

## Department of Computer Science and Engineering

Head of Department: Prof. Ing. Tomáš Hruška, CSc,

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### I. STAFF

#### **Professors:**

Prof. RNDr. Milan Češka, CSc., Prof. Ing. Václav Dvořák, DrSc., Prof. Ing. Jan Honzík, CSc.,  
Prof. Ing. Tomáš Hruška, CSc., Prof. Ing. Ivo Serba, CSc.

#### **Associate Professors:**

Doc. Ing. Vladimír Drábek, CSc., Doc. Ing. Jiří Kunovský, CSc., Doc. Ing. Miroslav Linhart, CSc., Doc.  
Ing. Zdeňka Rábová, CSc., Doc. Ing. Miroslav Švéda, CSc., Doc. Ing. František Zbořil, CSc.,  
Doc. Dr. Ing. Pavel Zemčík, Doc. Ing. Jaroslav Zendulka, CSc.

#### **Assistant Professors:**

Dr. Ing. Miroslav Beneš, Ing. Miloš Eysselt, CSc., Dr. Ing. Petr Hanáček,  
Ing. Vladimír Janoušek, Ph.D., Dr. Ing. Dušan Kolář, Ing. Zdeněk Kotásek, CSc.,  
RNDr. Jitka Kreslíková, CSc., RNDr. Alexander Meduna, CSc., Dr. Ing. Petr Peringer,  
Ing. Josef Schwarz, CSc., Ing. Tomáš Vojnar

#### **Ph.D. Students (internal):**

Ing. Jiří Brázda, Ing. Daniel Cvrček, Ing. Dao Asek Minh, Ing. Martin Dobšík, Ing. Tomáš Dulík,  
Ing. Martin Fědor, Ing. František Grebeníček, Ing. Petr Kotásek, Ing. Marek Křejský, Ing. Jiří Mencák,  
Ing. Vladimír Marek, Ing. Jaromír Marušinec, Ing. Petr Matoušek, Mgr. Vladimír Nováček,  
Ing. Jiří Očenášek, Ing. Tomáš Ondráček, Ing. Petr Peñas, Ing. Erik Pomykal, Ing. Pavel Pospíšil,  
Ing. Jaroslav Ráb, Ing. Richard Růžička, Ing. Lukáš Sekanina, Ing. Petr Sezemský, Ing. Petr Smolík,  
Ing. Pavel Tišnovský, Ing. Milan Urbášek, Ing. Jan Václavík, Ing. Michal Vojkůvka,  
Ing. Tomáš Vojnar (Assistant Professor now), Ing. Pavel Výšek

#### **Foreign Ph.D. Students (internal):**

Ing. Azeddien Sllame

#### **Ph.D. Students (external):**

Ing. Tomáš Bleša, Ing. Jaromír Bumbálek, Ing. Petr Cigánek, Ing. Michal Dobeš, Ing. Radovan Habáň,  
Ing. Petr Havel, Ing. Petr Havlíček, Ing. Milan Hrdlička, Ing. Jiří Hronek, Ing. Jan Chochola,  
Ing. Michal Jankovský, Ing. Vladimír Janoušek, Ing. Zdeněk Korčák, Ing. Jiří Matuš,  
Ing. Vladimír Medek, Ing. Viktor Němec, Ing. Karel Mikulášek, Ing. Karel Obluk, Ing. Ljubomir Patev,  
Ing. Zdeněk Pavlas, Ing. Petr Příkryl, Ing. Martin Ryšánek, Ing. Antonín Soušek, Ing. Milan Štaral,  
Ing. Elemír Števko, Ing. Petr Šťastný, RNDr. Arnošt Večerka

#### **Administration, Technical and Support Staff**

Marie Drábková, Eva Kapplerová, Eva Kirchnerová, Ludmila Ottová.

#### **Computing Centre:**

##### **Director:**

Ing. Petr Lampa.

##### **Staff:**

Květa Alamášiová, Ing. Rudolf Čejka, Helena Dupalová, Ing. Petr Gaďorek, Stella Habrdová,  
Karel Kappler, Ing. František Kreslík, Ing. Bohumil Michal, Milena Nečasová

### II. FACILITIES

The department includes **Educational Computing Laboratory** designated to support both teaching and research computing. Students have free access to all computing facilities in the laboratory. Computing facilities includes several different server platforms, including Sun Enterprise 450, BSD and Linux systems on PC servers, HP-UX on HP-PA RISC and Novell Netware file servers. Backbone of computer network is based on the Gigabit Ethernet and Layer 3 switching.

