DEPARTMENT OF CYBERNETICS AND ARTIFICIAL INTELLIGENCE

http://www.tuke.sk/kkui/
Tel./Fax: ++421 55 625 3574

Head of Department
prof. Ing. Ján Sarnovský, CSc.
E-mail: Jan.Sarnovsky@tuke.sk
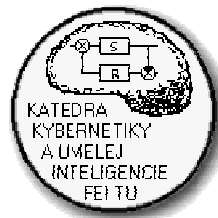
1   DEPARTMENT'S PROFILE

The Department (DCAI) is responsible for education in the following bachelor study programs: Cybernetics, Intelligent Systems; in the following master study programs: Cybernetics, Artificial Intelligence, Automation; and following PhD-study programs: Cybernetics, Artificial Intelligence, and Automation. In cooperation with Faculty of Economics also for bachelor and master study programs Business Informatics.

The main research topics at the Department are intelligent methods and algorithms for control and modeling of large-scale systems; risk-sensitive diagnosis of uncertain systems; computational intelligence techniques for modeling of intelligent systems and miscellaneous applications; intelligent decision support systems; pattern recognition; knowledge discovery; knowledge technologies for information retrieval and knowledge management; and computational and cognitive neuroscience.

The predecessor of the Department was founded in 1964. Department of Cybernetics and Artificial Intelligence was adapted in 1989. Currently it has 23 staff members, 24 internal and 13 external Ph.D. students. There are 3 sections within the department: Cybernetics, Artificial Intelligence, and Automation. Within the Department there are active two research Centers: Centre for Cybernetics (http://cybernetics.fei.tuke.sk/cybervirtlab/) and Centre for Intelligent Technologies (www.ai-cit.sk).

The Department is involved in a number of research and educational projects. The following types of projects were under way in 2008: 6 European IST projects (2 integrated projects, 2 STREPs, 1 Network of Excellence and 1 Specific Support Action), 1 Socrates thematic network, 1 US National Institutes of Health research project, 7 grants awarded by Science Grant Agency, 1 grant awarded by the Slovak Research and Development Agency Project, and 1 grant awarded by Cultural and Educational Grant Agency.

2 STAFF

Professors:	prof. Ing. Dušan Krokavec, CSc.
	prof. Ing. Ladislav Madarász, CSc.
	prof. RNDr. Eva Ocelíková, CSc.
	prof. Ing. Tomáš Sabol, CSc.
	prof. Ing. Ján Sarnovský, CSc.
	prof. Ing. Peter Sinčák, CSc.

Associate Professors:	doc. Ing. Július Csontó, CSc.
	doc. Ing. Anna Filasová, CSc.
	doc. Ing. Anna Jadlovská, PhD.
	doc. Ing. Ján Jadlovský, CSc.
	doc. Ing. Marián Mach, CSc.
	doc. Ing. Kristína Machová, CSc.
	doc. Ing. Ján Paralič, PhD.
	doc. Ing. Iveta Zolotová, CSc.

Assistant Professors:	Dr. Ing. Vratislav Hladký
	Ing. Rudolf Jakša, PhD.
	Ing. Norbert Kopčo, PhD.
	Ing. Stanislav Laciňák, PhD.
	Ing. Ján Liguš, PhD.
	Dr. Ing. Ján Vaščák

Researchers:	Ing. Rudolf Andoga, PhD.
	Ing. Marián Bučko, CSc.
	Ing. Marek Bundzel, PhD.
	Ing. Marek Duľa
	Ing. Jana Ligušová, PhD.
	Ing. Gabriel Lukáč
	Ing. Martin Sarnovský

| **Technical Staff:** | Imrich Balogh | Mária Feješová |
| | Tatiana Baňasová | |

Ph.D. Students:	Ing. Marián Bakoš	Ing. František Babič
	Ing. Oľga Duľová	Ing. Zoltán Ďurčík
	Ing. Juraj Eperješi	Ing. Zlatko Fedor
	Ing. Ladislav Fözö	Ing. Ján Galdun
	Ing. Michal Hladký	Ing. Daniel Hládek
	Ing. Juraj Chovaňák	Ing. Pavol Jasem
	Ing. Ľubomír Jasenovec	Ing. Vladimír Jeleň
	Ing. Nikola Kabakov	Ing. Peter Karch
	Ing. Ján Kažimír	Ing. Peter Kica
	Ing. Pavol Kocsis	Ing. Miron Kuzma
	Ing. Marek Lapko	Ing. Richard Lonščák
	Ing. Jana Modrovičová	Ing. Pavol Maliňák
	Ing .Ľuboš Popovič	Ing. Tomáš Reiff
	Ing. Peter Smatana	Ing. Ladislav Takáč
	Ing. Beáta Tomoriová	Ing. Gabriel Tutoky
	Ing. Matúš Užák	Ing. Jozef Vrana
	Ing. Jana Výrostková	Ing. Jozef Wagner
	Ing. Younes Alfitorey Mousa	

3   EQUIPMENT

3.1. Teaching and Research Laboratories

- Centre for Intelligent Technologies: Laboratory of Autonomous Systems (LAS-CIT), Laboratory of Humanoid Robots (LHR-CIT) (www.ai-cit.sk)
- Centre of Cybernetics (L-513) (http://cybernetics.fei.tuke.sk/cybervirtlab/)
- Laboratory of Intelligent Information and Control Systems (L-535)
- Laboratory of Distributed Control Systems - ROCKWELL AUTOMATION LABORATORY (L-536)
- Laboratory of Intelligent Control Networks (L-509)
- Laboratory of Speech and Pattern Recognition (V-147)
- Perception and Cognition Laboratory (V-31) http://pcl.tuke.sk
- Laboratory of Knowledge Technologies (V-101a)
- Laboratory of One-Chip-Computers (V-101b)
- Laboratory of intelligent control systems of aircraft engines (in cooperation with Faculty of Aeronautics)

3.2. Special Measuring Instruments and Computers

About 80 PCs and 20 servers (e.g. Cybernetics, MatlabWebServer), programmable logic automates of various types (2 x ControLogix with redundant power supply, 1 x Micrologix, 5 x PLC-5/20E, 2 x SLC 5/04, 2 x SLC-5/03, 2 x SLC5/01, TSX-47/40, TSX-17, SIMATIC S5-90U, SIMATIC S5-95U), far connectors, industrial visualization terminals and intelligent measurement elements, block of far I/O based on modules PLC, 2 x industrial terminal Panel-View-550, 1 x industrial PanelView Plus 600, 3 x analogue computers MEDA-50, three-phase drive Rockwell-Automation, models: for measurement and regulation of hot water supply, ball&plate, helicopter, magnetic levitation, intelligent house, traverse, portal crane, cableway, ball in the tube, 3 x KEPHER mobile robots, magnet, asynchronous drive, PowerMonitor equipments, resources and programs for image processing and recognition resources for infrared images recognition: 2 x PC-LabCard 812, 8 x single-chip-computer configurations based on I-80552, 10 x set TEMS-51 LAB

based on I-8031, three application on-chip-computer configurations 196 LAB based on I-80196, 3 x 3-channel oscilloscope, 3 x generator of signals, 3 x variable voltage supply, Lego mind-storm system, 4 x kit based on ADSP - 2100 signal processor; 4 x kits based on ADSP - 2181 signal processor. Oracle Server 10g.

Equipment for audio-visual perceptual experiments and virtual reality, including sound-attenuation experimental room (Tepro s.r.o) with RME Fireface 400 and other sound processors, Crown A-75 amplifiers, Bose Acoustimass speaker arrays, Etymotic Research and Sennheiser headphones, PCB Piezotronics and Knowles Electronsics microphones, Polhemus Fastrak 6-degree-of-freedom position tracker, and National Instruments digital spectrum analyzer.

NI SCXI 1000 measurement system, NI 9263 4-channel 10V, 16-bit analog output module; NI 9423 8 channel 24, sinking digital input module, CDAQ 9178, 8-slot USB 2.0 chassis for compactDAQ.

4   TEACHING

4.1. Undergraduate Study (Bc.) – 1. level

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Introduction to Business Informatics	1st	1/1	Paralič, J.
Computers and Algorithms	2nd	2/2	Jadlovská, Jadlovský
Office Information Systems	2nd	1/2	Zolotová
Foundations of Automatic Control	3rd	3/2	Madarász
Simulation Systems	3rd	2/2	Jadlovská
Control and Visualization Systems	4th	2/2	Zolotová
Identification and Modeling	5th	2/3	Filasová
Computer (Based) Control	5th	2/2	Krokavec, D.
Foundations of Theory of Automation	5th	2/2	Filasová
Artificial Intelligence	5th	2/2	Sinčák, et al.
Simulation Programming Tools Seminar	5th	2/2	Jadlovská
Database Management System Applications	5th	3/2	Ocelíková
Application Programming	5th	2/1	Jakša
Cybernetics and Management	5th	2/2	Sarnovský
Single-chip Microcomputers in Control	6th	2/3	Jadlovský
Knowledge-Based Systems	6th	3/2	Machová
Elements of Control Systems	6th	2/2	Hladký
Introduction to Non-linear Systems	6th	2/2	Jadlovská
Protocols and Interfaces	6th	2/2	Jadlovský
Scheduling and Logistics	6th	2/2	Paralič, J.
Introduction to Neurosciences	6th	2/2	Kopčo
Computational Intelligence	6th	2/2	Sinčák

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Control of Technological Processes	6th	2/2	Liguš, J.
Intelligent Control Networks	6th	2/2	Liguš, J.

