DEPARTMENT OF AUTOMATIC CONTROL SYSTEMS

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I. STAFF

Professors	Prof. Ing. Štefan Kozák, PhD., Prof. Ing. Ján Murgaš, PhD., Prof. Ing. Vojtech Veselý, DrSc.
Associate Professors	Doc. Ing. Ladislav Harsányi, PhD., Doc. Ing. Branislav Hrúz, PhD., Doc. Ing. Peter Hudzovič, PhD., Doc. Ing. Ivan Sekaj, PhD., Doc. Ing. Zdenka Králová, PhD.,
Assistant Professors	Ing. Mária Dúbravská, Ing. Jana Flochová, PhD., RNDr. Gabriel Juhás, PhD., Ing. Slavomír Kajan, Ing. Alena Kozáková, PhD., Ing. Ladislav Körösi, Ing. Eva Miklovičová, PhD., Ing. Leo Mrafko, Ing. Danica Rosinová, PhD., Ing. Terézia Švantnerová, PhD.
Research Workers	Ing. Martin Foltin, Ing. Ľubomír Grman, Ing. Monika Hejdová, Ing. Mária Hypiusová, PhD., Ing. Jana Paulusová
Technical Staff	Pavlína Knežíková (secretary), Ing. Jozef Babirád, Peter Detvaj, Margita Záchejová
PhD. Students	Ing. Ján Cigánek, Ing. Peter Drozd, Ing. Tomáš Chvostek Ing. Martin Kratmüller, Ing. Radko Memersheimer, Ing. Marián Mrosko, Ing. Juraj Perkácz, Ing. Vladislav Řikovský, Ing. Michal Spišiak

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory of Linear Systems
- Laboratory of Optimal Control
- Laboratory of Adaptive Control
- Laboratory of Process Control
- Laboratory of Control System Software
- Laboratory of Modelling and Control of Discrete Event Systems
- Laboratory of Industrial Information Technologies
- Laboratory of Simulation and Modelling of Intelligent Systems
- Laboratory of Control, Information and Communication Technologies

II.2 Special Measuring Instruments, Software and Computers

- Programmable Controllers SLC Allen Bradley (with PC SW Support and Net Components DH+, DH485, DeviceNet)
- Programmable Controllers PLC 5/25 and 5/20E (with PC SW Support and Net Components)
- Programmable Controllers MicroLogix 1000
- Programmable Controllers UDC Honeywell
- Programmable Controllers Modicon TSX Premium (TSX P572623, TSX P57352, P5720, P5710 with PC SW Support and Network Components)
- Programmable Controllers Simatic S7-300 (313C-2DP, 314C-2DP) with Ethernet Communication Module CP343-1 IT and I/O Modules SM331, SM332, SM321, SM322
- Distributed Control System Yokogawa Centum

- PanelView 550 Allen Bradley and PanelView 900 Allen Bradley
- FLEX I/O Allen Bradley Modules
- Allen Bradley Motor Drives
- Synchronous Motor, Asynchronous Motor, Servo PLC LENZE
- Industrial CAN Modules PROMOS line 2
- Production Line Model
- Production Line Model with Crane
- Production Line Model with Conveyors
- Production Line Model with Conveyors and Manipulators
- Transportation Model
- Model for Ball Color Separation
- Bouncing Ball Model
- Tank Level Control Model
- Magnetic Levitation Model
- Helicopter Model
- Railway Transfer Station Model
- Software Tool PL7 PRO for Modicon PLC
- Software CS3000 - Yokogawa
- Software I/A Series Softpack – Invensys Foxboro
- Software for Robust Controller Design
- Matlab R14
- Sybase Power Designer
- PROMOTIC SCADA Software
- CITECT SCADA Software
- Laboratory Controller and Development System LABREG
- Software MODES for Power System Modelling and Analysis
- WITNESS – Software Tool for Visual Interactive Simulation of Both Continuous Flow and Discrete Event Processes
- Data acquisition card for PC (Humusoft, Advantech)
- PLC SIMATIC S7-200, S7-300
- SIMATIC Panels TP107A, OP107B
- Frequency Converter SIEMENS MICROMASTER
- Software WinCC
- Programming Software Step7 Professional

III. TEACHING

III.1 Undergraduate Study (Bc.)