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

- Computer rooms with Sun workstations and Wyse X Terminals.
- Computer rooms with Personal Computers running Windows NT systems.
- Multimedia laboratories equipped with 3D accelerators and sound cards.

- Computer hardware laboratory with PCs, microcomputer development systems and CAD tools (XILINX, SYNOPSIS and Active-HDL).
- Computer peripheral laboratory.

## II.2. Special Instrumentation and Computers

- Visualisation laboratory equipped with 3D scanner, 3D glasses, digital camera, and 2D and 3D scanners.
- Computer network backbone based on 3 Layer 3 Extreme Networks Summit 48 switches.
- Sun Enterprise 450 server with 4 UltraSPARC processors, 4 GB RAM and 45 GB hard disk space.
- ATM 155 Mb/s connection to metropolitan network and Internet.

## III. TEACHING

### III.1. MSc level

Course name	Term	Hours (lec./lab.)	Lecturer
Programming and Usage of Computers	1	2/2	Prof. Ing. Jan Honzík, CSc.
Algorithms and Programming	2	3/2	RNDr. Jitka Kreslíková, CSc.
Programming Practice	2	0/2	RNDr. Jitka Kreslíková, CSc.
Software Engineering	3, 4	3/2	Doc. Ing. Jaroslav Zendulka, CSc.
Algorithms and Data Structures	3, 4	3/3	Prof. Ing. Jan Honzík, CSc.
Logic Systems	3, 4	3/2	Ing. Miloš Eysselt, CSc.
Operating Systems 1	3, 4	3/2	Dr. Ing. Petr Peringer
C and C++ Languages	3, 4	3/2	Dr. Ing. Petr Peringer
Assembly Languages 1	3, 4	1/1	Doc. Ing. František Zbořil, CSc.
Digital and Impulse Circuits	5	2/3	Ing. Josef Schwarz, CSc.
Data Modelling and Database Design	5	3/2	Doc. Ing. Jaroslav Zendulka, CSc.
Theoretical Computer Science 1	5	3/2	Prof. Ing. Milan Češka, CSc.
Computer Graphics Fundamentals	5	2/3	Prof. Ing. Ivo Serba, CSc.
Assembly Languages 2	5	2/2	Doc. Ing. František Zbořil, CSc.
Programming Languages	6	3/2	Prof. Ing. Tomáš Hruška, CSc.
Computer Organization and Architecture	6	3/2	Doc. Ing. Vladimír Drábek, CSc.
Principles of Compiler Design	6	3/2	Dr. Ing. Dušan Kolář
Advanced Computer Applications	6	2/3	Doc. Ing. Jiří Kunovský, CSc.
Software Architectures and Components	6	3/2	Prof. Ing. Jan Honzík, CSc.
Peripheral Devices 1	6	3/2	Doc. Ing. Miroslav Linhart, CSc.
Modelling and Simulation of Systems	7	3/2	Doc. Ing. Zdeňka Rábová, CSc.
Year Project 1	7	0/2	Doc. Ing. Zdeňka Rábová, CSc.
Computability and Complexity	7	3/2	Ing. Vladimír Janoušek, Ph.D.
Functional and Logic Programming	7	3/2	Dr. Ing. Miroslav Beneš
Graphical User Interfaces	7	3/2	Ing. Petr Lampa
Computer Graphics	7	3/3	Prof. Ing. Ivo Serba, CSc.
Peripheral Devices 2	7	3/2	Doc. Ing. Miroslav Linhart, CSc.
Human - Machine Interface	7	2/3	Doc. Dr. Ing. Pavel Zemčík
Year Project 2	8	0/2	Doc. Ing. Zdeňka Rábová, CSc.
Data Communication	8	3/2	Doc. Ing. Miroslav Švéda, CSc.
Artificial Intelligence	8	3/2	Doc. Ing. František Zbořil, CSc.
Applied Microcomputers	8	2/3	Ing. Josef Schwarz, CSc.
Computer Security and Cryptography	8	2/3	Dr. Ing. Petr Hanáček
OO Languages for Rapid Prototyping	8	3/2	Ing. Vladimír Janoušek, Ph.D.
Multimedia	8	2/3	Doc. Dr. Ing. Pavel Zemčík
Operating Systems 2	8	3/2	Ing. Petr Lampa
Advanced Computer Architecture	9	3/2	Prof. Ing. Václav Dvořák, DrSc.
Parallel and Distributed Algorithms	9	3/2	Dr. Ing. Petr Hanáček
Term Project	9	0/2	Doc. Ing. Zdeňka Rábová, CSc.
Information Systems Design	9	3/2	Prof. Ing. Tomáš Hruška, CSc.
Computer Communication and Interfacing	9	3/2	Doc. Ing. Miroslav Švéda, CSc.
Computer Networks	9	3/2	Doc. Ing. Miroslav Švéda, CSc.