4.2. Graduate Study (Ing.) – 2. level

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Computer Tools for Technological Systems Control	1st	2/3	Jadlovský
Theoretical Foundations of Artificial Intelligence	1st	2/3	Sinčák
Discrete-time Systems	1st	3/2	Krokavec, D.
Database Management System Applications	1st	3/2	Ocelíková
Machine Learning	1st	2/2	Machová
Control System Design Seminar	1st	0/2	
Fuzzy Systems in Control	1st	2/2	Vaščák
Selected topics of Artificial Intelligence	1st	2/2	Sabol
Computer Vision	1st	2/2	Zolotová, Tomori
Information Systems for Business Processes	1st	2/2	Zolotová
XML Technology Seminar	2nd	0/2	Mach
Knowledge Management	2nd	2/2	Paralič, J.
Optimal and Adaptive Control Theory	2nd	3/2	Sarnovský
Multicriterial Decision Making	2nd	3/2	Ocelíková
Evolutionary Algorithms	2nd	3/2	Mach
Intelligent Sensor Systems	2nd	3/2	Krokavec, D.
Control and Visualization of Processes	2nd	2/2	Zolotová
Control and Artificial Intelligence	2nd	2/2	Jadlovská
Logic Programming	2nd	1/1	Paralič, J.
Knowledge Discovery	2nd	2/2	Paralič, J.
Online Identification	2nd	2/2	Krokavec, D., Filasová
System Analysis and Synthesis	2nd	2/2	Madarász
Stochastic Systems	2nd	2/2	Krokavec, D.
Robust Control	2nd	2/2	Filasová
Information Transmission	2nd	2/2	Krokavec, D.
Speech Recognition	2nd	2/2	Krokavec, D.
Computational and Cognitive Neuroscience	2nd	2/2	Kopčo, N.
Biocybernetics	3rd	3/1	Csontó
Applications of the Semantic	3rd	1/3	Machová

Technologies			
Subject	**Semester**	**Lectures/exercises** (hours per week)	**Name of lecturer**
Complex Systems Control	3rd	2/2	Hladký
Complexity and Decision Making	3rd	2/2	Madarász
Distributed Control Systems	3rd	2/3	Jadlovský
Dynamic Systems Diagnostics	3rd	3/2	Krokavec, D.
Voice Mastered Systems	3rd	2/2	Krokavec, D.
Integrated manufacturing systems	3rd	2/2	Madarász
Neuro-fuzzy Systems	3rd	2/2	Vaščák
Project Management	3rd	2/2	Sabol
Electronic Commerce	4th	3/2	Sabol, Kováč

4.3. Undergraduate and Graduate Study for Foreign Students
(In English Language)

Subject	**Semester**	**Lectures/exercises** (hours per week)	**Name of lecturer**
Simulation Systems	3rd (1st level)	2/2	Jadlovská
Application Programming	5th (1st level)	2/2	Jakša
Intelligent Control Networks	1st (2nd level)	2/2	Liguš
Knowledge Management	1st (2nd level)	2/2	Paralič, J.

5   RESEARCH PROJECTS

- *Knowledge Practices Laboratory (KP-Lab)* is an integrated project funded by the European Commission within the IST Program (6th Framework Program) IST-2000-29207, coordinator: University of Helsinki. duration: 2006-2011, Team members from DCAI: Ján Paralič (team leader), František Babič, Peter Smatana, Peter Bednár, Martin Sarnovský. Activity: KP-Lab is an ambitious project that focuses on developing a learning system aimed at facilitating innovative practices of sharing, creating and working with knowledge in education and workplaces. KP-Lab presents a unifying view of human cognition. It is based on the assumption that learning is not just individual knowledge acquisition or social interaction, but shared efforts of transforming ideas and social practices. The objective of the KP-Lab project is to develop theories, tools, and practical models to elicit deliberate advancement and the creation of knowledge, as well as the corresponding transformation of knowledge practices in education and workplaces. The essential way of developing the collaborative technologies is through a co-evolutionary process involving researchers, technological developers and users. Web page: http://www.kp-lab.org

- *HYDRA (IST-2005-034891), Networked embedded system middleware for heterogeneous physical devices in a distributed architecture*, is a research project funded by the European Commission within the IST Program (6th Framework Program, IP). Team members from DCAI (in cooperation with the Faculty of Economics): Tomáš Sabol, Marián Mach, Peter Butka, Martin Sarnovský. Duration: 2006-2010. Activity: The aim of the project is to research,

develop and validate middleware for networked embedded systems that allows developing cost-effective, high-performance ambient intelligence applications for heterogeneous physical devices, and a software development kit enabling developers to develop innovative applications based on the middleware. Web page: http://www.hydra.eu.com/

- *Access-eGov, Access to e-Government Services Employing Semantic Technologies,* is a research project funded by the European Commission within the IST Program (6th Framework Program) FP6-2004-27020, coordinator: Tomáš Sabol. duration: 2006-2008, TUK team members (in cooperation with the Faculty of Economics): Marián Mach, Peter Bednár. Activity: Access-eGov addresses one of the main objectives of the Action Plans eEurope and eEurope+ "Government on-line: electronic access to public services" by "bringing administrations closer to citizens and businesses through the use of Internet" while putting user at the centre. Access-eGov is a thirty-six months EU-funded research and development project that aims to develop and validate a platform for composition of government services into complex process definitions (covering life events/business episodes) enabling semantic interoperability of particular e-Government services. Web page: http://www.accessegov.org

- *DEMO-Net* is a Network of Excellence project funded under the European Commission's sixth framework program: Information Society Technologies IST (FP6-2004-27219). The project started on January 1, 2006, will be funded for 4 years and has a detailed workplan for the first 30 months. Contact person: Tomáš Sabol (in cooperation with the Faculty of Economics). Web page: http://www.demo-net.org

- *SAKE (FP6-2004-27128), Semantic-enabled Agile Knowledge-based E-government*, is a research project funded by the European Commission within the IST Program (6th Framework Program, STREP). TUK team members (in cooperation with the Faculty of Economics): Tomáš Sabol, Marián Mach, Peter Butka. Duration: 2006-2008. Activity: The project addresses frequent changes in governments' regulations trying to resolve changes in a systematic manner. Specifying, developing and deploying a holistic framework and supporting tools for agile knowledge-based e-government are addressing the adaptation. The solution will comprise a semantic-based attention management system, semantic-based content management system, and a semantic-based groupware system. Web page: http://www.sake-project.org/

- *European Network of Intelligent Technologies.* Thematic Network, European Commission within the IST Program (5th Framework Program) IST-2000-29207, coordinator: Free University Amsterdam, Netherlands, Computational Intelligence Group (CIG) is active node in this international project. Prof. Sinčák is a member of Technology Transfer EUNITE committee and is in charge of competition activities within the EUNITE. The CIG has organized the world-wide competition about electricity load forecast. The full information about this competition including the results can be found on Web page – http://neuron-ai.tuke.sk/competition. It was an interesting contribution to the problem of prediction using intelligent technologies. There are number of activities in EUNITE and their Web page is http://www.eunite.org.

- *EIE-Surveyor: Reference Point for Electrical and Information Engineering in Europe,* Project Nr. 225997-CP-1-2005-1-FR-ERASMUS-TNPP, Project funded by the European Commission (SOCRATES Thematic Network). Reflection and

proposition on generic competences and subject-specific competences, methodology for accreditation, the multinational degrees, and the situation of the implementation of the Bologna-process and implementation of quality assessment methodologies in Electrical and Information Engineering (EIE) in Higher Education. Activities: Application of the TUNING methodology to EIE, to identify competences, observatory on the degrees available in EIE in Europe, and state of the implementation of the Bologna-process, quality assessment of some resources in EIE available through internet, analysis of existing accreditation procedures, proposition of a methodology.

- *Multiagent networked control with automatic reconfiguration,* Scientific Grant Agency project No. 1/0617/08, duration: 2008 – 2010, members: Ján Sarnovský (project leader). Activities: The scientific project Multiagent networked control with automatic reconfiguration has a goal to research, develop and implement the algorithms and control methods of the individual networked control elements, whose interconnections are realized by communication networks using the principles and methods of artificial intelligence. The project main focus is on the control algorithms as well as on the behavioral algorithms of the networked control elements with so called Plug and Play network functionality. By the modeling the networked control systems as the multiagent system and by the process formalization will be created the concrete algorithms for its automatic configuration and reconfiguration in the network environment with their consequences implementation inn the physical laboratory conditions in the area of mobile robotics and other models.

- *Methods for reconfigurable control systems design*, Scientific Grant Agency project No. 1/0328/08, duration: 2008 – 2010, members: Dušan Krokavec (project leader), Filasová Anna, Hladký Vratislav, Liguš Ján, Kocsis Pavol. Activities: The project Design of reconfigurable control systems is focused on the fault-tolerant control systems. The basic research is a fundamental part of the project and is undertaken in the specific areas of model based fault detection and isolation, control system reconfiguration, as well as robust control of parametrically uncertain linear dynamic systems in reconfigurable structures. The focal scientific points of the project are in the development of new integrated methods and algorithms to design a stability guaranteed fault-tolerant control structure with active reconfiguration; the terminal scientific objectives are the application-oriented computational methods for residual evaluation, the sophisticated reconfigurable schemes with explicit consideration of system performance degradation, as well as the appropriate procedures associated with interacting multiple control structures and the residual evaluation (decision making) strategy in reconfigurable control.