Subject, semester, hours per week for lectures and for seminars or practical exercises, name of lecturer

Modeling and simulation	(3rd sem, 3-2h)	Š.Kozák
Data processing systems	(3rd sem, 3-2h)	J.Flochová
Control Theory	(4th sem., 3-2h)	J.Murgaš
Matlab	(5th sem., 2-2h)	Š.Kozák
Linear Systems	(5th sem., 3-3h)	Š.Kozák
Introduction to Control Theory	(5th sem., 2-2h)	L.Harsányi
Optimization	(6th sem., 3-2h)	P.Hudzovič
Control System Software	(6th sem., 2-3h)	J.Flochová
Introduction to Control System Design	(6th sem., 2 2h)	B.Hrúz

Process Dynamics	(7th sem., 3-2h)	E.Miklovičová
Data Processing in Control Systems	(7th sem., 2-2h)	Z.Králová
Continuous Process Control	(8th sem., 3-2h)	V.Veselý
Industrial Information Systems Design	(8th sem., 2-2h)	B.Hrúz
Production Management	(8th sem., 2-2h)	Z.Králová

Distance study

Automation 1	(6th sem.)	J.Murgaš
Control theory	(7th sem.)	J.Murgaš
Linear systems	(11th sem.)	Š.Kozák

III.2 Graduate Study (Ing.)

Power System Control	(1st sem., 3-2h)	L.Harsányi
Multivariable System Control	(1st sem., 3-2h)	V.Veselý
Theory of Discrete Event Systems	(1st sem., 3-2h)	B.Hrúz
Databases of Control Systems	(1st sem., 2-2h)	Z.Králová
Industrial Information Systems Design	(1st sem., 2-2h)	B.Hrúz
Theory of Large Scale Systems	(2nd sem., 3-2h)	D.Rosinová
Fuzzy and Neural Controllers	(2nd sem., 3-2h)	I.Sekaj
Advanced Control Methods	(2nd sem., 2-2h)	Š.Kozák
Optimal Control	(2nd sem., 3-2h)	A.Kozáková
Operations Research	(2nd sem., 3-2h)	Z.Králová

IV. RESEARCH PROJECTS

- Advanced Control Methods, G 1/0158/03, V.Veselý
- Intelligent Control Systems, G 1/0155/03, Š.Kozák
- The Effect of Market Environment upon the Transfer and Conversion of Electric Energy, R&D State Program - 2004 SP 26 06K0C02, J.Murgaš
- Modelling, Control and Simulation of Distributed Manufacturing Systems, APVT - 51 - 011602, Š.Kozák
- Application of Artificial Intelligent Methods in Modelling and Control of Critical Processes in Power Industry, APVT - 20-031404, Š.Kozák
- Research and Development of HW and SW Modules of Positioning Sensoric Systems Carriers, APVV - 99-P05305, Š. Kozák
- Study of Advanced Laser Welding Technologies and Systems for Industrial Application, APVT - 99 - 002502, J.Murgaš
- Application of the Advanced Simulation Program Systems in Courses of the Study Program Production Technologies, KEGA 3/2411/04, Z. Králová
- Designing of Virtual Laboratories and Educational Programs, KEGA 3/3075/05, J. Murgaš

V. COOPERATION

V.1 Cooperation in Slovakia

- AXESS Ltd., Bratislava
- Alfa Base Ltd., Bratislava
- ATEC Ltd., Bratislava
- Business for Excellence Ltd., Bratislava
- Comenius University, Bratislava, Faculty of Natural Sciences
- ControlTech Industrial Automation Ltd., Trnava
- Eltis Ltd., Banská Bystrica
- ESAB Ltd., Bratislava
- EVPU Nová Dubnica
- Gratex International Inc., Bratislava
- HMH Ltd., Bratislava
- Honeywell Ltd., Bratislava
- Institute of Informatics, Slovak Academy of Sciences, Bratislava
- Johnson Controls Ltd., Bratislava
- KFB Control Ltd., Bernolákovo
- Kybernetika Ltd., Košice
- Legrand Slovakia
- MicroStep Ltd., Bratislava
- MicroStep-HDO Ltd., Bratislava
- PPA Controll Inc., Bratislava
- PPA Energo Ltd., Bratislava
- ProCS Ltd., Šaľa
- Regotrans – rittmeyer Ltd., Bratislava
- Research Institute of Welding, Bratislava
- Siemens Ltd., Bratislava
- Slovak Power Plants Inc., Bratislava
- Slovak Electricity Transmission System, Ltd, Bratislava
- Schneider Electric Slovakia Ltd.
- Start Automation Ltd., Malacky
- SPP – Slovtransgaz Inc., Nitra
- SWH – Siemens Business Service, Bratislava
- Technical University of Košice
- Tecton Ltd., Bratislava
- Telegyr Systems (Slovakia) Ltd., Bratislava
- Termoreg Ltd., Bratislava
- Trellis Inc., Trenčín
- TTC Ltd., Nitra
- UNIT Ltd., Bratislava
- University of Žilina
- Volkswagen Slovakia Inc., Bratislava
- VUJE Inc., Trnava

