dušan Kolář: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Marek Křejský, MSc.: ACM (USA)
- Assoc. Prof. Dr. Jíří Kunovský: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Dr. Petr Peringer: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Zdena Rábová: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Zdena Rábová: AFCEA (USA)
- Dr. Josef Schwarz: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Miroslav Švéda: executive committee of IEEE Computer Society TC Engineering of Computer-Based Systems (USA)
- Assoc. Prof. Dr. Miroslav Švéda: IEEE Computer Society (USA)
- Assoc. Prof. Dr. Miroslav Švéda: IFIP WG 10.1 (Austria)
- Tomáš Vojnar, MSc.: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. František Zbořil: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Pavel Zemčík: IEEE Computer Society (USA)
- Assoc. Prof. Dr. Pavel Zemčík: ACM (USA)
- Assoc. Prof. Dr. Jaroslav Zendulka: ACM (USA)
- Assoc. Prof. Dr. Jaroslav Zendulka: Czech and Slovak Simulation Society (member of EUROSIM) (Czech Republic)

**VI. PUBLICATIONS****VI.1 Journals and Parts of Books**

- Cvrček Daniel, Matyáš Václav ml.: PKI is not a silver bullet, In: DSM Data Security Management, Vol. 2001, No. 6, CZ, p. 26-29, ISSN 1211-8737 (in Czech)
- Češka Milan, Janoušek Vladimír, Vojnar Tomáš: Generating and Using State Spaces of Object-Oriented Petri Nets, In: International Journal of Computer Systems Science and Engineering, Vol. 16, No. 3, AT, p. 183-193, ISSN 0267-6192

- Češka Milan, Janoušek Vladimír, Vojnar Tomáš: Analysis and Verification Queries over Object-Oriented Petri Nets, Formal Methods and Tools for Computer Science, EUROCAST 2001, Berlín, DE, Springer, 2001, p. 20, ISBN 3-540-42959-X
- Dražanský Martin, Smolík Luděk: Biometrie a čipové karty, DSM - Data Security Management, Brno, CZ, 2001, p. 14-17
- Grebeníček František: Sparse Distributed Memory --- Modifications of Initialization, In: NEURAL NETWORK WORLD, Vol. 2001, No. 4, CZ, p. 317-336, ISSN 1210-0552
- Kolář Dušan, Meduna Alexander: Homogenous Grammars with a Reduced Number of Non-Context-Free Productions, In: Information Processing Letters, Amsterdam, NL, ISSN 0020-0190
- Lampa Petr: Wedge among switches, review of HP ProCurve 2312 and 2524 switches, In: CONNECT!, Vol. 2001, No. 5, Brno, CZ, p. 66-68, ISSN 1211-3085 (in Czech)
- Meduna Alexander, Vurm Petr: Multisequential Grammars with Homogeneous Selectors, In: Fundamenta Informatica, Vol. 2001, No. 48, CZ, p. 6, ISSN 0020-7160
- Meduna Alexander: Uniform Generation of Languages by Scattered Context Grammars, In: Fundamenta Informatica, Vol. 2001, No. 44, Amsterdam, NL, p. 231-235, ISSN 0169-299968
- Rattray Charles, Švéda Miroslav, Rozenblit Jerzy: Proceedings of the IEEE TC-ECBS and IFIP WG10.1 Joint Workshop on Formal Specifications of Computer-Based Systems, Washington D.C., US, US, 2001, p. 150, ISBN 1-85-769144-X
- Schwarz Josef, Očenášek Jiří: Multiobjective Bayesian Optimization Algorithm for Combinatorial Problems: Theory and Practice, In: NEURAL NETWORK WORLD, Vol. 11, No. 5, CZ, p. 423-441, ISSN 1210-0552
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### VI.3 PhD Thesis

- Cvrček Daniel: Authorization Model for Strongly Distributed Information Systems, PhD Thesis, Brno, 2001, p. 125 (in Czech)
- Vojnar Tomáš: Towards Formal Analysis and Verification over State Spaces of Object-Oriented Petri Nets, PhD Thesis, Brno, Czech Republic, 2001, p. 148

## VII. OTHER ACTIVITIES

- Organization of the 4th Information Systems Modelling (ISM 2001) international conference. The conference was oriented to information system theory, modelling techniques and tools, development methodologies and problems related to databases.
- Participation in organization of the 35th International Conference on Modelling and Simulation of Systems (MOSIS 2001). The conference dealt with simulation theory, tools, methods and applications.
- Participation in organization of the 15th European Simulation Multiconference ESM'2001, Praha, CZ, FEL ČVUT, 2001. The conference dealt with simulation theory.
- Organization and co-chairing the IEEE TC-ECBS and IFIP WG10.1 Joint Workshop on Formal Specifications of Computer-Based Systems 2001 held in Washington, D.C., USA. This international

workshop is aimed at formal specifications and their utilizations in the design and implementation of computer-based systems.

- Participation in organization of the faculty student conference STC 2001.
- Membership in program committees of international conferences and workshops (ECI 2001 Herľany Slovakia, MOSIS 2001 Hradec nad Moravicí Czech Republic, ASIS 2001 Velké Losiny Czech Republic, ECBS 2001 Washington D.C. USA, ESM 2001 Prague Czech Republic, EUROGRAPHICS 2001 Manchester Great Britain, EUROSIM 2001 Delft Netherlands, ISM 2001 Hradec nad Moravicí Czech Republic, MOCA 2001 Aarhus Denmark, NNW 2001 Prague Czech Republic, SCI 2001 Orlando Florida USA).
- Siemens prize for the outstanding PhD Thesis (Tomáš Vojnar) and a financial support for PhD students (Richard Růžička).
- Series of computer graphics lectures at FEI VŠB-TU Ostrava, Czech Republic.
- Accreditation of new study programmes Information Technology and preparation of documents necessary to establish the Faculty of Information Technology at Brno Technical University.