Course name	Term	Hours (lec./lab.)	Lecturer
Personal Comp., Technical Maintenance	9	2/2	Ing. Zdeněk Kotásek, CSc.
Graphical and Multimedia Processors	9	3/2	Doc. Ing. Vladimír Drábek, CSc.
Fault-Tolerant Systems	9	3/2	Doc. Ing. Vladimír Drábek, CSc.
Theoretical Computer Science 2	10	3/2	Prof. RNDr. Milan Češka, CSc.
MSc-Thesis Project	10	0/10	Doc. Ing. Zdeňka Rábová, CSc.

### III.2. Courses for the Faculty of Arts

Course name	Term	Hours (lec./lab.)	Lecturer
Creative Computer Graphics 1	5	2/3	Prof. Ing. Ivo Serba, CSc.
Creative Computer Graphics 2	6	2/3	Prof. Ing. Ivo Serba, CSc.
Creative Computer Graphics 2	7	2/3	Prof. Ing. Ivo Serba, CSc.
Creative Computer Graphics 3	8	2/3	Prof. Ing. Ivo Serba, CSc.

### III.3. PhD level

Course name	Hours (lec./lab.)	Lecturer
Modelling and Simulation	3/1	Doc. Ing. Zdeňka Rábová, CSc.
Computer Networks	3/0	Doc. Ing. Miroslav Švéda, CSc.
Fault-Tolerant Systems	3/0	Doc. Ing. Vladimír Drábek, CSc.
Real Time Systems	3/0	Doc. Ing. Miroslav Švéda, CSc.
Computer Networks	3/0	Doc. Ing. Miroslav Švéda, CSc.
Theory and Application of Petri nets	3/1	Prof. RNDr. Milan Češka, CSc.
Theory of Programming Languages	3/0	Prof. Ing. Tomáš Hruška, CSc.
Selected Topics from Database Systems	3/0	Doc. Ing. Jaroslav Zendulka, CSc.
Computer Graphics II	3/0	Prof. Ing. Ivo Serba, CSc.
Parallel and Distributed Computing	3/0	Prof. Ing. Václav Dvořák, DrSc.
Highly Exacting Computations	3/0	Doc. Ing. Jiří Kunovský, CSc.
Selected topics of object oriented modelling in persistent systems	3/0	Prof. Ing. Tomáš Hruška, CSc.

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

Course name	Term	Hours (lec./lab.)	Lecturer
Programming and Computer Usage 1	1	2/2	Doc. Ing. Jiří Kunovský, CSc.
Algorithms and Programming	2,3	3/2	RNDr. Jitka Kreslíková CSc.
Programming Practice	3	2/0	RNDr. Jitka Kreslíková CSc.
Software Engineering	3	4/1	Doc. Ing. Jaroslav Zendulka, CSc.
Algorithms and Data Structures	3,4	3/3	Prof. Ing. Jan Honzík, CSc.
Logic Systems	4	4/1	Ing. Miloš Eysselt, CSc.
Operating Systems 1	4	3/2	Ing. Petr Sezemský
C and C++ Languages	4,5	3/2	Ing. Tomáš Vojnar
Theoretical Computer Science 1	5	4/1	Prof. RNDr. Milan Češka, CSc.
Digital and Impulse Circuits	5	3/2	Ing. Josef Schwarz, CSc.
Assembly Languages 2	5	2/2	Doc. Ing. František Zbořil, CSc.
Data Modelling and Database Design	5	4/1	Doc. Ing. Jaroslav Zendulka, CSc.
Computer Organization and Architecture	6	3/2	Doc. Ing. Vladimír Drábek, CSc.
Computer Graphics Fundamentals	6	4/1	Prof. Ing. Ivo Serba, CSc.
Programming Languages	6	4/1	Prof. Ing. Tomáš Hruška, CSc.
Computer-Based Systems Design	9	3/1	Doc. Ing. Jiří Kunovský, CSc.
Parallel and Distributed Computing	10	3/2	Prof. Ing. Václav Dvořák, DrSc.
Graphical and Multimedia Processors	10	3/2	Doc. Ing. Vladimír Drábek, CSc.
Programming in C	10	5/2	Ing. Pavel Pospíšil
MSc-Thesis project	10		Prof. Ing. Václav Dvořák, DrSc.
Computer Networks	PhD	3/0	Doc. Ing. Miroslav Švéda, CSc.

