DEPARTMENT OF ELECTRICAL, MECHATRONIC AND INDUSTRIAL ENGINEERING

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1 DEPARTMENT'S PROFILE

The Department was established from the previous units: from Department of Electrical Drives and Mechatronics and from Laboratory of Industrial Engineering. The both units fused into the Department of Electrical, Mechatronic and Industrial Engineering.

The Department is responsible for education and research in electrical engineering in fields of power and industrial electronics, electrical machines and apparatuses, electromechanical systems, esp. in controlled drives, industrial and automotive mechatronic systems and in the area of effective production planning and control, quality management, and continuous improvement of products and services. The Department offers both types of undergraduate courses (master and bachelor courses) as well as the Ph.D. postgraduate course in Electrical Engineering.




2 STAFF

Professors:	prof. Ing. Jaroslav Timko, PhD.	
	prof. Ing. Ladislav Zboray, PhD.	
Associate Professors:	doc. Ing. Jaroslav Dudrik, PhD.	
	doc. Ing. Viliam Fedák, PhD.	
	doc. Ing. Pavol Fedor, PhD.	
	doc. Ing. Ján Fetyko, PhD.	
	doc. Ing. Michal Girman, PhD.	
	doc. Ing. Iraida Kolcunová, PhD.	
	doc. Ing. Michal Kostelný, PhD.	
	doc. Ing. Peter Kováčik, PhD.	
	doc. Ing. Irena Kováčová, PhD.	
	doc. Ing. Jozef Ondera, PhD.	
	doc. Ing. Daniela Perduková, PhD.	
	doc. Ing. Pavel Záskalický, PhD.	
Assistant Professors:	Ing. Peter Bober, PhD.	Ing. Peter Kmec, PhD.
	Ing. František Ďurovský, PhD.	Ing. Peter Košč, PhD.
	Ing. Stanislav Fedor	Ing. Želmíra Ferková, PhD.
	Ing. Ján Kaňuch	Ing. Jaroslava Žilková, PhD.
Assistants:	Ing. Stanislav Beláň (by 31 Dec. 2005)	
Senior Scientists:	Ing. Emanuel Hutník	doc. Ing. Juraj Oetter, PhD.
	Ing. Peter Keusch	Ing. Peter Višnyi, PhD.
Technical Staff:	Ing. Gabriela Brečková	Zuzana Olexová
	Katarína Gočová	Ing. Vladimír Suchý
	František Hajsák (part time)	
Ph.D. Students:	Ing. Dominik Fabrici	Ing. Peter Macko
	Ing. Peter Girovský	Ing. Martin Olejár
	Ing. Tomáš Hrdina	Ing. Martin Repiščák
	Ing. Milan Lacko	Ing. Ladislav Nemec

3 EQUIPMENT

3.1. Teaching and Research Laboratories

- two laboratories for teaching of subjects on electrical engineering basics
- Power Electronics Laboratory, Applied Electronics Laboratory
- Laboratory for CAD and Robotics (COSMOS, ProEngineer, MATLAB, PSpice, and applied SW)
- Laboratory of Industrial Automation and Mechatronics
- Laboratory of Electrical Machines and Apparatuses
- two specialized laboratories for electrical drives and servosystems based on industrial systems
- Laboratory of Industrial Systems for teaching of subjects Industrial Systems and Automation of Technological Processes.
- Laboratory of Information Technologies for Multimedia Techniques, Java

Programming, Information Systems in Industry, Simulation of Production Systems, and Business Process Modeling.

3.2. Special Measuring Instruments and Computers

Control Systems

- Modicon TSX Premium (Schneider Electric) incl. development SW (PL7 Pro V3.1), TELEMECANIQUE (TSX 07).
- OMRON - Sysmac Mini SK20, OMRON - Sysmac CQM 1
- Allen Bradley Programmable controller SLC 200 incl. development SW RS logic 500, Tech. Terminal AB PanelView 550 and converter AB 1305
- Control system Simadyn
- Automat LOGO, Siemens
- SIEMENS - SIMATIC S7-400 with SIMATIC NET CP for Industrial Ethernet, FM-458, SIMATIC S7-300 with PID Control Module and SIVAREX Weight Module, and two SIMATIC ET200M, LOGO controller.

Apparatus

- Logic Analyser PHILIPS
- Controlled drives and converters
- DSP controlled AC drive
- DSP based dSpace DS1102 for Hardware in the Loop
- DOMINOPUTER - teaching kit
- Pneumatic and hydraulic systems FESTO DIDACTIC - teaching kit
- 4-channel digital oscilloscope METIX

Converters

- AC Frequency Converter ABB ACS 600, 5,5 kW,
- AC Frequency Converters SIEMENS: SIMOVERT 6SE21, MicroMaster Junior, SIMOVERT 6SE70 Master drive, 6SE70 Master Drives - Motion Control 2-axes servodrive
- DC thyristor converters SIMOREG 6RA24 a 6RA70 DCMaster (SIEMENS)
- Softstarter (ABB, Siemens)
- Ward-Leonard drive system

Mechatronics systems

- Educational Robot Tech Quipment MA 2000
- Physical model of production line
- Model of liquid reservoir
- Model of caster material reservoirs
- Model of flow rate control
- Model of crane and inverted pendulum
- Modular Production System from FESTO DIDACTIC (full functional distribution, testing, and processing stations controlled by PLC)

Software

- ARIS tool for business process reengineering
- Cognos ReportNet, Impromptu, PowerPlay, Cognos Metrics Manager
- ELCAD for electrical engineering design

- J Builder for Java programming
- Macromedia Director
- Matlab, Simulink, dSpace
- PS-8 project management software,
- PV 4 simulation software
- SIMPLE++ simulation software

4 TEACHING

4.1. Undergraduate Study (Bc.)

a) Bc. study programme on Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Electrical Engineering Fundamentals	1st	3/1	Ďurovský
Electrical Machines and Apparatuses	3rd	2/0	Kostelný
Applied Electronics	3rd	2/2	Kováčová
Power Electronics	4th	2/2	Dudrik, Ondera
Electrical Drives	4th	2/2	Timko
Microcomputer Techniques	4th	2/2	Perduková
CAD SW in El. Engineering	4th	2/2	Fedák
Semester Project	5th	0/5	
Techniques in Automation	5th	3/3	Fedor P.
Semiconductor Supply Sources and Converters	5th	3/3	Ondera
Electrical Systems in Vehicles	5th	2/2	Dudrík, Ďurovský
Information Systems in Industry	5th	2/2	Girman, Košč
Kinematics and Dynamics of Electromechanical Systems	5th	2/2	Fetyko
Control Electronics	5th	2/2	Kováčová
Controlled Drives	6th	3/3	Zboray
Controlling and Visualisation Systems	6th	3/3	Fedor P., Perduková
Industrial Electrical Systems	6th	2/1	Fetyko, Ďurovský

