DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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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 Fĕdor, Otto Fučík, Petr Hanáček, Vladimír Janoušek, Dušan Kolář, Jitka Kreslíková, Petr Peringer, Josef Schwarz, Tomáš Vojnar

Technical Staff:

Jiří Matúš

Postgraduate Students:

Vladimír Arnošt, Daniel Čapek, Rudolf Čejka, Dao Minh, Tomáš Dulík, Martin Hrubý, Radek Kočí, Petr Kotásek, Marek Křejpský, Bohuslav Křena, Vladislav Kubíček, Vladimír Marek, Petr Matoušek, Aleš Mičín, Jiří Očenášek, Tomáš Ondráček, Petr Peňás, Jaroslav Ráb, Richard Růžička, Lukáš Sekanina, Ivan Schwarz, Azedien Sllame, Petr Smolík, Jiří Staroba, Josef Strnadel, Lukáš Szemla, Pavel Tišnovský, Michal Tomšů, Milan Urbášek, Michal Vojkůvka, Petr Vurm, 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. The computer net is based on 1 Gb Ethernet and switching on the third layer level which provides a sufficient capacity to cover sophisticated distributed computations. The computer net is connected to 155 Mb/s ATM Metropolitan Net and through CESNET to Internet (2,5 GB/s connection to Prague and 112 Mb/s connection to abroad).

II.1   Teaching and Research Laboratories

- The laboratory with five SUN Ultra workstations
- The laboratory with personal computers and Windows NT operating system (30 computers)
- Multimedia laboratory equipped with 3D accelerators and sound cards (30 workplaces)
- The microprocessor laboratory equipped with personal computers, microcomputers and development systems for processors by Motorola, Fujitsu, and National Semiconductors.
- The Peripheral Devices course 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 student and staff server with 2 Intel Pentium III/800 processors, 256 MB RAM, 140 GB HDD capacity and one Gb/s network adapter.
- SGI Octane, Indy, Indigo, Sun Ultra 5 and SPARCstation 5 workstations
- Computer net based on three one Gigabit Extreme Networks Summit 48 switches on the level of the third layer.
- 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)
- 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 server, PHP

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
Personal Computers, Technical Maintenance	Y1 L2, summer	2/3	Kotásek
C and C++ Languages	Y1 L2, winter	3/2	Peringer
Data Modelling and Database Design	Y1 L2, winter	3/2	Zendulka
Principles of Computer Graphics	Y1 L2, winter	3/2	Zemčík
Theoretical Computer Science 1	Y1 L2, winter	3/2	Češka
BSc Project	Y2 L2, winter	0/6	Rábová
Computability and Complexity	Y2 L2, winter	3/2	Janoušek
Computer Networks	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	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
Graphical User Interfaces	Y2 L2, winter	2/2	Lampa
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
Diagnosis and Safe 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	Y3 L2, winter	3/2	Švéda
Fault-Tolerant 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 Visualization	summer	42 hrs.	Zemčík
Fault-Tolerant Systems	summer	42 hrs.	Drábek
Parallel and Distributed Computing	summer	42 hrs.	Dvořák
Real Time Systems	summer	42 hrs.	Švéda
Selected Topics of OO Modelling	summer	42 hrs.	Hruška
Theory and Application of Petri Nets	summer	48 hrs.	Češka
Advanced Topics of Theoretical Comp. Science	winter	42 hrs.	Meduna
Computer Networks	winter	42 hrs.	Švéda
Knowledge Discovery in Databases	winter	42 hrs.	Zendulka
Modelling and Simulation	winter	52 hrs.	Rábová
Principles of Testable Design Synthesis	winter	42 hrs.	Kotásek
Theory of Programming Languages	winter	42 hrs.	Hruška

III.4 Study in English Language (Foreign Students)