## **IV. RESEARCH**

Projects the department co-ordinates:

Project name	Agency	Responsible person
Research of Information and Control Systems	MŠMT	Prof. Ing. Jan M. Honzík, CSc.
Methodology and Tools for Digital Circuits	GAČR	Ing. Zdeněk Kotásek, CSc.
Testability Analysis		
Process Definition in the Workflow Management systems	FRVŠ	Prof. Ing. Tomáš Hruška, CSc.
Data Approach Models in the Object-oriented Databases	FRVŠ	Prof. Ing. Tomáš Hruška, CSc.
Computer Animation of Dynamic Processes	FRVŠ	Ing. Martin Dobšík
Laboratory for 3D Multimedia Communication	FRVŠ	Doc. Dr. Ing. Pavel Zemčík
Visualization and Simulation in Virtual Reality	FRVŠ	Doc. Ing. Zdeňka Rábová, CSc.
Temporal Properties of Models Described by Object-Oriented Petri Nets	FRVŠ	Ing. Vladimír Janoušek, Ph.D.

Projects in which the department participates:

Project name	Agency	Responsible person
SOCRATES (4 bilateral agreements - Univ. of Bristol UK, Univ. of Surrey UK, UTAD Portugal, LUT Finland)	EU	Contact person Doc. Dr. Ing. Pavel Zemčík
Research and Application of Heterogenous Models	GAČR	Prof. Ing. Petr Vavřín, DrSc.

## **V. COOPERATIONS**

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

- AFOI - Association of firms for security of information
- Alcor Moravia Devices Ltd., Zlin,
- Bank Academy, Prague
- Beta Control Ltd., Brno,
- Camea Ltd., Brno,
- Comimpex Comp., Brno
- Dicom Ltd., Uherske Hradiste,
- IBM Czech Republic, Prague,
- UNIS Ltd., Brno,
- VEMA - Computers and Design Ltd., Brno,
- Brno Town Council, Department of Territorial Planning, Department of the Town information System,
- MES Ltd., Prague,
- Microsoft Ltd., Prague,
- Monet+, Zlin
- Motorola Ltd., Czech Republic, European Semiconductor Group, Prague
- MP-SOFT Brno,
- Ramet Ltd., Uherske Hradiste,
- SPT Telecom Company, Prague,
- The Office for the State Information System, Prague,
- Biomatematical Laboratory of the Entomology Institute of the Academy of Science CR, Ceske Budejovice,
- Faculty of Computer Science, Masaryk University, Brno,
- Department of Computer Science, Faculty of Electrical Engineering and Computer Science, TU Ostrava,
- Department of Mathematics, Faculty of Pedagogy, University of Ostrava,
- Department of Operational and System Analysis, University of Agriculture, Brno,
- Department of Computer Integrated Manufacturing, Faculty of Applied Sciences, University of Pilsen,
- Department of Computers, Faculty of Electrical Engineering, CVUT Prague,
- Masaryk Oncology Institute Brno,