b) Bc. study programme on Informatics and Control Systems in Mechatronics

Subject	Semester	Lectures/exercises (hours per week)	Name of lLecturer
Electrical Machines and Apparatuses	3rd	3/3	Záskalický
Microcomputer Techniques	4th	2/2	Perduková
Electrical Actuators and Drives	4th	3/3	Timko
CAD in Mechatronics	4th	2/2	Fedák
Digital Electronics	4th	2/2	Kováčová
Semester Project	5th	0/4	
Dynamics of Electromechanical Systems	5th	2/2	Fetyko
Artificial Intelligence Fundamentals	5th	2/2	Timko, Žilková
El. Engineering in Vehicles	5th	2/2	Dudrik, Ďurovský
Servosystems	6th	2/2	Fetyko
Control and Visualisation Systems	6th	2/2	Perduková
Mechatronic Production Systems	6th	2/2	Fetyko, Ďurovský, Fedák
Robotics	6th	2/2	Fetyko
Automation Techniques II	6th	2/2	Fedor P.
Electronics for Vehicles	6th	2/2	Dudrik, Ďurovský

c) Bc. study programme on Industrial Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Information Systems in Industry	3rd	2/2	Girman, Košč
Production Technology in Electrical Industry	3rd	2/2	Záskalický
Marketing	3rd	2/2	Kováčová
Multimedia Techniques	3rd	2/2	Kováčik, Fedor S.
Programming Seminar I	3rd	0/4	Girman, Keusch
Human Resource Management	4th	2/2	Girman, Košč
Control Theory	4th	2/2	Fedák
Simulation of Production Systems	4th	2/2	Girman, Bober
Automation of Technology Processes	4th	2/2	Kováčik
Database Systems for CIS	4th	2/2	Fedor P.
Programming Seminar II	4th	0/4	Girman, Keusch
Management of Companies	5th	2/2	Kováčik, Kmec

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Production Management and Logistics	5th	2/2	Kováčik
Semester Project	5th	0/4	
Industrial Systems	5th	2/3	Kováčik, Bober
Costing and Pricing	6th	2/2	Girman
Economic Analysis and Accounting	6th	2/2	Kováčová

4.2. Graduate Study (Ing.)

a) Ing. study programme on Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Special Electrical Machines	7th	2/2	Kostelný
Models of Dynamic Systems	7th	2/2	Fedák
Power Semiconductor Systems	7th	2/2	Ondera
Electrical Systems Controlled by Internet	7th	2/2	Kováčová
Electromagnetic Compatibility	8th	3/2	Kováčová
Control Circuits for Power Electronics	8th	3/3	Višnyi
Motion Control	8th	3/3	Fetyko
Semester Project	8th	0/4	Supervisor
Projecting of Electrical Machines	8th	2/2	Ferková
Logic and Non-linear Control	8th	2/0	Fedor P.
Artificial Intelligence Methods in Control	8th	2/2	Žilková
Electrical Apparatuses Construction	8th	2/2	Ferková
Projecting of Electrical Engineering Systems	9th	3/3	Ďurovský
Semiconductor Converters Applications	9th	2/2	Ondera
Signal Processors	9th	2/2	Višnyi
Control of Robots	9th	2/2	Fetyko
Semiconductor Converters Construction	9th	2/2	Ondera
Economic Analysis and Accounting	10th	2/0	Kováčová
El. Engineering of Intelligent Buildings	10th	2/0	Ďurovský
El. Engineering Production	10th	2/0	Záskalický

b) Ing. study programme on Control of Mechatronic Systems

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Models of Mechatronic Systems	7th	2/2	Fedák
Processing and Transfer of Signals	7th	2/2	Fedor P.
Semester Project	8th	0/4	
Motion Control	8th	3/3	Fetyko
Artificial Intelligence Methods	8th	3/2	Timko
Logical and Nonlinear Control	8th	3/3	Fedor P.
Electromechanical Transducers	8th	2/2	Timko
Microelectronics and Optoelectronics	8th	2/2	Dudrik
Control of Mechatronic Production Systems	9th	3/3	Fedák, Ďurovský
Semester Project	9th	0/3	Suervisor
Signal Processors	9th	2/2	Fedro P., Višnyi
Control of Robots	9th	2/2	Fetyko
Production Management and Logistics	9th	2/2	Girman
Diagnostics and Reliability in Mechatronics	9th	2/2	Fetyko, Ďurovský
Marketing	9th	2/2	Kováčová
Mechatronics Systems Projecting	10th	2/2	Fetyko
Microelectromechanics	10th	2/2	Gmiterko, Ferková
Database systems	10th	2/2	Fedor P.
Economic Analysis and Accounting	10th	2/2	Kováčová

c) Ing. study programme on Industrial Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Artificial Intelligence Fundamentals	7th	2/2	Timko, Žilková
Operational Management	7th	2/2	Girman
Financial Management of Companies	7th	2/2	Kováčik
Strategic Management	8th	2/2	Girman
Design of Manufacturing Systems	8th	2/2	Girman
Statistical Process Control	8th	2/2	Kováčik, Kmec
Human Resources Development	8th	2/2	Kováčik, Košč
Certification and Standardization	8th	2/2	Girman
Semester Project	8th	0/5	
Project Management	9th	2/2	Girman, Kmec

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Modeling, Simulation, and Optimization of Processes	9th	2/2	Girman
Artificial Intelligence Methods in Control	9th	2/2	Timko, Žilková
Software Quality Engineering	9th	2/2	Girman, Bober
Financial and Economic Analysis	10th	2/2	Kováčik
Fuzzy Systems	10th	2/2	Fedor P.

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

All subjects listed in previous subsections are offered also In English language for foreign students.

5 RESEARCH PROJECTS

- *Intelligent Mechatronic Systems.* VEGA (Scientific Grant Agency) project No 1/2177/05 (2005 - 2007). Co-ordinator: FETYKO, J.
- *Efficient utilization of renewable energy sources using modern power electronics converters*. VEGA (Scientific Grant Agency) project No 1/2177/05 (2005 - 2007). Co-ordinator: DUDRIK, J.
- *EMC of Power Semiconductor Converters.* VEGA (Scientific Grant Agency) project No /0176/03, (01/2003 - 12/2005). Co-ordinator: KOVÁČOVÁ, I.
- *Development of Modern Components for Mechatronic Systems.* Institutional project of FEI TU Košice No I-4424, 01/2003 – 12/2005. Co-ordinator: FEDOR, P.
- *Research of Basic Holonic Manufacturing Systems and their Applicability*. VEGA (Scientific Grant Agency) No. 1/1093/04 (2004-2006), Co-ordinator: GIRMAN, M.
- *Research of Basic Properties of Holonic Manufacturing Systems*, Institutional project of FEI TU Košice No. IV-4427 (2003 – 2005). Co-ordinator: GIRMAN, M.