- *Methods and Tools of Intelligent and Information Technologies for object Recognition and Classification*. Scientific Grant Agency project No. 1/0386/08, duration: 2008 – 2010, members: Eva Ocelíková (project leader), Iveta Zolotová, Jana Výrostková, Marián Bučko, Erna Demjénová, Marián Bakoš, Oľga Duľová, Peter Karch. Activity: Project focuses on design of new and modified methods and tools in decision support systems with emphasis on pattern recognition. It includes integrated chain of tasks starting with data acquisition, pre-processing and storing of input data, throughout knowledge discovery, to its presentation into decision making link in a suitable user interface. The attention will be focused on selection of informative features for decision on methods of object classification and composite classifiers. From latest information technologies, emphasis will be put on internet technology. Project implements theoretical-

_____

experimental analysis and integration of tools into the application areas for control of technological processes (situation control, SCADA/HMI systems, intelligent control and information systems), for ecology (remotely sensed data) and for medicine (cardiovascular illnesses, bio-medical images).

- *Situational control algorithms and large scale systems modeling*, Scientific Grant Agency project No. 1/0394/08, duration: 2008 – 2010, members: Ladislav Madarász (project leader), members: Andoga Rudolf Ing. PhD, Főző Ladislav, Ing, PhD., Modrovičová Jana, Ing., Bučko Marian Ing. CSc., Adamčík František doc. Ing. CSc. (Faculty of Aeronautics), Považan Jozef prof. Ing. CSc. (Faculty of Aeronautics), Lazar Tobiáš prof. Ing. DrSc. (Faculty of Aeronautics), Hocko Marián Ing. PhD. (Faculty of Aeronautics), Kabát Ján Ing. (Faculty of Aeronautics), Piľa Ján Ing. PhD. (Faculty of Aeronautics), Kolesár Ján Ing. PhD. (Faculty of Aeronautics), Judičák Jozef, Ing. (Faculty of Aeronautics). Activities: Nowadays, the area of technical systems is mainly focused to satisfy the demands for safety, quality and efficiency. Among the growing complexity of present systems, it is necessary to project such systems that will take all the three mentioned contrary demands into account. These facts bring us to a task of precision modeling of such systems and following design of progressive methods of their control. One of the efficient approaches in this area is also the methodology of situational control based on situational classification of operational states of a system designed as a general set of approaches to large scale systems control. This approach nowadays expects use of modern knowledge from the areas of artificial intelligence, modeling and control. Special attention will be put also to particular application results and their technical realization. In the area of large scale systems modeling, the emphasis will be put on creation of high precision models in an integrated virtual environment.

- *Methods for annotation, search, creation, and accessing knowledge employing metadata for semantic description of knowledge*, Scientific Grant Agency project No. 1/4074/07, duration: 2007 – 2009, members: Marián Mach (project leader), Tomáš Sabol, Ján Paralič, Kristína Machová, Ján Hreňo, Peter Bednár, Peter Butka, Martin Sarnovský, František Babič, Peter Smatana, Pavol Jasem, Jozef Vrana; activity: Project focuses on work with knowledge in form of metadata. This metadata enable to define content of information entities (most often in form of textual documents) in a way suitable for machine processing. Emphasis is put on domain theories in form of ontological knowledge models, parts of which may be used for annotation of information. Project should bring progress in the following research areas: Annotation of knowledge by means of classification and clustering algorithms; Automatic abstracts' generation; Web mining using knowledge models; Design of conceptual ontological models; Retrieval in the environment with semantically described knowledge; Support of knowledge creation processes; Text mining in distributed environment.

- *Plasticity in spatial auditory representations*. Scientific Grant Agency project No. 1/0445/09, duration: 2009 – 20011, members: Norbert Kopčo (Principal Investigator), Peter Kostelník, Rudolf Andoga, Beata Tomoriová Summary: How does past experience alter spatial auditory processing? Most textbooks discuss sound localization as if the auditory system simply extracts basic acoustic cues (ILD, spectral cues) and responds to these cues in a fixed, unchanging way. In fact, the auditory system solves a much more complex problem. The system learns, automatically, what combination of cues normally occur together to signify a source location and what exocentric location this combination of cues

represents. This learning occurs constantly across different time scales. This constant adjustment and fine-tuning enables the spatial auditory system to cope with the fact that the same physical acoustic cues do not always correspond to the same source location due to the changes in the acoustics properties of both the environment and the listener. The goal of the proposed work is to determine how past experience alters spatial auditory processing and perception using both behavioral experiments and computational modeling.

- *Contextual plasticity in spatial auditory maps*. National Institutes of Health - National Institutes of Deafness and Communication Disorders (USA) # 1 R03 TW007640-01, duration: 2006 – 2009, members: Barbara Shinn-Cunningham (Boston University), Norbert Kopčo (Principal Investigator), Rudolf Andoga. Summary: The proposed research has two main goals. The first goal is scientific: to gain new knowledge about the dynamic processes involved in human spatial auditory perception. Such knowledge is important for practical reasons (e.g., for the design of improved auditory prosthetic devices) as well as because it will improve basic understanding of the role of plasticity and dynamic processes in auditory processing. The second goal of this proposal is to further develop the existing collaboration between the Auditory Neuroscience Laboratory (ANL) at Boston University (BU) and the newly established Perception and Cognition Laboratory (PCL) at the Technical University of Kosice, Slovakia (TUK).

- *CyberVirtLab – Monitoring real and supervisory control of simulated systems*, Cultural and Education Grant Agency project No. 3/4230/06, duration: 2006 – 2008, members: Iveta Zolotová (project leader), Anna Jadlovská, Ján Liguš, jana Ligušová, , Vratislav Hladký, Ján Jadlovský , Marián bakoš, Nikola Kabakov, Ladislav takáč, Ján Galdun, Richard Lonščák, Juraj Horváth, Marek Ďuľa, Peter Kica, Stanislav Laciňák, Activity: The aim is remote and virtual access to monitoring and supervisory control of simulated and real systems, e.g. Ball&plate, heat system, magnet, crane, traversa.

- *DNA-CT - Fluorescent image analysis of irregularly shaped cells for purposes of non-destructive DNA quantification,* Slovak Research and Development Agency Project, No. APVV-0682-07, members: Iveta Zolotová (project leader for DCAI group), Peter Karch, Vladimír Jeleň, Oľga, Ďuľová, Zoltán Tomori (project leader of whole project from group of Institute of Experimental Physics SAS Košice), Marek Dudáš (project leader of group of Safarik University of Kosice), duration: 2008-2010. Activity: Adaptation of microscope for capturing of immobilized sperm cell images under different angles of view. Design of 3D mathematical model adjusting the acquired image with respect to both the angle of cell rotation and the physical conditions during acquisition. Statistical comparison of DNA contents values obtained under different condition.

6   CO-OPERATION

6.1. Co-operation in Slovakia

- Department of Automatic Control Systems Bratislava, Slovak University of Technology, Bratislava
- Institute of Intelligent Systems, Faculty of Informatics, Slovak University of Technology, Bratislava
- Institute of Computer Science, Slovak Academy of Sciences in Bratislava
- Department of Biophysics IEP Slovak Academy of Science

- Institute of Computer Science, University of P.J. Šafárik, Košice
- Economic University, Faculty of Business Economics, Košice
- Institute of Experimental Physics, Slovak Academy of Sciences
- Department of applied informatics (Centre for Cognitive Science), Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava
- Košice self-governing region
- Local Authority City Ward Ťahanovce, Košice
- The City of Košice
- Tatrabanka, a.s.

6.1.1. Visitors to the Department

- Dana Klimešová - Department of Information Engineering, Faculty of Economics and Management, Czech University of Agriculture, Prague, Czech Republic
- Karel Mls - University Hradec Kralove, Czech Republic
- Michal Racek and Ali Rantakari, POYRY Group, Finland
- Patrick Ausderau and Markus Holi – University of Applied Sciences (Metropolia), Finland
- Ekaterina Simonenko – University Paris-Sud, France

6.2. International Co-operation

- The Open University, Knowledge Media Institute, United Kingdom
- University of Vaasa, Finland
- Helsinki University of Technology, Dipoli, Finland
- Department of Software Engineering and Interactive Systems, Vienna University of Technology, Austria
- University of Regensburg, Germany
- Hearing Research Center and Dept. of Cognitive and Neural Systems, Boston University, USA
- Center for Cognitive Neuroscience and Department of Psychology, Duke University
- Institute of Pathological Physiology, 1st Faculty of Medicine, Charles University, Prague
- Budapest Computational Neuroscience Group, Department of Biophysics, Hungarian Academy of Sciences
- Department of Psychology, University of California at Riverside
- University of Dortmund, Germany
- Waseda University, Tokyo, Japan
- Technical University of Czestochowa
- Tokyo Institute of Technology, Japan
- Kuyshu Institute of Technology, Japan
- Université Joseph Fourier Grenoble, IUT 1 (Institut Universitaire de Technologie 1), Grenoble, France
- Heudiasyc UMR CNRS 6599, UTC, Compiegne, France
- Université Henri Poincaré, Laboratoire CRAN (Centre de Recherche en Automatique de Nancy), Nancy 1, France
- Department of Informatics, Technical University, Ostrava, Czech Republic
- Department of Control Systems and Instrumentation, Faculty of Mechanical Engineering Technical University of Ostrava, Czech Republic