V.2 International Cooperation

- Czech Technical University of Prague, CzR
- Democritos University of Thrace, Xanthi, Greece
- Ghent University, Belgium
- Humusoft Ltd., Praha
- Institute for Machine and Process Automation, University of Technology, Vienna, Austria
- Institute for Problems of Mechanical Engineering, St.Petersburg, Russia
- Institute of Information Theory and Automation, Academy of Sciences of the Czech Republic, Prague, CzR

- IRCyN, Ecole Centrale de Nantes, France
- Moscow Power Institute, Moscow, Russia
- Schneider Electric, Germany
- SOMMER, GmbH, Austria
- Technical University of Brno, CzR
- Technical University of Liberec, CzR
- Technical University of Ostrava, CzR
- Technical University of Tomas Bata in Zlin, CzR
- University of Bochum, Germany
- University of Bremen, Germany
- University of Maribor, Slovenia
- University of West Bohemia in Plzeň, CzR
- University of Zagreb, Croatia

V.3 Membership in International Organizations and Societies

- B.Hrúz: IFAC (International Federation of Automatic Control), member of the Technical Committee on Discrete Event and Hybrid Systems
- Š.Kozák: IFAC, member of the Technical Committee on Linear Control Systems
- J.Murgaš: IFAC, member of the Technical Committee on Adaptive and Learning Systems
- V.Veselý: IFAC, member of the Technical Committee on Robust Control
- Š.Kozák, J.Murgaš, V.Veselý: members of IEEE (Institute of Electrical and Electronics Engineers)
- J.Murgaš: member of the American Mathematical Society
- Š.Kozák: Publishing House Pergamon Press - editor

VI. THESES

VI.1 Masters Theses

Masters theses supervised at the Department of Automatic Control Systems. The names of supervisors are in brackets.

[1] F. Auxt: Analysis of discrete event system models in object-oriented language C++ (J. Flochová)
[2] F. Bacho: Web application for MS Access teaching (J. Flochová)
[3] T. Belák: Virtual laboratory for modelling, control and simulation of control processes (Š. Kozák)
[4] T. Böjtös: Development of program modules for fault diagnosis of discrete event systems controlled by PLC (J. Flochová)
[5] P. Bútora: Control system of laboratory turbogenerator (J. Murgaš)
[6] A. Darnay: Decentralized controller design via LMI approach (D. Rosinová)
[7] S. Dorák: Model reduction for large scale systems – generalized balanced realizations (D. Rosinová)
[8] V. Gandi: Modelling and control of automated product transportation and storage (B.Hrúz)
[9] K. Grejták: Self-tuning predictive neural controllers (Š. Kozák)
[10] J. Gyurkovics: Development of program modules for supervisory control of discrete event systems using PLC (J. Flochová)
[11] J. Harušinec: Performance analysis of control loops with robust controllers (T. Švantnerová)
[12] J. Huršan: Discrete robust controller design using LMI (D. Rosinová)
[13] P. Jánoš: Vizualization system design in YOKOGAWA CENTUM 3000 environment for a technology model controlled by PLC (M. Mrosko)
[14] T. Juhász: Inverted pendulum control design (D. Rosinová)