6 CO-OPERATION

6.1. Co-operation in Slovakia

The Department co-operates with many industrial enterprises in Slovakia having joint project at modernising of the electrical drive systems, control and mechatronic applications: US STEEL Košice, SIEMENS, ABB, BSH Drives and Pumps Michalovce, Křižík Prešov, Schneider Electric Slovakia, Spell Procont Prešov, Vonsch Podbrezová, TEKO Košice, ENERGO CONTROL Košice, ZŤS VVU Košice, ŽP Podbrezová, Bukóza Hencovce, Genesis Ltd. Prešov, Embraco Slovakia Ltd. Spišská Nová Ves, Kopex Ltd. Košice, Cogent Ltd. Košice, Regada Ltd. Prešov, Slovak Union for Quality, Innovation and Design Q-IMPULZ, Košice

6.1.1. Visitors to the Department

- Bartl, J, Hájek, V., Ondrušek Č., VUT Brno, Czech Republic, 20 Jan. 2005 – visit in framework of co-operation in the ETELE project.
- Richter, A., Konečná, E., Rydlo, P., Černík, M., TU Liberec, Czech Republic, 5 to 9 Sept 2005, study visit in framework of the joint bilateral Czech-Slovak project
- Bauer P., Delft University of Technology, 28 Dec. 2005
- Horváth G., West Bohemian University, Pilsen, Czech Republic, 31 May – 1 June 2005

6.2. International Co-operation

- Montanuniversity of Leoben, Austria
- University of Zagreb, Croatia
- Brno University of Technology, Czech Republic
- Technical University of Liberec, Czech Republic
- VŠB -Technical University of Ostrava, Czech Republic
- West Bohemian University, Pilsen, Czech Republic
- University of Vaasa, Finland
- Institut National Polytechniqe de Lorrain, Nancy, France
- Fachhochschule Ulm, Germany
- University of Technology and Economy, Budapest, Hungary
- University of Miskolc, Hungary
- Delft University of Technology, The Netherlands
- Silesian University of Gliwice, Poland
- Warsaw University of Technology, Poland
- University of Maribor, Slovenia
- University of Podgorica, Montenegro, Yugoslavia

6.2.1. Visits of Staff Members to Foreign Institutions

- FEDÁK, V: Brussels, Belgium, Delft, The Netherlands, 6-10 Feb. 2004, (EPE Executive Council, visit to the Delft University of Technology – cooperation on a joint project proposal submission)
- FEDÁK V.: Turku, Finland, 21 – 25 Jan. 2005 (eEDUSER project coordinator meeting)
- FEDOR, P.: Ostrava, Czech Republic , 9. Feb. 2005
- BOBER, P., KOVÁČIK, P.: Pilsen, Czech Republic 9 – 10 February 2005 (conference MOPP 2005)
- KOŠČ, P., Prague, Czech Republic, 21 - 23 Feb. 2005 (Conference BELCOM)
- FEDÁK, V.: Prague, Czech Republic, 7-9 April 2005(ATVN-EU-GP project co-ordinator meeting at the Czech Academy of Science)
- GIRMAN, M.: Prague, Czech Republic, FEI ČVUT, 9 – 11 March 2005 (cooperation)
- FEDÁK V.: Prague, Czech Republic, 20 – 22 April 2005 (Int. Conf. of the Czech Scientific Society and award acceptance for the Czech-Slovak scientific co-operation)
- FEDÁK, V., FETYKO, J, REPIŠČÁK, M.: Hungary, Budapest, 22 – 24 April 2005 (INETELE project coordinator meeting)

- FERKOVÁ, Ž.: Czech Republic, Brno 16 -19 May 2005 ()
- FERKOVÁ, Ž., ĎUROVSKÝ, F., HRDINA, T., OLEJÁR, M.: Czech Republic, Liberec, 22 – 28 May 2005 (study visit in framework of the joint bilateral Czech-Slovak project)
- FERKOVÁ, Ž., ĎUROVSKÝ, F., HRDINA, T., OLEJÁR, M.: Czech Republic, ČVUT Praha, 22 May 2005
- FEDOR, P., PERDUKOVÁ, D.: Miskolc, Hungary, 27 May 2005 (ICCC 2005 - 6th International Carpathian Control Conference)
- ZÁSKALICKÝ, P.: University of Opole, Poland, 13 – 17 June 2005 (Conference)
- GIRMAN, M.: Pilsen, Czech Republic, West Bohemian University 16 – 18 June (thesis defence, final exam)
- GIRMAN, M: Ulm, Germany, Fachhochschule Ulm, 18 – 22 June .200 (visit in framework of Socrates Erazmus project)
- DUDRIK, J., FEDÁK V.: University of Oradea, Electronics Department, 07 – 10 July 2005, (opening of co-operation)
- FEDÁK, V.: Brno, Czech Republic, 23 – 25 July 2005 (INETELE project co-ordinator meeting)
- KOSTELNÝ, M., ZÁSKALICKÝ, P.: Czech Technical University, Prague, Czech Republic, 6 – 10 September 2005 (ISEM – International Symposium on Electrical Machines)
- KOVÁČOVÁ, I.: Pilsen, Czech Republic, 11 – 15 Sept. 2005
- DUDRIK J., FEDÁK, V.: Dubrovnik, Croatia, 23 Sept. – 02 Oct. 2005 (EDPE international conference on Electrical Drives and Power Electronics and visits to the departments in Budapest and Zagreb)
- HUTNÍK, E.: Luck, Ukraine, 9 Oct. – 5 Nov. 2005 (setting up the control system of the metal sheet processing line – co-operation with SIEMENS, s.r.o. Košice)
- ZÁSKALICKÝ, P.: Technical University of Brno, Czech Republic, 13 – 15 Nov. 2005 (LVEM - international conference on Low Voltage Electrical Machines)
- BOBER, P., KOŠČ, P., KOVÁČIK, P.: Zlín, Czech Republic, Tomas Bata University in Zlín, 23 - 25 November 2005 (conference Industrial Engineering 03)
- FEDÁK, V.: Pultusk, Poland 30. 11. – 3. 12. 2005 (ATVN-EU-GP international conference);