- Department of Cybernetics, Czech Technical University Prague, Czech Republic
- Department of Control Engineering, Czech Technical University, Prague, Czech Republic
- Institute of Information Theory and Automation, Academy of Sciences of Czech Republic, Prague, Czech Republic
- Department of Information Engineering, Faculty of Economics and Management, Czech University of Agriculture, Prague, Czech Republic
- University of Hradec Králové, Czech Republic
- Faculty of Mechanical Engineering, Department of Automation, Institute of Information, University of Miskolc, Hungary
- Budapest Tech, Hungary
- Budapest University of Technology and Economics, Hungary
- California Institute of Technology, Jet Propulsion Laboratory (Dr. Antal, K. Bejczy), USA, California
- Hungarian Academy of Sciences, Computer and Automation Research Institute, Hungary (prof. Gyorgy Kovács)
- Regional Association of the Hungarian Academy of Sciences, Miskolc, Hungary
- Austrian Academy of Sciences, Acoustics Research Institute (Bernhard Laback)
- Auditory Neuroscience Group, Department of Physiology, University of Sydney

6.2.1. Visits of Staff Members to Foreign Institutions

- Kopčo, N: Boston University, Duke University, University of Sydney, University of Oldenburg, Charles University, Austrian Academy of Sciences
- Mach, M.: University of Regensburg, Germany
- Paralič, J.: University of Utrecht, Netherland
- Paralič, J.: Metropolia University of Applied Sciences, Espoo, Finland
- Zolotová, I.: EUSS Universitat Autonoma de Barcelona, Spain

6.3. Membership in International Organizations and Societies

- Kopčo, N.: Association for Research in Otolaryngology, Acoustical Society of America, Society for Neuroscience, Association for Research in Otolaryngology
- Krokavec, D.: Member of the International Federation of Automatic Control IFAC Technical Committee TC 1.4 Stochastic Systems
- Liguš, J.: EAEEIE – European Association for Education in Electrical and Information Engineering
- Madarász, L.: Honorary Member of the Board of Hungarian Academy of Sciences (2000)
- Madarász, L.: Chairmanship member of the Technical Section, Association of Hungarian Professors (2001)
- Madarász, L.: Honorary Professor, Bánky Donát Polytechnic, Budapest, Hungary (1999)
- Madarász, L.: Membership of Associate Editors, Acta Polytechnica Hungarica, Budapest Tech, Hungary (2004)
- Madarász, L.: Honorary Membership in Hungarian Fuzzy Association, Budapest Hungary (2002)
- Madarász, L.: American Biographical Institute, Gold Record of Achievement, Control of Large Scale Systems, USA (1997)
- Madarász, L.: The American Biographical Institute, The Research Board of Advisors (1996)

- Madarász, L.: Honorary Fellow of micro'CAD The Univesity of Miskolc (2005)
- Ocelíková, E.; Sinčák, P.; Zolotová, I.: CPRS - Czech Pattern Recognition Society
- Ocelíková, E.: CSSS - Czech and Slovak Society for Simulation
- Machová, K.: ACM – Association of Computer Machinery
- Paralič, J.: ACM – Association of Computer Machinery, IEEE
- Sabol, T.: Information Society Technologies Program Committee (IST PC), 5th Framework Program, Brussels
- Sarnovský, J.: IEEE
- Sarnovský, J.: INES - International Network of Engineers and Scientists for Global Responsibility
- Sarnovský, J.: Principia Cybernetica Web PRNCYB-L
- Sarnovský, J.: SWIIS - Suplementary Ways for Improving International Stability
- Sinčák P.: European Society of Neural Networks
- Sinčák P.: IEEE, Computational Intelligence Society
- Vaščák, J.: IEEE, Robotics and Automation Society; Systems, Man, and Cybernetics Society; Computational Intelligence Society
- Zolotová, I.: IEEE, Education Society

6.4. Membership in Slovak Organizations and Societies

- The whole Department of Cybernetics and Artificial Intelligence is a team member of:
    Slovak Society for Cybernetics and Informatics
    Slovak AI Society
- Filasová, A.: Slovak Society for Cybernetics and Informatics
- Krokavec, D.: Slovak Electrical Engineering Society
- Krokavec, D.: Scientific Grant Agency of Slovak Republic
- Krokavec, D.: Member of the Editorial Board of the Journal AT&P, Bratislava
- Madarász, L.: Member of the Editorial Board of the Journal AT&P, Bratislava
- Madarász, L.: Slovak Society for Cybernetics and Informatics
- Madarász, L.: Member of the Editorial Board of the Journal Transfer Inovácií, Faculty of Mechanical Engineering (2006)
- Madarász, L.: Member of the Editorial Board of the Acta Polytechnica Hungarica, Budapest Tech, Hungary (2006)
- Jadlovská, A; Ocelíková, E.; Sarnovský, J.: Slovak Society for Cybernetics and Informatics
- Paralič, J.: Slovak Society for Computer Science
- Sabol, T.: Board of the Open Society Fund, Bratislava
- Zolotová, I.: Slovak Research and Development Agency

6.5. International Networks and Exchange Programmes

- EIE-Surveyor, REFERENCE POINT FOR ELECTRICAL AND INFORMATION ENGINEERING IN EUROPE, Project Nr. 225997-CP-1-2005-1-FR-ERASMUS-TNPP, Project funded by the European Commission (SOCRATES Thematic Network), Contact person: Ján Liguš
- Socrates - Erasmus agreement between TU of Košice and University Hradec Kralove, Czech Republic. Contact person: Ján Vaščák
- Socrates - Erasmus agreement between FEI TUKE and Escola Universitaria Salesiana de Sarria Universitat Autonoma de Barcelona, Spain. Contact person:

Iveta Zolotová

7   THESES

7.1. Masters Theses

1. Bosák Martin: Software tool development for automatic migration of the database applications between the heterogeneous database systems (J. Ligušová)
2. Blaho Ján: Optimization of bridge crane measuring systems (J. Jadlovský)
3. Flander Peter: Enterprise Reference Model Proposal from Semantic Data Collection (L. Madarász)
4. Gášpár Tomáš: Evolutionary Optimization Module for Industrial Cutting Machines (P. Sinčák)
5. Gombár Miloš: Optimization of bridge crane control with elimination of bridge torsion (J. Jadlovský)
6. Holan Peter: Mechanisms of auditory attention in binaural sound detection (N. Kopčo)
7. Horváth Daniel: Auditory attentional control in a dynamic multi-talker environment (N. Kopčo)
8. Jeleň Vladimír: The Utilization of AI in Intelligent Buildings (P. Sinčák)
9. Kačur Peter: Network Control of Virtual Axle by Means of Khepera Mobile Robots (J. Liguš)
10. Kardoš Michal: Tracking of ball motion trajectory at the laboratory model "ball & plate" (V. Hladký)
11. Karch Peter: Local and Remote Supervisory Control of Systems – Intelligent House, Traverse (I. Zolotová)
12. Kažimír Ján: System to support acquisition and analyses of data from insulators' measurements (J. Paralič)
13. Kľučár Tomáš: Retrieval of Contractual Doctors of Insurance Companies According to a Given Medical Specialization (K. Machová)
14. Krešák Marián: A tool for distributed solution of optimization tasks (J. Csontó)
15. Kuba Miloš: A Prediction of a Defect Trend in the Iron Rolling with the aid of Machine Learning Methods (K. Machová)
16. Merčák Ivan: Generation of an Active Organization Telephone Directory of a Given Region from the Web (K. Machová)
17. Lörinc Jozef: Discrete-time linear system identification (D. Krokavec)
18. Lörinc Ľuboš: Implementation of Control Algorithms of Dynamical Systems to SLC Automats (J. Jadlovská)
19. Mihály Gabriel: Structured residual generators (D. Krokavec)
20. Nemec Tomáš: Probabilistic classifier models (M. Mach)
21. Oboril Július: Application for support of analysis of data from fluorescence spectroscopy (J. Paralič)
22. Onder Marián: Implementation and anlaysis of FLY algorithm for stereoscopic images processing (M. Bundzel)
23. Pľuchta Jarolím: Multidimensional Data Classification with Composed Classifiers (E. Ocelíková)
24. Porhinčák Roman: Generation of an Active Firm Register of a Given Region (K. Machová)
25. Poruben Ivan: Local and Remote Supervisory Control of Systems – Ball in Tube, Magnet (I. Zolotová)

26. Porvaz Peter: Support Tools for Automatic Projection of Control Systems (J. Liguš)
27. Potičná Natália: Identification and simulation control of cogeneration unit for biogas (J. Sarnovský)
28. Predajnoš Slavomír: Development of the user interface for the software tool for automatic migration of the database applications between the heterogeneous database systems (J. Ligušová)
29. Reiff Tomáš: Incremental System for Image Pattern Recognition (P. Sinčák)
30. Rusnák Ferdinand: Decentralized methods of control of Large scale systems (J. Sarnovský)
31. Sladik Tomáš: Evolution of neurocontroller for walk control of humanoid robot (M. Bundzel)
32. Surgent Daniel: Laminar Model of Cortical Layers of Visual Cortex – LaminART (R. Andoga)
33. Tóth Gabriel: Evolution of neurocontroller for movement control of snake robot (M. Bundzel)
34. Tutoky Gabriel: Meta-learning for automatic selection of algorithms for text classification (J. Paralič)
35. Voš Marek: Remote Control of Systems – Matlab Web Technology (I. Zolotová)
36. Fedor Zlatko: Incremental System for Linguistic Command Recognition (P. Sinčák)
37. Sivák Štefan: Multi-agent system control based on potential field s in Robocup soccer environment (P. Sinčák)
38. Szpyrc Roman: Possibilities of application of anytime algorithms in control of turbojet engines (L. Madarász)
39. Stráňovský Jozef: Web content mining (M. Mach)