Algorithms and Programming	Y1 L1, summer	3/2	Kreslíková
Programming and Computer Usage 1	Y1 L1, winter	2/2	Kunovský
C and C++ Languages	Y2 L1, summer, winter	3/2	Vojnar
Operating Systems 1	Y2 L1, summer	3/2	Sezemský
Software Engineering	Y2 L1, summer	4/1	Zendulka
Algorithms and Data Structures	Y2 L1, winter	3/3	Honzík
Logic Systems	Y2 L1, winter	3/2	Eysselt
Computer Organization and Architecture	Y1 L2, summer	4/1	Drábek
Fault-Tolerant Systems	Y1 L2, summer	4/1	Drábek
Internet Applications	Y1 L2, summer	4/1	Matoušek
Oracle Development Tools	Y1 L2, summer	4/1	Ráb
Principles of Compiler Design	Y1 L2, summer	4/1	Kolář
Programming Languages	Y1 L2, summer	4/1	Hruška
Assembly Languages	Y1 L2, winter	4/1	Zbořil sr.
Data Modelling and Database Design	Y1 L2, winter	4/1	Zendulka
Digital and Impulse Circuits	Y1 L2, winter	4/1	Schwarz
Principles of Computer Graphics	Y1 L2, winter	4/1	Fědor
Theoretical Computer Science 1	Y1 L2, winter	4/1	Češka
Artificial Intelligence	Y2 L2, summer	4/1	Zbořil sr.
BSc Project	Y2 L2, summer	0/6	Lampa
Computability and Complexity	Y2 L2, summer	4/1	Urbášek
Data Communication	Y2 L2, summer	4/1	Švéda
Operating Systems 2	Y2 L2, summer	4/1	Lampa
Advanced Numerical Methods	Y2 L2, winter	2/1	Kunovský
Computability and Complexity	Y2 L2, winter	4/1	Hrubý
Graphical and Multimedia Processors	Y2 L2, winter	4/1	Drábek
Human-Machine Interface	Y2 L2, winter	4/1	Zemčík
Modelling and Simulation of Systems	Y2 L2, winter	4/1	Zbořil jr.

IV RESEARCH PROJECTS

Methodology and tools for testability analysis if digital circuits
  GAČR 102/98/1463, Assoc. Prof. Dr. Zdeněk Kotásek

Modelling, Verifying, and Prototyping Distributed Applications Using Petri Nets
  GAČR 102/00/1017, Prof. Dr. Milan Češka

ECBS Experimental Laboratory (Educational Project)
  FRVŠ 1565, Prof. Dr. Jan M. Honzík

Open computer laboratory FEI VUT (Educational Project)
  FRVŠ 1516, Petr Lampa, MSc.

A special complex for multimedia data processing (Educational Project)
  FRVŠ 1519, Assoc. Prof. Dr. Vladimír Drábek

Year project as a first independent student work (Educational Project)
  FRVŠ 1621, Assoc. Prof. Dr. Zdena Rábová

Computer Animation of Dynamic Processes (Educational Project)
  FRVŠ 1083, Martin Dobšík, MSc.

Virtual reality system implementation (Educational Project)
  FRVŠ 1527, Jaromír Marušinec, MSc.

Knowledge discovery in databases and knowledge representation (Educational Project)
  FRVŠ 1620, Petr Kotásek, MSc.

Participation in research projects of other departments
  Research and Applications of Heterogenous Models GAČR 02/98/0552 (grant holder: Prof. Dr. Petr Vavřín ÚAMT FEI VUT) – Prof. Dr. Milan Češka, Dr. Petr Hanáček , Prof. Dr. Tomáš Hruška,
  Dr. Vladimír Janoušek , Dr. Petr Peringer , Assoc. Prof. Dr. Zdena Rábová, Assoc. Prof. Dr. František Zbořil.
  Pressure Analyzer TLAKAN GAČR 102/00/0938 (grant holder: Prof. Ing. Radimír Vrba, CSc. ÚMEL FEI VUT) – Assoc. Prof. Dr. Miroslav Švéda.