6.3. Membership in International Organizations, Societies and Committees

- FEDÁK, V.: EPE EC (Executive Council) full member and EPE General Assembly member (EPE = European Power Electronics and Drives Association - Brussels)
- FEDÁK, V., FETYKO, J., TIMKO, J.: EPE-PEMC-C members (Power Electronics and Motion Control Council - Budapest)
- KOVÁČIK, P.: The Institute of Electrical and Electronics- Senior Member, American Institute of Aeronautics and Astronautics - Senior Member, European Engineering educator – International society for Engineering Education, Member of the International Astronautical Federation, Member of the International Council of Aeronautical Sciences

Members of the Programme and Steering Committees of the International Conferences

- FEDÁK, V.: General Co-Chairman of the EDPE 2005 (Electrical Drives and Power Electronics):

- FEDÁK, V.: ISC of the ICETA 2005 (Emerging Telecomunications Technologies and Applications, 16-18 Sept. 2004, Košice)

6.4. Membership in Slovak Organizations and Societies

- TIMKO, J. (Vice-chairman); FEDÁK, V.; ZBORAY, L.; FEDOR, P. FETYKO J., DUDRIK J. - members of Joint Slovak Board for the Ph.D. Study in Electrical Engineering
- TIMKO, J. (chairman), FETYKO, J., KOVÁČOVÁ, I., FEDOR, P., FEDÁK, V., DUDRÍK, J.: members of board for the PhD. Study in Heavy-Current Electrical Engineering at FEEI TU Košice
- FERKOVÁ, Ž.: member of Technical Standards Commission on Electrical Machines in SR
- FEDÁK, V.; FETYKO, J.; KAŇUCH, J.; ONDERA, J.; TIMKO, J.; ZÁSKALICKÝ, P.; ZBORAY, L.: members of The SES (Slovak Electrotechnical Society), Branch at FEEI TU Košice
- FEDÁK, V.: Council of the Secondary Technical School for EE, Košice (delegate of the FEEI)
- KOVÁČIK, P.: The Slovak Society for Applied Cybernetics and Informatics, SLOVAK TRANSPORT SOCIETY at the Slovak Academy of Sciences, Žilina
- ONDERA, J.: Slovak Electrotechnical Society, Committee member
- GIRMAN, M., BOBER, P., KEUSCH, P.: Editorial board for Journal „Kvalita, Inovácia, Prosperita" (Quality, Innovation, Prosperity), ISSN 1335-1745

6.5. Contracts, International Projects

- In 2005 the Department co-ordinated the Leonardo da Vinci project Interactive and Unified E-Based Education and Training in Electrical Engineering - INETELE, (No CZ/02/B/F/PP/134009, 11/2002-06/2005). The objective of the project was to facilitate understanding and enhancement the studying in field of electrical engineering by teaching materials in electronic form with animated figures and interactive simulations. Altogether 20 multimedia modules were developed.

  Project partners: Montanuniversität Leoben (A), Brno University of Technology (CZ), Institut National Polytechnique de Lorraine, Nancy (F), Budapest University of Economics and Technology (H), Silesian Technical University, Gliwice (PL), Delft University of Technology (NL), Slovak Chamber of Commerce and Industry (SK), Chamber of Commerce (CZ), Simulation Research (NL), Mercury-Smékal, Košice (SK). Duration of the project: 2002-2005. Contracting Institution: Brno TU, project co-ordinator: FEDÁK, V.

- In 2005 we continued in cooperation with Dept. of El. Engineering and Electromechanical Systems of the Technical university of Liberec, Czech Republic in framework of a joint project based on an intergovernmental agreement between Czech Republic and Slovakia.
  Guarrantee: FETYKO, J.
  The working plan in 2005: joint visits at the departments supported by the lecture on topical research. Based on these, a plan of co-operation for collaboration in the next years is under preparation.

- Basics of Industrial Organization Management - Lifelong e-learning, Contract for Embraco Slovakia, Ltd., Spišská Nová Ves, Slovakia.

- SOCRATES Program: Higher education (ERASMUS), SOCRATES project, partner: University of Applied Sciences, Ulm (Germany), duration: 2003 - 2006, contact: Michal Girman, activity: Co-operation within the SOCRATES Program - students and teachers exchange.
- SOCRATES Program: Higher education (ERASMUS), SOCRATES project, partner: University of Vaasa (Finland), duration: 2003 - 2006, contact: Kristína Zgodavová (Peter Bober), activity: Co-operation within the SOCRATES Program - students and teachers exchange program.
- Leonardo do Vinci: SK/02/B/P/PP/142256: Efficient E-Learning Network Services Establishment for Education without Borders (FEDÁK, V. – project sub-coordinator, 10 partners from The Netherlands, Germany, Spain, Finland, Greece, Slovakia).

6.6. National Educational Projects

Project Code:	**G/166/03/61300**
Project title:	New Pedagogical Approaches and ICT Use for Teachers. (I2DV2)
Program:	program IDEP (Internet Distance Education Program) of the Open Society Foundation
Period:	9/2003-9/2005
Project co-ordinator:	PERDUKOVÁ, D.
Staff members:	PERDUKOVÁ, D, HARČARUFKOVÁ, K., ORBANOVÁ, I.
Tasks:	The project goal consists in development of 9 e-learning modules from field of IE for teachers at the secondary schools and universities. Based on the modules, 70 participants have to take part in the distance education pilot courses.
Department task:	to develop 8 e-learning modules, perform training and tutoring of the pilot run of the distance education course

7 THESES

7.1. Bachelor Theses

a) Bachelor Theses of the students from the former Laboratory of Industrial Engineering

1. BARANI, J.: A Traceability Project in the Dispatch Warehouse (Girman, M.)
2. DZURŇÁK, P.: Use of e-Learning Technologies in the Workplace Training (Košč, P.)
3. FEHÉR, M.: Environment Influence Reducing Selected Plant in Embraco Slovakia (Zgodavová, K.)
4. FOTTA, J.: Performance Increasing of JOTA Production Line (Bober, P.)
5. JOPPA, J.: The process of Improvement in Maintenance (Kmec, P.)
6. KARPINSKÝ, M.: Introduction of ISO 9000 into Practice (Girman, M.)
7. KLEIN, J.: Scrap Reduction of „T“ Compressors in due to Wearing out of Mechanical Parts (Zgodavová, K.)
8. MARŠALEK, K.: Effectiveness Improvement of Definite Purpose Automatic Machine for Cooling Compressor Rotor Centring (Bober, P.)
9. NOVOTNÝ, V.: Scrap Reduction of Production Line (Bober, P.)
10. PAČNÁR, M.: Process Modelling for Sensor Manufacturing (Girman, M.)