7.1. Bachelors Theses

1. Babiak Peter: The Prediction Systems in the Field of Economy Informatics (J. Liguš)
2. Bakaľár Vladimír: Development of the reports of the information system LABACS used for model access administration and evidence of the hardware in the DCAI laboratories (J. Ligušová)
3. Baran Miroslav: Design and realization of visualization of Magnet and Tube models (S. Laciňák)
4. Bartók Peter: Accessing data from biomedical databases using gene ontology (J. Paralič)
5. Bašista Štefan: Statistical analysis and design of a model from experimentally obtained data of a small turbojet engine MPM 20 (L. Madarász)
6. Bereščák Peter: Analysis of Transactional Content Management System in Economics (J. Sarnovský)
7. Breza Jozef: Dynamic model of a small turbojet engine – MPM 20 (R. Andoga)
8. Česánek Štefan: Demonstration Software Design of a Washing Machine Fuzzy Controller for Education Purposes (J. Vaščák)
9. Čopík Matej: Control of Tube and Magnet models and integration into DSC on DCAI (S. Laciňák)
10. Demčák Jozef: Basic possibilities of connection of Neural Networks and Petri Nets (J. Liguš)
11. Dolinský Kamil: Design and Realization of Program Modules for Models of Dynamical Systems (A. Jadlovská)

12. Dudek Roman: Development of the web forms of the information system LABACS used for model access administration and evidence of the hardware in the DCAI laboratories (J. Ligušová)
13. Faix Ján: Internet interface for mobile robot control (P. Sinčák)
14. Fuhrman Miroslav: Design of an environment for computation of basic parameters of a turbojet engine (L. Madarász)
15. German-Sobek Milan: Approaches of multiagent control in the world (J. Sarnovský)
16. Gregor Martin: Design of a Navigation System for Robotic Soccer Based on Fuzzy Logic (J. Vaščák)
17. Gulyásová Katarína: Dynamics modelling and dynamics analysis of the Ball & Plate system (A. Filasová)
18. Hasiček Rastislav: A tool for automated categorization of congenital diseases research documents to user-defined categories (J. Paralič)
19. Hučko Ondrej: Synthesis of a constant revolutions controller for a small turbojet engine MPM 20 (R. Andoga)
20. Jajčišin Štefan: Modeling and Control of Dynamical Systems by Matlab/Simulink (A. Jadlovská)
21. Jankura Marcel: Document Management System In the Frame of Information and Control Systems (J. Liguš)
22. Janto Ľuboš: History of AI and its Technological and Social Implications (P. Sinčák)
23. Karnayová Andrea: A Comparison of Bank Products Using an Expert System (K. Machová)
24. Kateržabek Gabriel: Senzoric system of Khepera mobile robots (J. Liguš)
25. Kochan Kamil: Bee Behavior Simulation in Solving Some Problems of the Contemporary Web (K. Machová)
26. Koncz Peter: Semi-automatic creation of surveys from Internet resources (J. Paralič)
27. Kovácsová Judita: Project Planning, Tracking and Managing in Small Company (I. Zolotová)
28. Krajčír Ján: Adaptation of a departmental web application and its deployment into a testing operation (J. Paralič)
29. Leško Peter: The Application of the Case-Based Reasoning Approach for Dynamic Questionnaire Systems (J. Liguš)
30. Makuša Michal: Respondent health status classification into risk classes (E. Ocelíková)
31. Mihaľ Roman: Simulation of various types of dynamic systems in simulation language MATLAB (V. Hladký)
32. Müller Andrej: Dynamics modelling and dynamics analysis of the Magnetic levitation model (A. Filasová)
33. Namešpetra František: Coevolution of neurocontrollers in predator vs. prey task (M. Bundzel)
34. Pavlovský Július: Design of Control Algorithms for a Model of a Mechanical System (A. Jadlovská)
35. Pénzeš Tomáš: ALUMNI – communications portal of alumnus TU Košice (J. Sarnovský)
36. Pištejová Jana: Efficiency and benefits' analysis of data-mining implementation in selected organization (J. Paralič)
37. Pruchnerovič Roman: MIS application based on Business Intelligence ORACLE with application for employment monitoring in Slovakia (J. Jadlovský)
38. Savčák Peter: Dynamics modelling and dynamics analysis of the Helicopter

model (A. Filasová)

39. Sedlák Lukáš: The principle of requisite variety in automatic control (J. Sarnovský)
40. Sedlák Štefan: Text similarity (M. Mach)
41. Sklenčár Peter: Realization of web application for simulation of various types of dynamic systems (V. Hladký)
42. Szabó Peter: Networked Control of the Khepera mobile robots (J. Liguš)
43. Štrbová Zuzana: An Overview of Software Products Used in the Bank Sector (K. Machová)
44. Tomáš Jaroslav: Networked Control of the Khepera mobile robots (J. Liguš)
45. Tušanová Adela: Creation of a web application and its influence on the development of a small company (J. Paralič)
46. Virčíková Mária: Interactive Evolutionary Computation in Design (P. Sinčák)
47. Vojtek Juraj: Manager Analysis Tools – Evaluating of Questionnaires (I. Zolotová)
48. Zagyi Tomáš: Computer Support of Performance Analysis of Ice Hockey Team (I. Zolotová)
49. Zbojovský Martin: Networked Measurement Channel (J. Liguš)

8   OTHER ACTIVITIES

- 6th IEEE International Conference on Computational Cybernetics (ICCC 2008 – http://www.bmf.hu/conferences/iccc2008), has been organized in Stara Lesná – Vysoké Tatry, Slovakia, November 27-29
- 6th Slovak – Hungarian Joint Symposium on applied Machine Intelligence (SAMI 2008 - http://www.sami.tuke.sk/2008) has been organized in Herľany, Slovakia, January 21-22
- 8th International Student Workshop on Data Analysis (WDA 2008) has been organized in Dedinky, Slovakia, June 26-29

9   PUBLICATIONS

9.1. Books

1. BABIČ, František - PARALIČ, Ján (eds.): 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. 1st edition. Košice: Centre for Information Technologies, 2008. 169 pp. ISBN 978-80-89284-10-8.
2. BABIČ, František - PARALIČ, Ján - RAUBER, Andreas: WDA 2008 : Workshop on Data Analysis: Proceedings of the 8th International Student Workshop: Dedinky, Slovakia, June 26 - 29, 2008. Košice: EQUILIBRIA, 2008. [90 p.]. ISBN 978-80-89284-21-4.
3. DOBOŠ, Ľubomír - FORGÁČ, Michal - MODROVIČOVÁ, Jana (eds.): 8th Scientific Conference of Young Researchers: Proceeding from conference: May 28th, 2008 Košice, Slovakia. Košice: FEI TU, 2008. 163 pp. ISBN 978-80-553-0036-8
4. LANDRYOVÁ, Lenka - ZOLOTOVÁ, Iveta: Industrial Web portal for remote supervisory control. In: Encyclopedia of Networked and Virtual Organization. Hershey: Information Science Reference, 2008. p. 700-707. ISBN 978-1-59904-

885-7.

5. MADARÁSZ, Ladislav - BUČKO, Marián - ANDOGA, Rudolf: System Analysis and Synthesis (in Slovak). 1. vyd. Košice: Elfa, 2008. 267 pp. ISBN 978-80-8086-080-6

9.2. Journals

1. BABIČ, František - BEDNÁR, Peter - FURDÍK, Karol - PARALIČ, Ján - PARALIČ, Marek - WAGNER, Jozef: Trialogical learning in practice. In: Acta Electrotechnica et Informatica. Vol.8, No. 1 (2008), pp. 32-38. ISSN 1335-8243

2. BEST, Virginia - OZMERAL, Erol J. - KOPČO, Norbert - SHINN-CUNNINGHAM, Barbara G.: Object continuity enhances selective auditory attention. In: Proceedings of the National Academy of Sciences of the United States of America. vol. 105, no. 35 (2008), p. 13173-13177

3. BUNDZEL, Marek - SINČÁK, Peter: Ensembling classifiers using unsupervised learning. In: Lecture Notes in Computer Science. vol. 5097 (2008), p. 513-521, ISSN 0302-9743

4. FŐZŐ, Ladislav - MADARASZ, Ladislav - ANDOGA, Rudolf: Design of anytime control algorithm for MPM20 turbojet engine with use of its analytic model (in Slovak). In: Transfer Inovacii. Vol.11 (2008), pp. 94-101, ISSN 1337-7094

5. FILASOVÁ, Anna - KROKAVEC, Dušan: Decentralized robust control design using LMI. In: Acta Montanistica Slovaca. Vol.13, No. 1 (2008), pp. 100-104. ISSN 1335-1788

6. HLADKÝ, Vratislav - POPOVIČ, Ľuboš: Identification and modeling of a kindergarten and design of temperature controller (in Slovak). In: Automation. vol. 51, no. 7-8 (2008), p. 464-467, ISSN 0005-125X

7. HRUBINA, Kamil - JADLOVSKÁ, Anna: Optimal strategies generated for the mathematical model of source distribution using a dynamic programming method algorithm. In: Acta academica karviniensia. no. 1 (2008), p. 81-92. ISSN 1212-415X

8. JADLOVSKÁ, Anna - LONŠČÁK, Richard: Design and experimental verification of an optimal control algorithm for the educational model of mechanical system (in Slovak). In: ElectroScope - Journal for Electrical Engineering and Electronics, Czech Republic vol. 2, no. 1 (2008), 10 p. ISSN 1802 – 4564

9. JASENOVEC, Ľubomír - BURÁK, Ján - BIGOŠ, Peter - JADLOVSKÝ, Ján: Network control system of bridge crane. In: Lifting machines in theory and practice: Electronic journal of construction and operation of lifting, manipulating and transporting machines and vehicles. No. 1 (2008), p. 53-56, ISSN 1802-2812.