[15] T. Károlyi: Development of program modules for supervisory control of discrete event systems using PLC (J. Flochová)
[16] A. Klima: Modelling and control of freight train reloading station using Stateflow (M. Foltin)
[17] M. Krascenits: Robust controller design for hybrid system (V.Veselý)
[18] I. Kürti: Robust PID controller design (M. Dúbravská)
[19] B. Lavička: Modelling and control of non-linear dynamic systems with radial basis functions (RBF) (Š. Kozák)
[20] R. Mihok: Fuzzy predictive controller design (J. Paulusová)
[21] M. Mušec: Modelling and control of river pollution using coordinated methods (D. Rosinová)
[22] M. Nevidzan: Laboratory model control using PLC (M. Hejdová)
[23] M. Nídel: Design of control structures using genetic programming tools (I. Sekaj)
[24] R. Pribiš: Optimization of neural structures for nonlinear dynamic systems (Š. Kozák)
[25] L. Prvák: Optimization and transport processes in production systems (Z. Králová)
[26] P. Sopko: Control of automatically directed vehicles in flexible manufacturing systems (B. Hrúz)
[27] M. Struhár: Optimal neural network control structure (Š. Kozák)
[28] J. Sýkora: Robust PI(D) design for SISO and MIMO systems using LMI (V. Veselý)
[29] R. Štefanec: Software support for the final production test of HCA (M. Hejdová)
[30] P. Štellmach: Program package for robust controller design for continuous systems (M. Hypiusová)
[31] R. Tellur: Conference information system (Z. Králová)
[32] M. Tisovský: Robust PID controller design for SISO interval system (V. Veselý)
[33] M. Trvalík: Coordination methods for large-scale dynamic system control (D. Rosinová)
[34] M. Tvrdý: Engineering methods of PID controller parameters setting for SISO and MIMO systems (V. Veselý)
[35] R. Valo: Modification of Levenberg – Marquardt learning method for neural networks (L. Körösi)

VI.2 Doctoral Theses

[1] M. Gonos: Model reference adaptive control in the presence of unmodelled dynamics. (J.Murgaš)
[2] Ľ. Grman: Stability analysis and robust controller design for linear systems (V.Veselý)

VII. OTHER ACTIVITIES

- 13th Annual Conference Technical Computing, Prague November 15, 2005
  M. Foltin – member of the Conference Committee
- Conference WITNESS 2005, Kroměříž, Czech Republic, May 26-27, 2005:
  Z. Králová - member of the Program Committee
- Bachelor study, present state, experience and results. Meeting of automatic control departments from Czech Republic and Slovak Republic 2005. Brno, Czech republic, September 14-16, 2005: Š. Kozák - member of the International Program Committee
- 15th International Conference Process Control 2005, Štrbské pleso, Slovak republic, June 7-10, 2005: Š. Kozák, V. Veselý - members of the International Program Committee
- 1st International Workshop on Advanced Control Circuits and Systems, Cairo, Egypt, March 6-10, 2005: Š. Kozák, B. Hrúz, V. Veselý - members of the International Program Committee
- International conference Cybernetics and Informatics, Dolný Kubín, Slovak republic, February 9-11, 2005: Š. Kozák - Chairman of the International Program Committee
  V. Veselý - Vice-Chairman of the International Program Committee
  J. Murgaš - member of the International Program Committee

M. Hejdová, P. Knežíková, A. Kozáková, L. Körösi, M. Mrosko, R. Memersheimer, D.Rosinová, M. Foltin - members of the National Organizing Committee
- SSKI (Slovak Society for Cybernetics and Informatics): Š. Kozák - President, V. Veselý, B. Hrúz - Vice-Presidents
- Czech and Slovak Society for System Simulation (CSSS): J. Flochová - member
- Journal „Cybernetics and Informatics“: Š. Kozák – Editor-in-Chief B. Hrúz, V. Hudačin, L. Körösi, A. Kozáková, V. Král, E. Miklovičová, - Editors D. Rosinová - Managing Editor J. Murgaš, V. Veselý - member of International Editorial Board
- AT&P Journal:, J. Murgaš V. Veselý - member of Editorial Board
- Journal of Electrical Engineering: V. Veselý - member of Editorial Board
- Journal „Selected Topics in Modelling and Control“: V. Veselý - Editor, Š. Kozák, J. Murgaš - members of Editorial Board
- Š. Kozák: guarantor for the scientific branch Mechatronics
- Project Management Association of Slovakia: Z. Králová - member
- Slovak Society for Operations Research: Z.Králová - council member
- Training of automobile industry workers, Bratislava, Slovak republic, February 17-18, 2005 Š. Kozák – contact, L. Körösi, M. Mrosko – organizing committee
- Seminar Real Time Workshop, Bratislava, Slovak republic, April 27-29, 2005 Š. Kozák – contact, M. Foltin, L. Körösi – organizing committee
- Seminar Virtual reality - Matlab, Bratislava, Slovak republic, June 29-30, 2005 Š. Kozák – contact, M. Foltin, M. Mrosko – organizing committee
- Seminar Visualization Systems in Industrial Applications, Bratislava, Slovak republic, October 27, 2005 Š. Kozák – contact, R. Memersheimer, M. Mrosko - organizing committee