11. POHLY, A.: Analysis of Machine idle times in Stamping Operations (Kmec, P.)
12. PROKS, R.: Modelling of Company Processes (Girman, M.)
13. RUSÓOVÁ, M.: Description of Supply Chain for Embraco Customers (Kmec, P.)
14. STAROŇ, R.: Lean Manufacturing – Introduction into Operations (Kmec, P.)
15. ŠKOVIRHA, M.: Implementation of 6 Sigma Method in Compressor Producing (Kováčik, P)
16. WAGNEROVÁ, Ž.: Description of Supply Chain for Embraco – Suppliers (Kmec, P.)
17. WANTRUBA, I.: Quality Improvement in Compressor Manufacturing (Girman, M.)

7.2. Masters Theses

a) Master Theses of the students from the former Department of Electrical Drives and Mechatronics

1. BEŇAKOVÁ K.: Interactive e-Learning Module „Transformers“. (Kostelný, M.)
2. Bc. BARJAK, V.: AC Dynamometer. (Ďurovský, F.)
3. BRUNACKÝ, T.: Control of Position and Speed (Žilková, J.)
4. Bc. BUGÁR, M.: Non–linear Methods for Control of Complex Drives. (Perduková, D.)
5. GERGIŠÁK J.: Direct Torque Control for Sensorless Drive with an IM. (Žilková, J.)
6. KLIMAN M.: DC Drive Fuzzy Modeling and Control. (Fedor, P.)
7. KUĽBAGA T.: Sensorless Control of Switched Reluctance Motor. (Ferková, Ž.)
8. LACKO M.: Autonomous Inverter for Renewable Energy Sources. (Dudrik, J.)
9. MACKO P.: Fuzzy Control of Modeling Machine Temperatures. (Fedor, P.)
10. MELIŠOVÁ M.: Control of DC-AC Drive System with Small Logic Controller and Visual Application. (Perduková, D.)
11. RYBOVIČ P.: Piezoelectric Motor. (Ferková, Ž.)
12. ŠIMKŮ F.: Universal Pulse Generator for Power Semiconductor Converters. (Dudrik, J.)
13. BERKO J.: Sensorless Field Oriented Control of a Drive with an IM. (Žilková, J.)
14. DRAVECKÝ R.: Control of Glue Dosing in the Line for Production of Sanitary Products. (Fetyko, J.)
15. HRICIŠIN M.: Workplace for Washing Machine Control Development. (Fedor, S.)
16. JAKLOVSKÝ V.: Physical Model of Airflow Rate Control. (Fedor, S.)
17. NAJSÁREK A.: Design and Processing of Interactive Multimedia Learning Material for Education in Electrical Equipment of Vehicles. (Ďurovský, F.)
18. LUKÁČ S.: The Mathematical Model of a Synchronous Motor. (Timko, J.)
19. KAVEČANSKÝ P.: Implementation of e – Learning in the Subject of Electrical Drives. (Fedák, V.)
20. PHÁLEK D.: Design of Cableway Drive Control. (Fedor, P.)

b) Master Theses of the students from the former Laboratory of Industrial Engineering

1. ANDREJANIN, L.: A Model of Educational Processes (Girman, M.)
2. APÁTHY, M.: Solution of Typical Tasks of Production Management in MATLAB (Girman, M.)
3. BALICKÁ rod. BOHÁČOVÁ, Z.: Automobile Sales from the Point of View of Customers (Kmec, P.)
4. BALTAZÁR, P.: Quality Assessment of Software Process (Bober, P.)

5. BUČKO, M.: Tools for Business Process Reengineering and for Workflow Management (Košč, P.)
6. ČIŽMÁR, M.: The Use of a Technical Kit for Teaching (Kmec, P.)
7. DOMARACKÁ, E.: The Reality of Make-to-Order in Metal Working (Kmec, P.)
8. DRIBŇAKOVÁ, L.: Possibilities of Production of Heat in a Small Town (Kmec, P.)
9. FIUT,R.: Analysis and Improvement of Scaffolding Building Process (Bober, P.)
10. GÁNOCZI,J.: A Program for Modelling of Enterprise Processes (Girman, M.)
11. GIRMAN, J.: Design of an Environment for Modelling of Enterprise Processes (Girman, M.)
12. GMURCZYK, M.: CRM System for Customer Support (Košč, P.)
13. HAMAŠ, A.: Inventory Management (Kmec, P.)
14. HARVAN, R.: Utilization of Time Petri Nets for Modelling of Enterprise Processes (Girman, M.)
15. HÉŽEL, M.: Possibilities of the Processing of Communal Waste in Revúca (Kmec, P.)
16. HOMOLJAK, J.: Strategy of a Selected Company and its Position on the Market (Kmec, P.)
17. HORVÁTH, J.: Evaluation of the Activities of the Technical Department in a Selected Enterprise (Kmec, P.)
18. JANOV, J.: Simulation of Cash Flow in a Company (Kmec, P.)
19. JIROUŠEK, P.: Lean Production Project in Embraco Slovakia, a.s. (Košč, P.)
20. KAJBA, Ľ.: Technological Data Acquisition by Internet (Kováč, D.)
21. KAŠČÁK, J.: Competitive Benchmarking in Wood-Industry Company Bukoza Vranov (Zgodavová, K.)
22. KLIMA, J.: Evaluation of Social Networks (Kmec, P.)
23. LÖRINC, P.: Process capability Analysis in Company Faurecia Leather Kosice (Zgodavová, K.)
24. ONDERKOVÁ, B. Modelling of Enterprise Processes (Girman, M.)
25. PILC, J.: Business Intelligence Tools for Manager Decision Support. (Košč, P.)
26. PURTÁTOR, Ľ.: The Logistical Chain in Automotive Industry (Kmec, P.)
27. ROVŇÁK, M.: The Use of the Personal Digital Assistant (PDA) devices for the Presentation of Managerial (Kmec, P.)
28. SELČAN, V.: A Multiagent System for Operations Management (Girman, M.)
29. SOPKO, R.: Quality evaluation of the e-learning systems environment (Zgodavová, K.)
30. SVOREŇ, M.: Automobile Sales from the Point of View of a Dealer (Kmec, P.)
31. ŠILLING, M.: Team Leadership and Conflict Management (Košč, P.)
32. ŠIMČÁK, P.: Strategic Planning for ICT Company (Košč, P.)
33. ŠIŠKA, P.: Corporate Culture and Management of Human Resources in OVP, Ltd. (Košč, P.)
34. ŠKROVÁNEK, P.: Design of a Program for Spatial Allocation of Work Centers (Girman, M.)
35. ŠPINER, R.: Simulation of Operations in Planography (Kmec, P.)
36. ŠULIČ, M.: The FMEA Method Application in the Frame of PDCA Cycle in Faurecia Leather Kosice Company (Zgodavová, K.)

Note: All theses are in Slovak.

7.3. Theses to the PhD. Exam.

1. DUPEJ, J.: Universal Motor for White Technique Application, PhD. Exam, FEI TU, Košice, 2005, June (supervisor: Záskalický, P.)