10. KLIMEŠOVÁ, D. - OCELÍKOVÁ, E.: Knowledge Uncertainty and Composed Classifier. International Journal of Mathematical Models and Methods in Applied Sciences, Issue 2, Volume 1, pp. 101-105, ISSN 1998-0140

11. KLIMEŠOVÁ, D. - OCELÍKOVÁ, E.: Study of Uncertainty and Contextual Modeling. International Journal of Circuits, Systems and Signal Processing, Issue 1, Volume 1, pp. 12-15, ISSN 1998-4464

12. KOPČO, Norbert - SHINN-CUNNINGHAM, Barbara G.: Influences of modulation and spatial separation on detection of a masked broadband target. In: Journal of the Acoustical Society of America. vol. 124, no. 4 (2008), p. 2236-2250. ISSN 0001-4966

13. KROKAVEC, Dušan - FILASOVÁ, Anna: Diagnostics and reconfiguration of control systems. In: Advances in Electrical and Electronic Engineering. Vol.7, No. 1-2 (2008), pp. 15-20. ISSN 1336-1376

14. POVAŽAN, Jozef - ANDOGA, Rudolf - FOZO, Ladislav - JUDIČÁK, Jozef: Anytime control algorithm design for MPM 20 engine. In: Acta Avionica. Vol.10, No. 16 (2008), pp. 127-131. ISSN 1335-9479

15. SARNOVSKÝ, Ján: Information society as a tertiary sphere after industry and agriculture (in Slovak). In: AT&P Journal. Vol.15, No. 5 (2008), pp. 11, ISSN 1335-2237

16. SARNOVSKÝ, Ján: Complexity (in Slovak). In: AT&P Journal. Vol.15, No. 8 (2008), pp. 9., ISSN 1335-2237

17. SARNOVSKÝ, Ján: Wiener and automation (in Slovak). In: AT&P Journal. Vol.15, No. 2 (2008), pp. 11, ISSN 1335-2237

18. TOMORIOVÁ, Beáta - ANGODA, Rudolf - KOPČO, Norbert: Effects of modality-dependent cuing and eye movements on sound localization (A). In: Journal of the Acoustical Society of America. vol. 123, no. 5 (2008), p. 3718. ISSN 0001-4966

9.3. Conferences

1. ANDOGA, Rudolf - FOZO, Ladislav - MADARÁSZ, Ladislav: Basic approaches to small turbojet engine modeling. In: SISY 2008: 6th international symposium on Intelligent Systems and Informatics: September 26-27, 2008, Subotica, Serbia. Budapest: Tech, 2008. 7 p. ISBN 978-1-4244-2407-8.

2. ANGODA, Rudolf - MADARÁSZ, Ladislav - FOZO, Ladislav: Digital electronic control of a small turbojet engine - MPM 20. In: INES 2008: 12th international conference on Intelligent Engineering Systems: Proceedings: February 25-29, 2008, Miami, Florida. [s.l.]: Trivent Conference Office, 2008. p. 37-40. ISBN 978-1-4244-2083-4.

3. ANGODA, Rudolf - FOZO, Ladislav - MADARÁSZ, Ladislav: Small turbojet engine MPM 20 - simulations and modeling. In: Computational intelligence and informatics: Proceedings of the 9th international symposium of Hungarian researchers: 2008 November 6-8, Budapest. Budapest: Budapest Tech, 2008. p. 267-279. ISBN 978-963-7154-82-9.

4. BABIČ, František - PARALIČ, Ján: Identification of tacit knowledge during realization of knowledge creation processes. In: Junior Scientist Conference 2008: Proceedings: November 16th - 18th 2008, Vienna University of Technology. Vienna: University of Technology, 2008. p. 15-16. ISBN 978-3-200-01612-5.

5. DUĽOVÁ, Oľga - ZOLOTOVÁ, Iveta: Using greedy and evolution algorithms for active contour. In: Process Control 2008: Proceedings of the 8th international scientific - technical conference: June 9 - 12, 2008, Kouty nad Desnou, Czech Republic. Pardubice: University Pardubice, 2008. p. c085a-1-c085a-9. ISBN 978-80-7395-077-4.

6. FILASOVÁ, Anna - KROKAVEC, Dušan: Efficient residual generator design using LMI. In: ICCC'2008: Proceedings of 9th International Carpathian Control Conference: Sinaia, Romania, May 25-28, 2008. Craiova: University of Craiova, 2008. p. 155-158. ISBN 978-973-746-897-0.

7. FILASOVÁ, Anna - KROKAVEC, Dušan: Residual filter design method based

Lyapunov inequality. In: New Trends in Technical Cybernetics, September 10.-12.. 2008, Čeladná, Czech Republic. Ostrava: VŠB TU, 2008. p. 9-15. ISBN 978-80-248-1812-2.

8. FILASOVÁ, Anna - KROKAVEC, Dušan: LMI based design of a system fault residual generator. In: Process Control 2008: Proceedings of the 8th international scientific - technical conference: June 9-12, 2008, Kouty nad Desnou. Pardubice: University Pardubice, 2008. p. c058-1-c058-12. ISBN 978-80-7395-077-4.

9. FURDÍK, Karol - MACH, Marián - SABOL, Tomáš: Practical experiences with enhancing semantic interoperability in eGovernment using WSMO. In: MeTTeG08: Proceedings of the 2nd International Conference on Methodologies, Technologies and Tools Enabling e-Government: Corfu, Greece - 25-26 September 2008. Camerino: Universita di Camerino, 2008. p. 23-35. ISBN 978-88-7589-337-8.

10. FURDÍK, Karol - PARALIČ, Ján - TUTOKY, Gabriel: Meta-learning method for automatic selection of algoritms for text classification. In: 19th Central European Conference on Information and Intelligent Systems : Conference Proceedings : September 24-26, 2008, Varaždin, Croatia. Varaždin: University of Zagreb, 2008. p. 477-484. ISBN 978-953-6071-04-3.

11. GALDUN, Ján - THIRIET, Jean-Marc - LIGUŠ, Ján - SARNOVSKÝ, Ján: Reliability increasing through networked cascade control structure consideration of quasi-redundant subsystems. In: IFAC 2008: Proceedings of the 17th IFAC World Congress: Seoul, Korea, July 6-11, 2008. Seoul: IFAC, 2008. p. 6839-6844. ISBN 978-3-902661-00-5.

12. HOCKO, Marián - JUDIČÁK, Jozef - FOZO, Ladislav: Actual problems of alternative fuels for turbojet engines (in Slovak). In: 27. Setkání kateder mechaniky tekutin a termomechaniky: Mezinárodní konference: 24. - 27. června 2008, Plzeň. Plzeň: ZČU, 2008. 8 p. ISBN 978-80-7043-666-0.

13. HRUBINA, Kamil - JADLOVSKÁ, Anna: On optimal control of dynamic systems using the algorithm of numerical methods. In: Recent education trends in the IT 2008, Monograph from International Conference, Olomouc PFUP 2008, p. 323-327. ISBN 978-80-7220-311-6.

14. JADLOVSKÁ, Anna - SARNOVSKÝ, Ján: Using an optimal control theory of the linear dynamic systems for the design of the state controller with integrator, In: Recent education trends in the IT 2008, Monograph from International Conference, Olomouc PF UP 2008, p. 553-558. ISBN 978-80-7220-311-6.

15. JADLOVSKÁ, Anna - SARNOVSKÝ, Ján - LONŠČÁK, Richard: Design and simulation of optimal control of laboratory nonlinear models. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 37-44. ISBN 978-80-553-0066-5.

16. JADLOVSKÝ, Ján - MARCIN, Jozef: Utilization of camera inspection systems for quality control in production. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 168-173. ISBN 978-80-553-0066-5.

17. JASENOVEC, Ľubomír - JADLOVSKÝ, Ján: Effect of using technology network in control of the positioning system. In: ICCC'2008: Proceedings of 9th International Carpathian Control Conference: Sinaia, Romania, May 25-28, 2008. Craiova: University of Craiova, 2008. p. 279-282, ISBN 978-973-746-897-

---

0.

18. KABÁT, Ján - MADARÁSZ, Ladislav - MODROVIČOVÁ, Jana: Introduction to problem, basis and measurement of magnetic aura of turbojet aircraft engines. In: Computational intelligence and informatics: Proceedings of the 9th international symposium of Hungarian researchers: 2008 November 6-8, Budapest. Budapest: Budapest Tech, 2008. p. 379-386. ISBN 978-963-7154-82-9.

19. KLIMEŠOVÁ, Dana - OCELÍKOVÁ, Eva: Spatial data uncertainty management. In: ISPRS 2008: Proceedings of The 21th Congress The International Society for Photogrammetry and Remote Sensing: 3-11 July 2008, Beijing China: Second Announcement and Call for Abstracts. Beijing: ISPRS, 2008. p. 209-212. ISSN 1682-1750.

20. KROKAVEC, Dušan - FILASOVÁ, Anna: Constrained control of discrete-time stochastic systems. In: IFAC 2008: Proceedings of the 17th IFAC World Congress: Seoul, Korea, July 6-11, 2008. Seoul: IFAC, 2008. p. 15315-15320, ISBN 978-3-902661-00-5.

21. KROKAVEC, Dušan - FILASOVÁ, Anna: Performance of reconfiguration structures based on the constrained control. In: IFAC 2008: Proceedings of the 17th IFAC World Congress: Seoul, Korea, July 6-11, 2008. Seoul: IFAC, 2008. p. 1243-1248, ISBN 978-3-902661-00-5.