Participation in the Faculty Research Intentions
  Information and Control System Resesarch CEZ: J22/98:262200012
  (grant holder: Prof. Dr. Jan M. Honzík, ÚIVT) - 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. Miloš Eysselt, Dr. Otto Fučík,
  Dr.Petr Hanáček, Dr. Vladimír Janoušek, Dr. Dušan Kolář, Dr. Jitka Kreslíková, Dr. Petr Peringer,
  Dr. Josef Schwarz, Martin Fědor, MSc., Tomáš Vojnar, MSc.

V COOPERATIONS

V.1 Cooperations in the Czech Republic
  - Camea, s.r.o., Brno
  - Jihomoravská plynárenská a.s., Brno
  - UNIS, s.r.o., Brno
  - Departemnt of Informatics, FEEI, VŠB - TU Ostrava
  - Department of Computers FEE, ČVUT Prague

V.2 International Cooperation
  - Siemens AG Österreich, Wien, Austria
  - Neuroth Electroinic Components-Engineering, Wien, Austria
  - DWL Electronische Systeme, GmbH, Germany
  - Applied Dynamics International Ltd., Wellingborough, Great Britain
  - Rapid Data Ltd., Great Britain
  - Rolls-Royce Military Areo Engines Ltd., Great Britain
  - Boeing North American, USA
  - Lord Corporation Inc., Erie, Pennsylvania, USA
  - University of Lingby, Denmark
  - Lappeenranta University of Technology, Lappeenranta, Department of Information Technology, Finland
  - University of Joensuu, Joensuu, Department of Computer Science, Finland
  - Univesidade 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 Surrey, Guildford, Center for Vision, Speech, and Signal Processing, Great Britain
  - University of Huddersfield, Huddersfield, Department of Computer Science, Great Britain
  - 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. Bruno Ulrick, Great Britain, ADI, 3 weeks
- Dr. Alan Chalmers, University of Bristol, Bristol, Great Britain, Department of Computer Science, 5 days
- Dr. Michael Frydrych, Lappeenranta University of Technology, Lappeenranta, Finland, Department of Information Technology, 5 days

V.2.2 Visits of Staff Members to Foreign Institutions
- Martin Dobšík, MSc., Lappeenranta University of Technology, Lappeenranta, Finland, 2 weeks
- Martin Fědor, Lappeenranta University of Technology, Lappeenranta, Finland, 2 weeks
- Dr. Otto Fučík, PhD., PennState University, Pennsylvania, USA, 4 months
- Marek Křejpský, MSc., University of Bristol, Bristol, Great Britain, 1 week
- Jaromír Marušinec, MSc., University of Bristol, Bristol, Great Britain, 1 week
- Jaromír Marušinec, MSc., Lappeenranta University of Technology, Lappeenranta, Finland, 2 weeks
- Pavel Tišnovský, MSc., Lappeenranta University of Technology, Lappeenranta, Finland, 2 weeks
- Milan Urbášek, MSc., Institute for Communication and Software Technology TU Berlin, 3 months
- Assoc. Prof. Dr. Pavel Zemčík, PennState University, Pennsylvania, USA, 4 months
- Assoc. Prof. Dr. Pavel Zemčík, University of Bristol, Bristol, Great Britain, 1 week
- Assoc. Prof. Dr. Pavel Zemčík, University of Surey, Guildford, Great Britain, 2 days
- Assoc. Prof. Dr. Pavel Zemčík, Lappeenranta University of Technology, Finland, 4 weeks total (2 stays)

V.3 Contracts

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 fur Informatik (Germany)
- Prof. Dr. Milan Češka: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Vladimír Drábek: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Martin Dobšík, MSc.: ACM (USA)
- Prof. Dr.Václav Dvořák: IEEE Computer Society (USA)
- Dr.. Miloš Eysselt: Czech and Slovak Simulation Society (v rámci 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 (v rámci EUROSIM) (Czech Republic)
- Dr. Petr Hanáček: Centrum pro elektronický obchod (Czech Republic)
- Prof. Dr. Jan Honzík: T.E.X.T. (Trans European Exchange and Transfer Consortium) (Great Britain)
- Prof. Dr. Jan Honzík: IGIP (Internationale Gesellschaft fuer Ingenieurpaedagogik) (Austria)
- Prof. Dr. Tomáš Hruška: ACM (USA)
- Prof. Dr. Tomáš Hruška: IFIP, WG 10.1 (Austria)
- Prof. Dr. Tomáš Hruška: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Dr. Vladimír Janoušek: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Dr. Dušan Kolář: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Marek Křejpský, MSc.: ACM (USA)