7.4. PhD. Theses

1. KAŇUCH, J.: Design of Methodology for Investigation of EMC for Drives with Disc Motor. PhD. Thesis, FEI TU Kosice, 2005, 165. p. (supervisor: Kováčová I.)

8 OTHER ACTIVITIES

8.1. Symposia, Workshops, Conferences

- SEMEP 2005 – International Seminar on Electrical Machines in framework of the annual meeting of teachers of electrical machines, Herľany, 18-20 Jan. 2005 (organiser Kostelný, M.).
- *High-Tech Workshop, Herľany 2005* (13-15 May 2005). High-Tech (as the abbreviation of High-Technology) presents an engineering workshop aimed to the informal exchange of ideas of teachers, students, graduates and colleagues from practise in the Educational and Training Centre of Technical University of Košice in Herľany (www.gejzir.sk). Organisers: Perduková D., Fedor S. More information about this activity is to be found in www.tuke.sk/hth.
- STRAPING'05: Seminar and Meeting of Industrial Engineers, May 20 - 22, 2005, Herľany, Slovakia
- Student visit in enterprises (11 –14 April 2005): Transgaz Jablonov n.T., Slovalco Žiar n.Hr., SE Gabčíkovo, EBO Jaslovské Bohunice, Osram Nové Zámky, Neusiedler Ružomberok, Cableway Jasná p.Chopkom, NDS – highway tunnel Branisko (19 students + 2 pedagogical staff). Organiser: Ďurovský F.

8.2. Student Competitions and Rewards

- *"Werner von Siemens Excellence Award for the Master Thesis*". Ing. Peter Lacko was awarded by the companies Siemens, s.r.o., Siemens Business Services s.r.o., System Engineering, s.r.o. for the 1st position in category "Final Theses" to his work (final thesis): Fuzzy Logic Control of the Temperatures of the Moulding Press. Supervisor: Fedor P. More information at www.siemens.sk.

8.3. Project for Industry

Project title:	Solution and Technical Consultancy at Realization of Drives and Control System in the Slitting Line in the U. S. Steel Košice, s.r.o., Cold Roll Mill Division
Done for:	Siemens, s.r.o., Bratislava
Project manager:	Fetyko, J.
Co-operating staff:	Ďurovský, F., Hutník, E.
Project title:	Design and Realisation of the Tester for Thermal Trip for Current Breakers
Done for:	SEZ Krompachy, a.s.
Project manager:	Fetyko, J.
Co-operating staff:	Dudrík, J., Višnyi, P., Ďurovský, F., Hutník. E., Nemec, L., Hrdina, T., Kaňuch, J., Hajsák, F.
Project title:	Control System Analyses of Continual Tinning Line
Done for:	U. S. Steel Košice, s.r.o., Cold Roll Mill Division

Project manager: Ďurovský, F.
Co-operating staff: Fetyko, J., Ďurovský, F., Hutník, E., Šimko, O.

Project title: Training in Converters and Rectifiers of SIEMENS Production
Done for: U.S. Steel Košice, Cold Roll Mill Division
Project manager: Ďurovský,F.
Co-operating staff: Hutník,E.

Project title: Switching Equipment for Switching and Synchronisation of the Short-Circuit Current
Done for: SEZ Krompachy, a.s.
Project manager: Fetyko,J.
Co-operating staff: Dudrik, Vyšnyi P.

Project title: Lecturing of MS Office Course
Done for: Telegrafia, s.r.o.,
Project manager: Perduková
Co-operating staff: Perduková, Fedor S.

Project title: Preparation and Lecturing of MS Office Course
Done for: Military Repairing Enterprise. Moldava n./B,
Project manager: Perduková
Co-operating staff: Perduková, Fedák

Project title: Technical State Analysis of Supply for Main Drives of the Hot Roll Mill Finishing Line. Design of Technical Measures for Disturbance Minimize, Connection of the Controllers in the Control System. Study.
Done for: U. S. Steel Košice. Hot Roll Mill Division
Project manager: Ďurovský, F.
Co-operating staff: Fetyko, J.

Project title: Design of screwless terminals.
Done for: SEZ Dolný Kubín, a.s.
Project manager: Ferková, Ž.
Co-operating staff: Mantič, M., Laboš, J. (Faculty of Mechanical Engineering)

9 PUBLICATIONS

9.1. Books

1. KOVÁČOVÁ, I. - KAŇUCH, J. - KOVÁČ, D.: Electromagnetic Compatibility of Power Electrical Systems, *Equilibria, s.r.o. publishing house*, Košice, 2005, 182 p., ISBN 80-969224-5-9. (in Slovak)

9.2. Journals

1. BAUER, P – van DUIJSEN, P.J. – FEDÁK, V.: Pokroky a trendy v simuláciách vo výkonovej elektronike a elektrických pohonoch (Advances and Trends in Simulations in Power Electronics and Electrical Drives). *AT&P Journal*, Vol.12, 2005, No 4, pp. 50-52; No 5, pp. 100-101. ISSN1335-2237 (In Slovak)
2. BOBER, P.: Rozvrhovanie výroby pomocou genetických algoritmov (Production Scheduling by Genetic Algorithm). *Kvalita Inovácia Prosperita (Quality Innovation Prosperity)*, 2005, vol. 9, no. 1, pp. 10-18. ISSN 1335-1745. (In Slovak)