22. KROKAVEC, Dušan - KOCSIS, Pavol: Optimized mode decoupling in state feedback control. In: Process Control 2008: Proceedings of the 8th international scientific - technical conference: June 9-12, 2008, Kouty nad Desnou. Pardubice: University Pardubice, 2008. p. c063-1-c063-7. ISBN 978-80-7395-077-4.

23. KUZMA, Miron - JAKŠA, Rudolf - SINČÁK, Peter: Computational intelligence in font design. In: Computational intelligence and informatics: Proceedings of the 9th international symposium of Hungarian researchers: 2008 November 6-8, Budapest. Budapest: Budapest Tech, 2008. p. 193-203. ISBN 978-963-7154-82-9.

24. MACH, Marián - STRÁŇOVSKÝ, Jozef: An experiment in recommending content from an information portal. In: 19th Central European Conference on Information and Intelligent Systems: Conference proceedings: September 24-26, 2008, Varaždin, Croatia. Varaždin: University of Zagreb, 2008. p. 299-306. ISBN 978-953-6071-04-3.

25. MACHOVÁ, Kristína - GAĽOVÁ, Lenka: The partial mapping of the web graph. In: 19th Central European Conference on Information and Intelligent Systems: Conference proceedings: September 24-26, 2008, Varaždin, Croatia. Varaždin: University of Zagreb, 2008. p. 451-458. ISBN 978-953-6071-04-3.

26. MACHOVÁ, Kristína – VRANA, Jozef – DŽBOR, Martin: Some Approaches to Make the Internet Searching Easier. In: AMIForum – Ambient Intelligence Forum 2008: Conference proceedings: October 15-16, 2008, Hradec Králové, Czech Republic. Faculty of Informatics and Management, University of Hradec Králové.

27. OCELÍKOVÁ, Eva - KLIMEŠOVÁ, Dana - ZOLOTOVÁ, Iveta: Dimension decreasing of feature space. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 49-52. ISBN 978-80-553-0066-5.

28. PARALIČ, Ján - BABIČ, František: Support of knowledge creation processes in computer-based collaborative system. In: Innovation in Manufacturing Networks:

Eighth IFIP International Conference on Information Technology for Balanced Automation Systems: Porto, Portugal, June 23-25, 2008. New York: Springer, 2008. p. 145-152. ISBN 978-0-387-09491-5.

29. REIFF, Tomáš - SINČÁK, Peter: Multi-agent sophisticated system for intelligent technologies. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 87-91. ISBN 978-80-553-0066-5.

30. SARNOVSKÝ, Ján: Methodological aspects of control theory. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 78-82. ISBN 978-80-553-0066-5.

31. TAKÁČ, Ladislav - LIGUŠ, Ján - SARNOVSKÝ, Ján: Systematic design of the web portals. In: EAEEIE Annual Conference: 19th international conference European Association for Education in Electrical and Information Engineering: June 29 - July 2, 2008 Tallinn, Estonia. Tallinn: IEEE, 2008. p. 60-65. ISBN 978-1-4244-2008-7.

32. VÝROSTKOVÁ, Jana - OCELÍKOVÁ, Eva: Simple and composed classifiers applied to multidimensional data. In: Process Control 2008: Proceedings of the 8th international scientific - technical conference: June 9-12, 2008, Kouty nad Desnou. Pardubice: University Pardubice, 2008. p. c180-1-c180-6. ISBN 978-80-7395-077-4.

33. VÝROSTKOVÁ, Jana - OCELÍKOVÁ, Eva - KLIMEŠOVÁ, Dana: Simple and composed classifiers used for classification of experimental data. In: Human System Interaction: International conference HSI'2008: May 25-27, 2008, Kraków, Poland: Conference proceedings. Rzeszow: University of Information Technology and Management, 2008. p. 340-343. ISBN 1-4244-1543-8.

34. ZOLOTOVÁ, Iveta - LACIŇÁK, Stanislav - OCELÍKOVÁ, Eva: New trends in supervisory monitoring and control. In: AEI '2008: International Conference on Applied Electrical Engineering and Informatics: September 8-11, Greece, Athens 2008. Košice: FEI TU, 2008. p. 102-105. ISBN 978-80-553-0066-5.

35. FEDOR, Zlatko - SINČÁK, Peter: AIBO talking procedure based on incremental learning approach. In: Computational Intelligence: First Györ Symposium: Abstracts: Györ, 23. September 2008. Györ: Széchenyi István University, 2008. p. 40-41.

36. KOPČO, Norbert - LIN, I-Fan - SHINN-CUNNINGHAM, Barbara - GROH, Jennifer: Visual calibration of auditory spatial perception in humans and monkeys. In: Association for Research in Otolaryngology: Abstracts of the thirty-first annual midwinter research meeting: February 16-21, 2008, Phoenix, Arizona, USA. [New Jersey: Association for Reserach in Otolaryngology], 2008. p. 303, ISSN 0742-3152.

37. OZMERAL, Erol - BEST, Virginia - KOPČO, Norbert - MASON, Christine - KIDD, Gerald - SHINN-CUNNINGHAM, Barbara: Dynamic aspects of auditory spatial attention. In: Association for Research in Otolaryngology: Abstracts of the thirty-first annual midwinter research meeting: February 16-21, 2008, Phoenix, Arizona, USA. [New Jersey: Association for Research in Otolaryngology], 2008. p. 313, ISSN 0742-3152.

38. TOMORIOVÁ, Beáta - ANDOGA, Rudolf - KOPČO, Norbert: Influence of eye fixation on the effects of visual and auditory cuing in sound localization. In: Cognitive and neural systems: Twelfth international conference: Proceedings:

May 14 - 17, 2008, [Boston]. [Boston: Boston university], 2008. p. 29.

39. VAŠČÁK, Ján: Fuzzy cognitive maps in path planning. In: Computational Intelligence: First Györ Symposium: Abstracts: Györ, 23. September 2008. Györ: Széchenyi István University, 2008. p. 19-21.

40. ANGODA, Rudolf - FOZO, Ladislav - MADARÁSZ, Ladislav: Approaches in modeling of a small turbojet engine MPM 20. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 101-108. ISBN 978-1-4244-2106-0.

41. BABIČ, František - WAGNER, Jozef - PARALIČ, Ján: The role of ontologies in collaborative systems. In: SAMI 2008: Elektronický zdroj: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 119-124. ISBN 978-1-4244-2106-0.

42. BABIČ, František - PARALIČ, Ján - WAGNER, Jozef: KP-Lab platform based on service-oriented approach. In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 319-322. ISBN 978-80-227-2827-0.

43. BUNDZEL, Marek - KASANICKÝ, Tomáš: Growing ensemble of classifiers. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 183-187, ISBN 978-1-4244-2106-0.

44. BUTKA, Peter - HREŇO, Ján - LUKÁČ, Gabriel: SAKE project - architecture and first prototype. In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 96-100. ISBN 978-80-89284-10-8.

45. DOLINSKÁ, Saskia - GOLDÍROVÁ, Mária - JASEM, Pavol - PARALIČ, Ján - DUDÁŠ, Marek: Generation of effective bioinformatics tools for diagnosis and research on birth defect. In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 153-157, ISBN 978-80-89284-10-8.

46. ĎURČÍK, Zoltán - PARALIČ, Ján - KUŠNÍR, Jaroslav - DUBAYOVÁ, Katarína: Decomposition of spectral data from analysis of biological materials. In: SAMI 2008: 6th International Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 285-289. ISBN 978-1-4244-2106-0.

47. EPERJEŠI, Juraj: Gait optimization of AIBO robot based on interactive evolutionary computation. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 237-240. ISBN 978-1-4244-2106-0.

48. EPERJEŠI, Juraj - BUNDZEL, Marek - SINČÁK, Peter: Artificial intelligence in mobile robotics. In: SCYR 2008: 8th Scientific Conference of Young Researchers: Proceeding from conference: May 28th, 2008 Košice, Slovakia. Košice: FEI TU, 2008. pp. 92-94. ISBN 978-80-553-0036-8.

49. FILASOVÁ, Anna - KROKAVEC, Dušan.: Residual filter design using computational mathematics methods. In *Proceedings of the 6th IEEE*

International Conference on Computational Cybernetics ICCC 2008, November, 27-29, 2008, Stará Lesná, Slovak Republic, [CD ROM] / A. Szakál (ed.). Budapest Tech, Hungary, s. 96-100. ISBN 978-1-4244-2875-5 (IEEE Catalog Number: CFP08575-CDR)

50. FILASOVÁ, Anna - KROKAVEC, Dušan: Residual filter design for fault detection in linear discrete-time MIMO systems. In: Cybernetics and Informatics: International Conference SSKI, 10.-14. February 2008, Ždiar, Slovakia. Bratislava: STU, 2008. 10 pp. ISBN 978-80-227-2828-7.

51. GALDUN, Ján - TAKÁČ, Ladislav - LIGUŠ, Ján - THIRIET, Jean-Marc - SARNOVSKÝ, Ján: Distributed control systems reliability: consideration of multi-agent behavior. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. Budapest: Budapest Tech, 2008. pp. 157-162. ISBN 978-1-4244-2106-0.

52. GALDUN, Ján: Consideration of shared redundancy in networked control systems. In: SCYR 2008: 8th Scientific Conference of Young Researchers: Proceeding from conference: May 28th, 2008 Košice, Slovakia. Košice: FEI TU, 2008. pp. 115-117. ISBN 978-80-553-0036-8.