- Assoc. Prof. Dr. Jiří Kunovský: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Jaromír Marušinec, MSc.: ACM (USA)
- Dr. Petr Peringer: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Zdena Rábová: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Zdena Rábová: AFCEA (USA)
- Dr. Josef Schwarz: Czech and Slovak Simulation Society (v rámci EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. Miroslav Švéda: 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 (v rámci EUROSIM) (Czech Republic)
- Assoc. Prof. Dr. František Zbořil: Czech and Slovak Simulation Society (v rámci 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 (v rámci EUROSIM) (Czech Republic)

VI PUBLICATIONS

VI.1 Journals and Parts of Books

- DVOŘÁK, V.: Formal Specifications of Computer-Based Systems, *In* Journal of Universal Computer Science, Vol. 6, No. 11, November 2000, Springer Verlag, Berlin, Heidelberg, New York, 2000, pp. 1-3, ISBN 3-540-62047-8.
- DVOŘÁK, V. - ČEJKA, R.: Prototyping cluster-based distributed applications, *In* Distributed and Parallel Systems - From Concepts to Architectures, Kluwer Academic Publ., Balatonfured, Lake Balaton, Hungary, 2000, pp. 229-232, ISBN ISBN 0-7923-7892-X.
- FĚDOR, M.: A multimedia demonstration program "UPUP", *In* Windows 100%, Vol. 1, No. 11/2000, Shinyusha, Japan, 2000, pp. 59.
- GREBENÍČEK, F.: Origami / Art of Paperfolding (in Czech: Origami / Umění skládání papíru), *In* Umění a řemesla, Vol. 42, No. 3, Sdružení Umění a řemesla, Praha, 2000, pp. 60-63, ISSN 0139-5815/2.
- HANÁČEK, P.: Medical documentation digital signature (in Czech Digitální podpis zdravotnické dokumentace), *In* Lékař a technika, Vol. 31, No. 5, ČLSJEP, Praha, 2000, pp. 130-132, ISSN 0301-5491.
- MEDUNA, A.: Terminating Left-Hand Sides of Scattered Context Grammars, *In* Theoretical Computer Science, Vol. 2000, No. 237, Elsevier, Amsterdam, 2000, pp. 423-427, ISSN 0304-3975.
- MEDUNA, A.: Generative Power of Three-Nonterminal Scattered Context Grammars, *In* Theoretical Computer Science, Vol. 2000, No. 239, Elsevier, Amsterdam, 2000, pp. 625-631, ISSN 0304-3975.
- VEČEŘA, I. - VRBA, R. - ŠVÉDA, M.: Sensors with Self-Testing (in Czech: Senzory s vlastním testováním), *In* Elektrorevue, Vol. 2000, No. 12, MŠMT ČR, FEI VUT v Brně, 2000, pp. 1-7, ISSN 1213-1539.
- **ZEMČÍK, P. et al.: Compression of Multispectral Remote Sensing Images Using Clustering and Spectral Reduction, *In* IEEE Transactions on Geoscience and Remote Sensing, Vol. 38, No. 2, IEEE, Piscataway, NJ, USA, 2000, pp. 1073-1082, ISSN 0196-2892.**
- ZEMČÍK, P. et al.: Industrial Applications of Computer Vision (in Czech: Průmyslové aplikace počítačového vidění), *In* Automa, No. 5, Praha, 2000, pp. 28-30, ISSN 1210-9592.
- HANÁČEK, P. - STAUDEK, J.: Information systems security (in Czech: Bezpečnost informačních systémů), ÚSIS, Praha, 2000, 127 pages, ISBN 80-238-5400-3.
- HRUŠKA, T., HASHIMOTO, M., (Eds.): Knowledge-Based Software Engineering, No. 62, IOS Press, Ohmsha Publishing, Amsterodam, 2000, 330 pages, ISBN 1-58603-060-4.