3. BOBER, P. - FERKOVÁ, Ž.: Konštrukcia a vlastnosti krokového motora s asymetrickým statorom (Construction and Characteristics of Stepper Motor with Asymmetric Stator). *Časopis pre elektrotechniku a energetiku (Journal for electrical and Power Engineerings)*, Vol. 11, No. 5, 2005, pp. 26-28, ISSN 1335-2547. (In Slovak)
4. DUDRIK, J.: DC Converters with Switching at Zero Voltage and Zero Current for Large Powers. *Advances in Electrical and Electronic Engineering*, No.3, Vol.4/2005, pp.189-193, Žilina 2005. (in Slovak), ISSN 1336-1376
5. DUDRIK, J. :New Methods in Teaching of Power Electronics Devices. *Iranian Journal of Electrical and Computer Engineering*, Vol. 4, No. 2, 2005, pp.117-120
6. FERKOVÁ, Ž., ZBORAY, L.: Contribution to Parameter Identification of an Induction Motor by Genetic Algorithms. *Acta Technica et Informatica*, No.2, Vol.2 2005 pp.11-14, ISSN 1335-8243
7. FEDOR, P. - PERDUKOVÁ, D.: Fuzzy Model of Washing Machine Drive. *Acta Technica CSAV*, 2005, pp. 83-91, ISSN 0001-7043
8. HALUŠKA, J. – KMEC, P.: Úloha technickej diagnostiky v údržbe zameranej na spoľahlivosť (RCM) (The role of technical diagnostics in Reliability-Centered Maintenance). *Spravodaj ADT SR 2005*, pp. 7-8. (In Slovak)
9. KEUSCH, P.: Multiagentové systémy (Multiagent systems). *Kvalita - Inovácia - Prosperita*. Vol. 9, No. 1 (2005), pp. 32-37, ISSN 1335-1745. (In Slovak)
10. KOŠČ, P.: Od firemného vzdelávania k učiacej sa organizácii (From Workplace Training to Learning Organization). *Kvalita - Inovácia - Prosperita*, vol. 9, No. 1 - 2005, pp. 38-46, ISSN 1335-1745. (In Slovak)
11. KOVÁČOVÁ, I.: Inductive Coupling of the Electrical Drive – EMC. *Transactions of the Universities of Košice*, 2005, No.2, pp. 42-48, ISSN 1335-2334
12. KOVÁČOVÁ, I.: EMC of Power DC Electrical Drives. *Journal of Electrical Engineering*, Romania, Vol. 5, No.1, 2005, pp. 61-66, ISSN 1582-4594.
13. KOVÁČOVÁ, I. - KAŇUCH, J. – KOVÁČ, D.: EMC of a Disc Motor with Permanent Magnets. *Electrorevue*, 22 p., 2005, CZ, ISSN 1213-1539. (in Slovak)
14. KOVÁČOVÁ, I. - KAŇUCH, J. - KOVÁČ, D.: The EMC of Electrical Systems – Galvanic Coupling (Part I.). *Acta Electrotechnica et Informatica*, 2005, Vol.5, pp. 22-28. ISSN 1335-8243
15. KOVÁČOVÁ, I. - KOVÁČ, D.: Parasitic Capacitances of Converters and EMC. *Transactions of the Universities of Košice*, 2005, No.1, pp.40-47
16. KOVÁČOVÁ, I. - KOVÁČ, D.: Converter's EMC – Parasitic Capacitances. *Electronics Letters*, Vol. 5, No.1, 2005, 6 p., www.electronicsletters.com, ISSN 1213-161X.
17. KOVÁČOVÁ, I. – KOVÁČ, D.: Converter's EMC - Capacitive Coupling and Parasitic Capacitances. *Advances in Electrical and Computer Engineering*, Romania, Vol. 5, No.1, 2005, pp. 25-32, ISSN 1582-7445.
18. KOVÁČOVÁ, I. - KAŇUCH, J. – KOVÁČ, D.: DC Permanent Magnet Disc Motor Design with Improved EMC. *Acta Technica CSAV*, Vol. 50, No.3, 2005, pp.291-306. ISSN 0001-7043.
19. KOVÁČOVÁ, I. – KOVÁČ, D.: EMC and Parasitic Capacitances of Converters. *Journal of Electrical Engineering*, Romania, Vol. 5, No.2, 2005, pp. 31-35, ISSN 1582-4594.
20. PERDUKOVÁ, D. - FEDOR, P. – HRDINA, T.: Control of the Technology for Cooling Water by a SCHNEIDER-MODICON TELEMECANIQUE Control System. *Elektrotechnika v praxi*, BAEL 2005, Vol. 15, July-Aug. 2005, p. 82-85. ISSN 0862-9730 (in Slovak)

21. VOJTKO, J. - KOVÁČOVÁ, I. - MADARÁSZ, L. - KOVÁČ, D.: Utilization of Neural Networks for Error Reduction of Elastomagnetic Sensors. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, Japan, Vol.9, No.4, 2005, pp. 372-378, ISSN 1343-0130.
22. VOJTKO, J. - KOVÁČOVÁ, I. - KOVÁČ, D. – MADARÁSZ, L.: Neural Networks for Error Reduction of Transformer Type Elastomagnetic Sensors. *Acta Technica ČSAV*, Vol. 49, No.1, 2005, pp. 93-106, ISSN 0001-7043.
23. ZÁSKALICKÝ, P.: Dynamical Model of a Reluctance Step Motor. *Advances in Electrical and Electronic Engineering*, No.1, Vol.4/2005, pp.18-22, Žilina 2005. ISSN 1336-1376 (in Slovak)
24. ZÁSKALICKÝ, P. - ZÁSKALICKÁ, M.: Behaviour of the Two-phase Permanent Magnet Synchronous Motor Supplied by Rectangular Voltage. *Acta Technica ČSAV* 50 (2005), Prague, Czech Republic. pp. 195-206. ISSN 0001-7043
25. ZÁSKALICKÝ, P., ZÁSKALICKÁ, M.: Properties of a Two-Phase Synchronous Small Motor with Permanent Magnets at Rotor Supplied by a Triac from a Single Phase Supply Network. *Acta Electrotechnica et Informatica*, No.3, Vol.5. pp.70-74, Košice, 2005. ISSN 1335-8243 (In Slovak)
26. ZÁSKALICKÝ, P.: Investigation of Properties of a Two-Phase Synchronous Small Motor with Permanent Magnet Supplied by a Triac Converter. *Elektro*, I-II. 2005, pp.26-29, Ostrava, Czech Republic. (In Slovak)
27. ZÁSKALICKÝ, P., DUPEJ, J.: Dynamic Model of the Universal Motor Supplied by a Harmonic Voltage. *Advances in Electrical and Electronic Engineering*, No.4, Vol.4/2005, Žilina 2005, ISSN 1336-1376. (In Slovak)
28. ŽILKOVÁ, J. - TIMKO, J - BERKO, J.: Speed Sensor less Control of an Induction Motor Drive Using Extended Kalman Filter. *Acta Technica ČSAV*, Vol. 50, No.3, 2005, pp.279-289. ISSN 0001-7043.