53. HLÁDEK, Daniel - VAŠČÁK, Ján - SINČÁK, Peter: Hierarchical fuzzy inference system for robotic pursuit evasion task. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. Budapest: Budapest Tech, 2008. pp. 273-277. ISBN 978-1-4244-2106-0.

54. JADLOVSKÁ, Anna - KABAKOV, Nikola - SARNOVSKÝ, Ján: Intelligent modeling and predictive control of non-linear system based on forward neural model. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 73-78, ISBN 978-1-4244-2106-0.

55. JASEM, Pavol - PARALIČ, Ján - DOLINSKÁ, Saskia - DUDÁŠ, Marek: Automatic retrieval of structured data for hereditary diseases research (in Slovak). In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 123-127, ISBN 978-80-89284-10-8.

56. JASEM, Pavol - DOLINSKÁ, Saskia - PARALIČ, Ján - DUDÁŠ, Marek: Automatic data mining and structuring for research on birth defects. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 137-139, ISBN 978-1-4244-2106-0.

57. JASEM, Pavol - JASEM, Pavol - HOROVČÁK, Ľubomír: Review of medical imaging methods. In: 3. Slovak Biophysical Symposium: Proceedings: Bratislava, 18.-20.4.2008. Bratislava: FMFI UK, 2008. pp. 44, ISBN 978-80-89186-31-0.

58. JASENOVEC, Ľubomír - JADLOVSKÝ, Ján: Model of the time delay on RemoteIO technology network. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 91-94. ISBN 978-1-4244-2106-0.

59. KOCSIS, Pavol - KROKAVEC, Dušan: State variables mode decoupling in state control design for linear MIMO systems. In: Cybernetics and Informatics:

International Conference SSKI, 10.-14. February 2008, Ždiar, Slovakia. Bratislava: STU, 2008. 8 pp. ISBN 978-80-227-2828-7.

60. KROKAVEC, Dušan - FILASOVÁ, Anna: Subspace identification method using orthogonal decomposition technique. In: Cybernetics and Informatics: International Conference SSKI, 10.-14. February 2008, Ždiar, Slovakia. Bratislava: STU, 2008. 9 pp. ISBN 978-80-227-2828-7.

61. KROKAVEC, Dušan - FILASOVÁ, Anna: Dynamic feedback controller design using computational mathematics methods. In: SAMI 2008: 6th International Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 55-58. ISBN 978-1-4244-2106-0.

62. LUKÁČ, Gabriel - BUTKA, Peter - MACH, Marián: Semantically-enhanced extension of the discussion analysis algorithm in SAKE. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 241-246. ISBN 978-1-4244-2106-0.

63. LUKÁČ, Gabriel - MACH, Marián - BUTKA, Peter: Design of a method for discussion group authors data mining (in Slovak). In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 50-53. ISBN 978-80-89284-10-8.

64. MADARÁSZ, Ladislav - KOVÁČ, Jozef - SENDERSKÁ, Katarína: Selection of assembly system type. In: SAMI 2008: 6th International Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 45-47. ISBN 978-1-4244-2106-0.

65. MACHOVÁ, Kristína - VRANA, Jozef - DZBOR, Martin: Ontológie v podpore sémantického webu. In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 12-15. ISBN 978-80-89284-10-8.

66. MACHOVÁ, Kristína - MODROVIČOVÁ, Jana: System AWA for support of web adaptivity (in Slovak). In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 355-358, ISBN 978-80-227-2827-0.

67. MODROVIČOVÁ, Jana: Clustering methods in the Internet user cognitive load decreasing. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. Budapest: Budapest Tech, 2008. pp. 169-172. ISBN 978-1-4244-2106-0.

68. POVAŽAN, Jozef - FOZO, Ladislav - ANDOGA, Rudolf - JUDIČÁK, Jozef: Possibilities of use of anytime control algorithms in turbojet engines (in Slovak). In: Nové trendy rozvoja letectva: 8. medzinárodná vedecká konferencia: 11. - 12. septembra 2008: Zborník. Košice: LF TU, 2008. pp. 103-104. ISBN 978-80-553-0067-2.

69. ROČKAI, Viliam: Associative concept learning (in Slovak). In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 182-191. ISBN 978-80-227-2827-0.

70. ROČKAI, Viliam: Automatic generation of words from one single syntactical-semantic class (in Slovak). In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia.

Košice: Centre for Information Technologies, 2008. pp. 133-136. ISBN 978-80-89284-10-8.

71. SARNOVSKÝ, Martin - BUTKA, Peter - SAFKO, Vladimír: Distributed clustering of textual documents in grid environment (in Slovak). In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 192-203. ISBN 978-80-227-2827-0.

72. SARNOVSKÝ, Martin - KOSTELNÍK, Peter - BUTKA, Peter - HREŇO, Ján - LACKOVÁ, Dáša: First demonstrator of HYDRA middleware architecture for building automation. In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 204-214. ISBN 978-80-227-2827-0.

73. SARNOVSKÝ, Martin - KOSTELNÍK, Peter - HREŇO, Ján - BUTKA, Peter: Device description in HYDRA middleware. In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 71-74. ISBN 978-80-89284-10-8.

74. SINČÁK, Peter: Do we need innovations based on artificial intelligence? (in Slovak). In: SOFTECON 2008: Professional conference about visions and trends in modern information technologies: Bratislava, March 6. 2008: Proceedings. SOFTEC, 2008. 28 p.

75. SINČÁK, Peter - REIFF, Tomáš: Incremental building of intelligent systems. In: Cybernetics and Informatics: International Conference SSKI, 10.-14. February 2008, Ždiar, Slovakia. Bratislava: STU, 2008. 5 pp. ISBN 978-80-227-2828-7.

76. SKOKAN, Marek - BUNDZEL, Marek - SINČÁK, Peter: Pseudo-distance based artificial neural network training. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 59-62, ISBN 978-1-4244-2106-0.

77. TAKÁČ, Ladislav - SARNOVSKÝ, Ján - LIGUŠ, Ján: Cybernetic modeling – changes in systems' structure (in Slovak). In: Cybernetics and Informatics: International Conference SSKI, 10.-14. February 2008, Ždiar, Slovakia. Bratislava: STU, 2008. 8 pp. ISBN 978-80-227-2828-7.

78. TOMORIOVÁ, Beáta - KOPČO, Norbert: Auditory spatial cuing for speech perception in a dynamic multi-talker environment. In: SAMI 2008: 6th International Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. S.l.: IEEE, 2008. pp. 247-250. ISBN 978-1-4244-2106-0.

79. TUTOKY, Gabriel: Comparison of incremental and non-incremental creation of classification models for text documents (in Slovak). In: 2nd Workshop on Intelligent and Knowledge oriented Technologies: Proceedings: November 15-16, 2007, Košice, Slovakia. Košice: Centre for Information Technologies, 2008. pp. 162-165. ISBN 978-80-89284-10-8.

80. UŽÁK, Matúš - VERTAĽ, Igor - JAKŠA, Rudolf - SINČÁK, Peter: Reduction of visual information in neural network learning process visualization. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. Budapest: Budapest Tech, 2008. pp. 279-284. ISBN 978-1-4244-2106-0.

81. VAŠČÁK, Ján - RUTRICH, Michal: Path planning in dynamic environment using fuzzy cognitive maps. In: SAMI 2008: 6th International Symposium on Applied

Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 5-9. ISBN 978-1-4244-2106-0.

82. VRANA, Jozef - MACHOVÁ, Kristína - DZBOR, Martin: Support of semantic retrieval on the web (in Slovak). In: Znalosti 2008: 7th conference, Bratislava, 13.-15. February 2008: Proceedings. Bratislava: STU, 2008. pp. 399-402, ISBN 978-80-227-2827-0.

83. VRANA, Jozef - DZBOR, Martin - MACHOVÁ, Kristína: Software means for the support of semantic web. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia: Proceedings. Budapest: Budapest Tech, 2008. pp. 147-150, ISBN 978-1-4244-2106-0.

84. VRANA, Jozef - MACHOVÁ, Kristína - DŽBOR, Martin: Ontologies and web services as building blocs of the semantic web (march 2008). In: SCYR 2008: 8th Scientific Conference of Young Researchers: Proceeding from conference: May 28th, 2008 Košice, Slovakia. Košice: FEI TU, 2008. pp. 159-161. ISBN 978-80-553-0036-8.

85. VÝROSTKOVÁ, Jana - OCELÍKOVÁ, Eva: Classification of experimental data by simple and composed classifiers. In: SAMI 2008: 6th international Symposium on Applied Machine Intelligence and Informatics: January 21-22, 2008, Herľany, Slovakia. Budapest: Budapest Tech, 2008. pp. 25-28. ISBN 978-1-4244-2106-0.

9.4. Others

1. FŐZŐ, Ladislav: Use of mathematical model of steady and nonsteady operation of MPM20 turbojet engine by design of anytime control algorithms (in Slovak), Dissertation thesis, Dept. of Cybernetics and AI, Faculty of Electrical Engineerin and Informatics, Technical University of Košice, Slovakia, 144 p., september 2008

2. HLÁDEK, Daniel: Learning by means of genetic fuzzy systems in multiagent control of mobile robots (in Slovak). Written work for dissertation exam (in Slovak). Košice 2008. 58 p.

3. MACHOVÁ, Kristína: Machine learning in documents' processing and support of adaptive web (in Slovak): Habilitation thesis. Košice 2008. 80 p.

4. MALIŇÁK, Pavol: Incremental learning algorithms for recognition systems (in Slovak). Written work for dissertation exam (in Slovak). Košice 2008. 82 p.