- **MEDUNA, A.: Automata and Languages: Theory and Applications, Springer, London, 2000, 892 pages, ISBN 1-85233-074-0.**
- RATTRAY, C. - ŠVÉDA, M. (Eds.): Proceedings of the IEEE TC-ECBS + TF RE and IFIP WG10.1 Joint Workshop on Formal Specifications of Computer-Based Systems, University of Stirling, Scotland, Napier University, Edinburgh, Scotland, 2000, 85 pages, ISBN 1-85-769121-0.
- ZENDULKA, J. (Ed.): Proceedings of the Workshop Information Systems Modelling, MARQ Ostrava, Rožnov pod Radhoštěm, 2000, 216 pages, ISBN 80-85988-45-3.

VI.2 Conferences

- ARNOŠT, V.: Discrete Simulation of Sound Wave Propagation, In MOSIS 2000 Proceedings, Vol. I. (2000), MARQ, Rožnov pod Radhoštěm, Czech Republic, 2000, pp. 241-246, ISBN 80-85988-44-5.
- ARNOŠT, V.: Discrete Simulation of Sound Wave Propagation (in Czech: Počítačová simulace šíření zvuku), *In* Proceedings of the 1st Conference of Czech Student AES Section on Audio Technologies and Processing, Vol. 1. (2000), FEI VUT Brno, Brno, Czech Republic, 2000, pp. 76-79, ISBN 80-214-1602-5.
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VI.4 PhD Thesis
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- KOTÁSEK, Z.: The Application of Controlability/Observability Principles in Digital Circuit Design (in Czech: Uplatnění principů řiditelnosti/pozorovatelnosti při návrhu číslicových obvodů), 2000, habilitation thesis VUT, Brno, 80 pages.
- MEDUNA, A.: Context-Free Multirewriting with a Reduced Number of Nonterminals, 2000, habilitation thesis VUT, Brno, 164 pages.

VII OTHER ACTIVITIES

- **Building a laboratory of Fujitsu microcomputers, in collaboration with the company UNIS.**
- **Building a laboratory ECBS.**
- **Building a laboratory for digital video editing.**
- **Participation in organization of the 34th International Conference on Modelling and Simulation of Systems (MOSIS 2000).** The conference dealt with simulation theory, tools, methods and applications.
- **Organization of the 34th Information Systems Modelling (ISM 2000) international workshop.** The workshop organized in conjunction with MOSIS 2000 was oriented to information system theory, modelling techniques and tools, development methodologies and problems related to databases.
- **Organization of the 3rd Joint Conference on Knowledge-Based Software Engineering (JCKBSE 2000).** The international conference arranged in co-operation with the Japanese organization SIG-KBSE was oriented to topics related to using knowledge-based approaches in software engineering.
- **Organization of the IEEE TC-ECBS and IFIP WG10.1 Joint Workshop on Formal Specifications of Computer-Based Systems (FSCBS 2000)**, Napier University, Edinburgh, Scotland. An international work workshop aimed at formal specifications and their applications in design and implementation of computer based systems.
- **Participation in organization of the faculty student conference TCS'00.**

- **Membership in program committees of international conferences and workshops** (ECI 2000 Herľany Slovakia, MOSIS 2000 Rožnov pod Radhoštěm Czech Republic, ASIS 2000 Hostýn Czech Republic, ECBS 2000 Edinburg Scotland, ISM 2000 Rožnov pod Radhoštěm Czech republic, JCKBSE 2000 Brno Czech Republic, SCI Orlando Florida USA).
- **Series of lectures in Computer Graphics at Technical University of Ostrava, Czech Republic**
- **Booklets describing study programmes at the Faculty of Electrical Engineering and Computer Science of BTU Brno**