## V.2. International Cooperation

- Applied Dynamics International Ltd., Wellingborough , UK,
- Boeing North American, USA,
- DWL Electronische Systeme, GmbH, Germany,
- Fujitsu Microelectronics Europe, Dreieich-Buchslag, Germany,
- Neuroth Electronic Components-Engineering Wien, Austria,
- IMAG-LGI, Grenoble, France,
- Parsytec, GmbH, Chemnitz, Germany,
- Rapid Data Ltd., UK,
- Rolls-Royce Military Aero Engines Ltd., UK,
- RTC Athlone, Ireland,
- RTC (Regional Technical College) Sligo, Ireland,
- Centre for Vision, Speech, and Signal Processing (CVSSP), University of Surrey, Guildford, UK,
- Department of Computer Science, Merchant Venturers' Building, University of Bristol, UK,
- Department of Electrical and Electronic Engineering, University of Bristol, Merchant Venturers Building, University of Bristol, UK,
- Department of Information Technology, Lappeenranta University of Technology, Lappeenranta, Finland,
- Dep. de Engenharias, Universidade de Trans-os-Montes e Alto Douro, Vila Real, Portugal,
- Department of System Science and Industrial Engineering, State University of New York, New York, USA,
- Department of Informatics, Aristotle University of Thessaloniki, Soluň, Greece,
- Information Processing Group, Lappeenranta University of Technology, Lappeenranta, Finland,
- Institute of Computer Graphics, Vienna University of Technology, Karlsplatz, Vienna, Austria,
- Institute of Control and System Engineering, Technical University of Wroclaw, Wroclaw, Poland,
- Institute National Polytechnique de Grenoble, Laboratoire d'Automatique de Grenoble-Ensieg, France,
- Institute of System Science, Johannes Kepler University Linz, Linz, Austria,
- Department of Computer Graphics, Komensky University, Bratislava, Slovak Republic,
- KFKI - MSZKI, Budapest, Hungary,
- NCEA (National Council for Educational Awards), Dublin, Ireland,
- School of Computing and Mathematics, University of Huddersfield, Huddersfield, UK,
- Slovak Academy of Science, Bratislava, Slovak Republic,
- Technical university of Gdansk, Gdansk, Poland,
- The International Institute for General System Science, Southwest Texas State University, San Marcos, Texas, USA,
- Universidade Nova de Lisboa, Lisbon, Portugal,
- Universitat Autònoma de Barcelona, Barcelona, Spain,
- Université Paul Sabatier, Toulouse, France,
- University of Lingby, Denmark,
- University of Macau, Macau
- University of Michigan, USA
- University of Miskolc, Miskolc, Hungary,
- University of Vienna, Austria,
- University of Tasmania, Hobart, Australia,
- University of Oxford, UK,
- University of Wyoming, Laramie, USA,
- Department of Computer Science and Engineering, Technical University of Bratislava, Slovak Republic,
- Department of Computer Science and Engineering, Technical University of Kosice, Slovak Republic.

### V.2.1. Visitors to the Department

- Prof. George J. Klir, Dept. of System Science and Industrial Engineering, State University of New York, Binghamton, USA - 3 days,
- Dr. Yannis Manolopoulos, Department of Informatics, Aristotle University of Thessaloniki, Thessaloniki, Greece - 3 days,
- Prof. Heikki Kalviainen, Department of Information Technology, Lappeenranta University of Technology, Finland (head of Information Processing Laboratory) - 1 week
- Dr. Michael Frydrych, Department of Information Technology, Lappeenranta University of Technology, Finland (assistant at Information Processing Laboratory) - 1 week

- António Coelho M.Sc., Filipe Cunha M.Sc., Universidade Trás-os-Montes e Alto Douro, Vila Real, Portugalsko - 5 days

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

- Prof. RNDr. Milan Češka, CSc. - LAAS, Toulouse, France – 3 days
- Prof. Ing. Václav Dvořák, DrSc - Dept. of Computer Science, University of Tasmania, Hobart, Australia - 6 weeks
- Ing. Martin Fědor – Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal – 3 days
- Ing. Marek Křejský – Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal - 3 days
- Doc. Dr. Ing. Pavel Zemčík - University of Bristol, UK - 1 week
- Doc. Dr. Ing. Pavel Zemčík - Lappeenranta University of Technology, Finland - 4x 1 week
- Doc. Dr. Ing. Pavel Zemčík - University of Huddersfield, UK, 3 days
- Doc. Dr. Ing. Pavel Zemčík - University of Surrey, Guildford, UK, 2 days
- Doc. Dr. Ing. Pavel Zemčík - Universidade Trás-os-Montes e Alto Douro, Vila Real, Portugal - 1 week
- Doc. Dr. Ing. Pavel Zemčík - University of Joensuu, Finland - 1 day
- Ing. Jaromír Marušinec - Lappeenranta University of Technology, Finland - 3 weeks
- Ing. Jaromír Marušinec - Universidade Trás-os-Montes e Alto Douro, Vila Real, Portugal - 3 days
- Ing. Milan Urbášek - University of Huddersfield, UK - 4 months