VIII. PUBLICATIONS

VIII.1 Journals

[1] GRMAN, Ľ., ROSINOVÁ, D., VESELÝ, V., KOZÁKOVÁ, A.: Robust Stability Conditions for Polytopic Systems. In: International Journal of Systems Science. - Vol.36, No.15 (2005) - pp. 961-973. (in English)

[2] GRMAN, Ľ., VESELÝ, V.: Robust Output Feedback Quadratic Controller Design. In: Journal of Electrical Engineering. - Vol.56, No.5-6 (2005) - pp. 128-134. (in English)

[3] MURGAŠ, T., CHVOSTEK, T.: Numerical Servosystem Control via CAN. In: EE - časopis pre elektrotechniku a energetiku. - Vol.11, Special Issue (2005) - pp. 48-52. (in Slovak)

[4] SEKAJ, I., PERKÁCZ, J., ŠRÁMEK, M.: Utilization of Evolutionary Computation in Practical Tasks. In: EE - časopis pre elektrotechniku a energetiku. - Vol.11, Special Issue (2005) - pp. 27-29. (in Slovak)

[5] SEKAJ, I., VESELÝ, V.: Robust Output Feedback Controller Design: Genetic Algorithm Approach. In: IMA Journal of Mathematical Control and Information. - Vol.22 (2005) - pp. 257-265. (in English)

[6] SPIŠIAK, M., KOZÁK, Š.: Automatic Generation of Neural Network Structures Using Genetic Algorithm. In: Neural Network World. - Vol.15, No.5 (2005) - pp. 381-394. (in English)

[7] VESELÝ, V.: Engineering Methods of PI Controller Parameters Setting for MIMO Systems (1). In: AT&P Journal. - Vol.12, No.4 (2005) - pp. 66-67. (in Slovak)

[8] VESELÝ, V.: Engineering Methods of PI Controller Parameters Setting for MIMO Systems (2). In: AT&P Journal. - Vol.12, No.5 (2005) - p. 118. (in Slovak)

[9] VESELÝ, V.: Static Output Feedback Robust Controller Design via LMI Approach. In: Journal of Electrical Engineering. - Vol.56, No.1-2 (2005) - pp. 3-8. (in English)

[10] VESELÝ, V., HARSÁNYI, L.: PSS Design via Disturbance Attenuation Method. In: Journal of Electrical Engineering. - Vol.56, No.3-4 (2005) - pp. 110-112. (in English)

[11] VESELÝ, V., KOZÁKOVÁ, A.: A Power System Application of a Robust Decentralized Controller Design Methodology. In: Archives of Control Sciences. - Vol.15, No.2 (2005) - pp. 137-148. (in English)

[12] ZOLOTOVÁ, I., FLOCHOVÁ, J., OCELÍKOVÁ, E.: Database Technology and Real Time Industrial Transaction Techniques in Control. In: Journal of Cybernetics and Informatics. - Vol.5 (2005) - pp. 18-23. (in English)

VIII.2 Conferences

[1] ÁGH, T., BLAHO, M., BARTOŠ, S., FOLTIN, M., KOLLÁRčíK, M., SEKAJ, I.: The Laboratory of Evolutional Computing. In: 13th Annual Conference "Technical Computing 2005" : Prague, Czech Republic, 15.11.2005. (in English)

[2] CHVOSTEK, T., MURGAŠ, T., DLUHÝ, M., FOLTIN, M.: Adaptive Heuristic PID Controller Realization in RTLinux. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 16.1-7. (in Slovak)