### V.3. Membership in International Organizations and Societies

Person	Organization
Prof. RNDr. Milan Češka, CSc.	ACM, TC10 IFIP, WG 10.1, Research Board of Advisers 1999, The American Bibl.Institute, Inc, 1999 Gesellschaft fur Informatik , Czech and Slovak Simulation Society (as part of EUROSIM)
Doc. Ing. Vladimír Drábek, CSc. Ing. Martin Dobšík	Czech and Slovak Simulation Society (as part of EUROSIM) ACM, SIGGRAPH, Czech and Slovak Simulation Society (as part of EUROSIM)
Doc. Ing. Vladimír Drábek, CSc.	Czech and Slovak Simulation Society (as part of EUROSIM)
Prof. Ing. Václav Dvořák, Dr.Sc. Ing. Miloš Eysselt, CSc.	IEEE Computer Society Czech and Slovak Simulation Society (as part of EUROSIM), IGIP (Internationale Gesellschaft fuer Ingenieurpaedagogik)
Ing. Martin Fědor	ACM SIGGRAPH, Czech and Slovak Simulation Society (as part of EUROSIM)
Dr. Ing. Petr Hanáček	ACM, Czech and Slovak Simulation Society (as part of EUROSIM), Centre for E-commerce
Prof. Ing. Jan Honzík, CSc.	T.E.X.T. (Trans European Exchange and Transfer Consortium), IGIP (Internationale Gesellschaft fuer Ingenieurpaedagogik)
Prof. Ing. Tomáš Hruška, CSc.	ACM, IFIP, WG 10.1, Czech and Slovak Simulation Society (as part of EUROSIM)
Ing. Vladimír Janoušek, Ph.D Dr. Ing. Dušan Kolář Ing. Marek Křejský	Czech and Slovak Simulation Society (as part of EUROSIM) Czech and Slovak Simulation Society (as part of EUROSIM) ACM
Doc. Ing. Jiří Kunovský, CSc. Dr. Ing. Petr Peringer Doc. Ing. Zdeňka Rábová, CSc.	Czech and Slovak Simulation Society (as part of EUROSIM) Czech and Slovak Simulation Society (as part of EUROSIM) Czech and Slovak Simulation Society (as part of EUROSIM), AFCEA
Prof. Ing. Ivo Serba, CSc. Ing. Josef Schwarz, CSc. Ing. Tomáš Vojnar. Doc. Ing. Miroslav Švéda, CSc.	Czech and Slovak Simulation Society (as part of EUROSIM) Czech and Slovak Simulation Society (as part of EUROSIM) Czech and Slovak Simulation Society (as part of EUROSIM) IEEE Computer Society, TC Engineering of Computer-Based Systems, IFIP WG 10.1, Czech and Slovak Simulation Society (as part of EUROSIM)
Doc. Ing. František Zbořil, CSc.	Czech and Slovak Simulation Society (as part of EUROSIM)

Doc. Dr. Ing. Pavel Zemčík	ACM, IEEE, EUROGRAPHICS
Doc. Ing. Jaroslav Zendulka, CSc.	ACM, Czech and Slovak Simulation Society (as part of EUROSIM)

## **VI. PUBLICATIONS**

### **VI.1. Journals**

- Meduna, A.: Prefix Pushdown Automata, International Journal of Computer Mathematics, Gordon and Breach, London, 1999, pp. 215-228,
- Meduna, A.: Terminating Left-Hand Sides of Scattered Context Productions, Theoretical Computer Science, North-Holland, Amsterdam, 1999, (in press)
- Meduna, A.: Generative Power of Three-Nonterminal Scattered Context Grammars, Theoretical Computer Science, North-Holland, Amsterdam, (in press)
- Sekanina, L., Drábek, V.: Evolvable hardware - evoluce na čipu, In: Elektrovue, Vol. 1, No. 5/99, FEECS BTU Brno, Brno, 1999, <http://www.elektrovue.cz/>
- Švéda, M., Vrba, R.: Actuator-Sensor-Interface Interconnectivity, In: Control Engineering Practice, Vol. 7, No. 1, Elsevier Science, Kidlington, Oxford, UK, 1999, pp.. 95--100, ISSN 0967-0661

### **VI.2. Conferences**

- Arnošt V.: Software Musical Synthesizer, In: MOSIS '99 Proceedings, Vol. 2, MARQ, Rožnov pod Radhoštěm, Czech Republic, 1999, pp. 23-28, ISBN 80-85988-33-X
- Cejka, R., Dvorak, V.: "CSP-based Modeling of SM Architectures". Proceedings of conference Computer Engineering and Informatics CE&I'99, Kosice - Herlany, Slovakia, pp. 163-168, FEI TU Kosice Publ., 1999. ISBN 80-88922-05-4.
- Češka, M., Janoušek, V., Vojnar, T.: Towards Verifying Complex Distributed Systems Using Object-Oriented Petri Nets, In: Proceedings of the 7th International Conference on Computer Aided Systems Theory and Technology - EUROCAST'99, Vienna University of Technology, Vienna, Austria, 1999, pp.. 229--232
- Češka, M.: Cybernetics and Concepts of Formal Language Theory, Universidad de Las Palmas, Las Palmas de Gran Canaria, 1999, pp. 57-59, ISBN 84-8416-950-2
- Cvrček, D.: Access Control in Workflow Systems, In: MOSIS'99 Proceedings, MARQ Ostrava, Rožnov pod Radhoštěm, Czech Republic, 1999, pp. 93-100, ISBN 80-85988-31-3
- Drábek, V.: A Model of PicoJava CPU Core, In: MOSIS'99, Rožnov p. Radhoštěm, Czech Republic, 1999, Vol. 2, pp.27-29, ISBN 80-85988-33-X
- Drábek, V.: The Economic Analysis of Design for Testability, In: I&IT'99, Sci. Conf. Univerzita Mateja Bella, Banská Bystrica, Slovakia, 1999, pp.5.
- Drábek, V.: The Unified Approach to Processor Testing, In: CE&I, Sci. Conf., Technical University Kosice, Kosice-Herlany, Slovakia, 1999, pp.192-195, ISBN 80-88922-05-4
- Drábek, V., Vojkůvka, M.: Modelling of Elliptic Curve Cryptography, In: Proceedings of XXIst International Colloquium "Advanced Simulation of Systems" 1999, MARQ Ostrava, Krnov, Czech Republic, 1999, pp.89-94, ISBN 80-85988-41-0
- Dulík, T.: An FPGA implementation of Goertzel algorithm, In: MOSIS'99 proceedings, Vol 2, MARQ Ostrava, Rožnov pod Radhoštěm, Czech Republic, 1999, pp.35-42, ISBN 80-85988-33-X
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### **VI.3. Textbooks, Lecture Notes**

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### **VI.4. Books**

- Dvořák, V. - Drábek, V.: "Architektura procesorů". Nakladatelství VUT v Brně - VUTIUM, Brno, 1999, 300 pages(in Czech). ISBN 80-214-1458-8.

### **VI.4. PhD theses**

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- Příkryl, P.: Tools for parallel programming. FE ECS BTU Brno, Brno, Czech Republic, 1999, 125 pages (in Czech)
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## **VII. OTHER ACTIVITIES**

- Participation in organization of the 33 rd International Conference on Modelling and Simulation of Systems (MOSIS'99)
- Organization of the 2 nd Information Systems Modelling Workshop (ISM'99) as a part of MOSIS'99
- Organization of "E-commerce in health service, Internet and data security and legislative" section as a part of the 7th International Fair of Medical Technology and Pharmacy MEFA'99
- Organization of CS&E-branch Students Conference TCS'99
- Membership in program and scientific committees of international conferences (ADBIS'99 Maribor Slovenia, ECBS'2000 Edinburgh UK, ECI'99 Herľany Slovak Republic, HEINFO'99 Smolenice Slovak Republic, MOSIS'99 Rožnov pod Radhoštěm ČR, MOSMIC'99 Sůľov Slovak Republic, ISAS'99 Orlando USA, ISM'99 Rožnov pod Radhoštěm Czech Republic, ASIS'99 Krnov ČR, I&IT'99 Banská Bystrica Slovak Republic, OBUPM'2000 Las Vegas USA, DDECS'2000 Smolenice Slovak Republic, RUFIS'99 Brno Czech Republic)
- Authorization to organize 11 th Eurographics Workshop on Rendering 2000
- Organization of one-day Microchip a XILINX workshops
- Creation of faculty information