[3] CHVOSTEK, T., ORGOŇ, J., FOLTIN, M., MURGAŠ, T., DLUHÝ, M.: Real Time Linux Process Control Using Adaptive Heuristic PID Controller. In: 15th International Conference on Process Control '05 : Štrbské Pleso, Slovak Republic, 7.-10.6.2005. pp. 178.1-9. (in English)

[4] FLOCHOVÁ, J., AUXT, F.: Supervisory Control Simulation and Web-Based Teaching. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 158-162. (in English)

[5] FOLTIN, M., CHVOSTEK, T., HUMAJ, M.: Technological Process Vizualization via DDE. In: 13th Annual Conference "Technical Computing 2005" : Prague, Czech Republic, 15.11.2005. (in Slovak)

[6] HARSÁNYI, L., DÚBRAVSKÁ, M.: Performance of Robust Control Loop. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 40-50. (in Slovak)

[7] HERDA, M., VESELÝ, V.: Controller for Hybrid Parameter-Dependent Systems. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 51-56. (in English)

[8] KÖRÖSI, L., KOZÁK, Š.: Optimal Neural Network Structures for Modelling and Control Design. In: IEEE 4th International Conference on Intelligent Systems Design and Applications : Budapest, Hungary, 26.-28.8.2004. (in English)

[9] KÖRÖSI, L., KOZÁK, Š.: Optimal Self Tuning Neural Network Controller Design. In: 16th IFAC World Congress : Prague, Czech Republic, 3.-8.7.2005. CD-Rom.(in English)

[10] KOZÁK, Š.: Future, Perspectives and Implementation of Advanced Control Methods and Information and Communication Technologies. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. ii-viii. (in Slovak)

[11] KOZÁK, Š., MEMERSHEIMER, R.: Robust Hybrid Polynomial Controller Design. In: 1st International Workshop on Advanced Control Circuits and Systems ACCS'05 : Cairo, Egypt, 6.-10.3.2005. CD-Rom. (in English)

[12] KOZÁK, Š., MEMERSHEIMER, R., KOZÁKOVÁ, A.: Robust Neural Networks Modeling and Control. In: IEEE International Symposium on Intelligent Signal Processing : Faro, Portugal, 1.-3.9.2005. CD-Rom. (in English)

[13] KOZÁK, Š., VESELÝ, V., JURIŠICA, L., HRÚZ, B.: New Organizational Forms and Requirements for Bachelor Education in the Field of Automation. In: : Meeting of Automatic Control Departments from Czech Republic and Slovak Republic "Bachelor's Study, Present State, Experience and Results": Brno, Czech Republic, 14.-16.9.2005. pp. 36-41. (in Slovak)

[14] KOZÁKOVÁ, A.: Design of a Decentralized PID Controller for the Glass Tube Drawing Process. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 77-83. (in English)

[15] KOZÁKOVÁ, A., VESELÝ, V.: A Frequency Domain Design Technique for Robust Decentralized Controllers. In: 16th IFAC World Congress : Prague, Czech Republic, 3.-8.7.2005. CD-Rom. (in English)

[16] KRÁLOVÁ, Z.: Learning Systems for Production Management and Production System Simulation. In: 8th Conference WITNESS 2005 : Kroměříž, Czech Republic, 26.-27.5.2005. pp. 45-51. (in Slovak)

[17] MEMERSHEIMER, R., KOZÁK, Š.: Robust GA Polynomial Controller Design. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 292-298. (in English)

[18] MEMERSHEIMER, R., KOZÁK, Š.: Robust Polynomial Controller Design. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp.299-307. (in English)

[19] MIKLOVIČOVÁ, E., MURGAŠ, J., GONOS, M.: Reducing the Effect of Unmodeled Dynamics by MRAC Control Law Modification. In: 16th IFAC World Congress : Prague, Czech Republic, 3.-8.7.2005. CD-Rom. (in English)

[20] MROSKO, M., MIKLOVIČOVÁ E., MURGAŠ, J.: Predictive Control Using Genetic Algorithms for Positional Servosystem. In: 15th International Conference on Process Control '05 : Štrbské Pleso, Slovak Republic, 7.-10.6.2005. pp. 152.1-6. (in English)

[21] MROSKO, M., MIKLOVIČOVÁ, E.: Predictive Control Using Genetic Algorithms and Multicriterial Optimisation. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 308-314. (in Slovak)

[22] MURGAŠ, J., SEKAJ, I., FOLTIN, M., MIKLOVIČOVÁ, E.: Optimization of Power System Stabilizer by Genetic Algorithm. In: 16th IFAC World Congress : Prague, Czech Republic, 3.-8.7.2005. CD-Rom. (in English)

[23] PAULUSOVÁ, J., KOZÁK, Š.: Predictive Fuzzy Control Application. In: EUROCON 2005 - The International Conference on Computer as a Tool : Belgrade, Serbia and Montenegro, 21.-24.11.2005. pp. 241-244. (in English)

[24] PAULUSOVÁ, J., KOZÁK, Š., BOTTO, J.: Predictive Fuzzy Control. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 116-122. (in English)

[25] ROSINOVÁ, D.: Robust Discrete Time Systems Control: Comparison of LMI Methods. In: 15th International Conference on Process Control '05 : Štrbské Pleso, Slovak Republic, 7.-10.6.2005. pp. 196.1-6. (in English)

[26] ROSINOVÁ, D.: Robust Discrete-Time Systems Control: Comparison of LMI Methods. In: 1st International Workshop on Advanced Control Circuits and Systems ACCS'05 : Cairo, Egypt, 6.-10.3.2005. (in English)

[27] ROSINOVÁ, D., VESELÝ, V.: Robust Control for Uncertain Polytopic System Using LMI. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 127-132. (in English)

[28] ŘÍKOVSKÝ, V.: Kinematic Control of Redundant Manipulators Using Soft-Computing Methods. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 191-198. (in Slovak)

[29] SEKAJ, I., ŠRÁMEK, M.: Robust Controller Design Based on Genetic Algorithms and System Simulation. In: 44th IEEE Conference on Decision and Control and European Control Conference ECC'05 : Seville, Spain, 12.-15.12.2005. CD-Rom.(in English)

[30] SPIŠIAK, M., KOZÁK, Š.: Generation of Neural Model Optimal Structure. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 133-141. (in Slovak)

[31] VÁSZONDY, A., KRÁLOVÁ, Z., ALMAN, B.: Simulation Analysis of the Line Alfa-Porsche in Volkswagen Slovakia, Inc.. In: 8th Conference WITNESS 2005 : Kroměříž, Czech Republic, 26.-27.5.2005. pp. 53-60. (in Slovak)

[32] VESELÝ, V.: Engineering Methods of PI Controller Parameters Setting. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 144-149. (in Slovak)

[33] VESELÝ, V.: Robust Guaranteed Cost Controller Design for Linear Polytopic Systems. In: 15th International Conference on Process Control '05 : Štrbské Pleso, Slovak Republic, 7.-10.6.2005. pp. 194.1-6. (in English)

[34] VESELÝ, V., KOZÁKOVÁ, A.: Independent Design of Robust Decentralized Controllers. In: 1st International Workshop on Advanced Control Circuits and Systems ACCS'05 : Cairo, Egypt, 6.-10.3.2005. (in English)

[35] VESELÝ, V., KOZÁKOVÁ, A.: Robust PSS Design for a Multivariable Power System. In: 2005 IEEE St.Petersburg PowerTech Conference : St.Petersburg, Russia, 27.-30.6.2005. CD-Rom. (in English)

[36] VESELÝ, V., ROSINOVÁ, D., KOZÁKOVÁ, A., HYPIUSOVÁ, M., GRMAN, Ľ.: Robust Control of Linear Systems - A Survey. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 142-143. (in Slovak)

[37] ZOLOTOVÁ, I., FLOCHOVÁ, J., OCELÍKOVÁ, E.: Database Technology and Real Time Industrial Transaction Techniques in Control. In: International Conference "Cybernetics and Informatics" : Dolný Kubín, Slovak Republic, 9.-11.2.2005. pp. 214-219. (in English)

VIII.3 Book

[1] SEKAJ, I.: Evolutionary Computations and Their Practical Utilization. - Bratislava: IRIS, 2005. - 157 pp. (in Slovak)

VIII.4 Part of Book

[1] KOZÁK, Š., SPIŠIAK, M.: Optimal Control Structure Determination Using Artificial Intelligence Methods. In: Optimal Control of Processes Based on the Use of Informatics Methods. / Ed: Hrubina, K., Taufer, I. - Košice: TU, 2005. - pp. 195-208. (in English)