9.3. Textbooks

1. ĎUROVSKÝ, F. - MAXIM, V.: Automotive Electronic Systems. E-learning module. *INETELE, VUT Brno*, 2005, ISBN 80-214-2978-X; English and Slovak versions
2. FEDÁK, V. – FETYKO J.: Mechatronic Systems. E-learning module. *INETELE, VUT Brno*, ISBN 80-214-2978-X; English and Slovak versions
3. FEDÁK, V. – TIMKO, J. – ŽILKOVÁ, J.: Electrical Drives. E-learning module. *INETELE, VUT Brno*, 2005, ISBN 80-214-2978-X; English and Slovak versions
4. KOSTELNÝ, M., KAŇUCH, J.: Transformers. E-learning module. *INETELE, VUT Brno*, 2005, ISBN 80-214-2978-X; English and Slovak versions
5. ZBORAY, L. Controlled Drives. E-learning module. *INETELE, VUT Brno*, 2005, ISBN 80-214-2978-X; English and Slovak versions

9.4. Conferences

Conferences Abroad

1. BAUER, P. – DAVAT, B. – FEDÁK, V. - HÁJEK, V.: Educational Visualization for Teaching Power Electronics. *PEEW 05 - IEEE Power Electronics Education Workshop*. Recife, Brazil, 12-16 June 2005, ISBN 0-7803-9002-4.
2. BOBER, P.: Model vzdelávacích procesov a jeho použitie (Model of Educational Processes and its Application). In: *8th International Seminar MOPP 2005*, Plzeň, 10. 2. 2005, Plzeň: Západočeská univerzita v Plzni, s. 13-20, ISBN 80–7043–352–3, [CD-ROM]. (In Slovak)
3. BOBER, P. – FERKOVÁ, Ž.: Krokový motor s asymetrickým statorom (Stepper Motor with Asymmetric Stator). In: *Specialised Seminar on Chosen Problems of*

Electrical Machines and Drives 2005, 17 - 18 May 2005, Šlapanice (CZ), ISBN 80-214-2970-4, [CD-ROM]. (In Slovak)

4. BOBER, P. - GIRMAN, M. – SELČAN, V.: Multiagentové systémy v rozvrhovaní výroby (Multiagent Systems in Production Scheduling). In: *Conference PI 03*, Meeting of Departments of Industrial Engineering, 24. – 25.11.2005, Zlín (CZ)
5. DUDRIK, J., ŠEPEĽA, J.: Soft-switching current-Mode controlled DC-DC converter with secondary switches. In: *International Conference on Electrical Drives and Power Electronics*, EDPE 05, Dubrovnik 2005, Croatia. ISBN 953-6037-43-2.
6. FEDÁK, V. - BAUER, P., - MIKSIEWICZ, R. - WEISS, H.: Experience with E-learning for Electrical Engineering – from Idea to Realisation. *International Conference on Engineering Education*, ICEE 2005 Gliwice, July 2005. ISSN 1562-3580.
7. FEDÁK, V. – BAUER, P.: E-Learning in Electrical Engineering Education: Opportunities and Challenges. *International Conference on Electrical Drives and Power Electronics, EDPE 05* - Dubrovnik, Keynote lecture. 26-28 Sept. 2005. ISBN 953-6037-43-2.
8. FEDÁK, V. - REPIŠČÁK, M. - ZBORAY, L.: Design and Implementation of E-Learning Tool for Courses on Electrical Drives. *International Conference on Electrical Drives and Power Electronics, EDPE 05*, Dubrovnik, 26-28 Sept. 2005. ISBN 953-6037-43-2.
9. FEDÁK, V. – FETYKO, J.: New Courses on Large Industrial Mechatronics Systems at the FEEI TU Kosice. *International Conference on Electrical Drives and Power Electronics, EDPE 05*, Dubrovnik, 26-28 Sept. 2005. ISBN 953-6037-43-2.
10. FEDOR, P. - PERDUKOVÁ, D.: Fuzzy Model of the Asynchronous Motor Drive. In: *Proc. of 6th International Carpathian Control Conference ICCC 2005*. Miskolc-Lillafured, Hungaria, May 2005, Vol.II., pp.377-382, ISBN 963 661 645 0
11. FERKOVÁ, Ž.: Contribution to Calculation of the Unbalanced Magnetic Pull of a Single-Phase Asynchronous Motor; *International Symposium on Electric Machinery, ISEM 2005*, 7-8 Sept. 2005, pp. 194-199; Prague Czech Republic, pp.46-50, ISBN 80-01-03328-7. (In Slovak)
12. FERKOVÁ, Ž., KUBÍN, K.: Príprava výpočtového modelu pre analýzu jednofázového asynchrónneho motora (Calculation Model Development for Single-Phase Asynchronous Motor Analysis); *22nd User Conference Cosmos 05*, pp.119-125, 7-9 Sept. 2005, Frenštát pod Radhoštem, Czech Republic. (In Slovak)
13. JAKAB, F. – FEDÁK, V. – MICHALKO, M. – MURIN, P.: Progressive IP Video Technologies, In: ATVN-EU-GP Conference Proceedings on Academic Internet Television Network Showcase. The Best of Good Practice Activities. Pultusk, Poland, Dec. 1-3, National Institut of Telecommunications, Warsaw, 2005, pp. 184-189, , www.atvn-eu-gp.pl, ISBN 83-916146-1-1
14. KOSTELNÝ, M. – FEDÁK, V. – KAŇUCH, J.: Interactive E-learning Module on Transformers. *International Symposium on Electric Machinery in Prague, ISEM 2005*, 7-8 Sept.2005, Prague Czech Republic, ISBN 80-01-03328-7. (In Slovak)
15. KOŠČ, P., KOCUR, D.: Doporučenia pre inštitucionálnu implementáciu e-learning technológií (Recommendations for Institutional Implementation of e-Learning Technologies), *Conference BELCOM 2005*, 21-22 Feb. 2005, Prague, Czech Republic, ISBN 80-01-03203-5. (In Slovak)
16. KOŠČ, P.: Význam otvorenej a flexibilnej vzdelávacej inštitúcie pre celoživotné a podnikové vzdelávanie (Importance of Open and Flexible Educational

Institutions for Lifelong Learning and Enterprise Training), *Conference on Industrial Engineering 03*, Zlín, 24.-25.11.2005, Czech Republic. (In Slovak)

17. KOVÁČOVÁ, I. - KOVÁČ, D.: Converter's EMC – Parasitic Capacitances. In: Proceeding from *7th International Conference on Advanced Methods in Theory of Electrical Engineering Applied to Power Systems*, West - Bohemian University Plzeň, 2005, Czech Republic, pp.H01-H06, ISBN 80-7043-392-2
18. ŽILKOVÁ, J. - TIMKO, J - GIROVSKÝ, P.: Comparative Study of Different Neural Speed Estimators for the Induction Motor. In: *International Conference on Electrical Drives and Power Electronics, EDPE 05*, Dubrovnik, 26-28 Sept. 2005. ISBN 953-6037-43-2.
19. ŽILKOVÁ, J. - TIMKO, J - GIROVSKÝ, P.: The Neural Speed Controller for the Induction Motor. In: *International Conference on Electrical Drives and Power Electronics, EDPE 05*, Dubrovnik, 26-28 Sept. 2005. ISBN 953-6037-43-2.
20. GÁNOCZI, J. – GIRMAN, M. - KOVÁČIK P.: Použitie zápisu XML pre modelovanie podnikových procesov (Use of XML Notation for Business Process Modelling). In: *Conference PI 03*, M*eeting of Departments of Industrial Engineering*, 24 – 25 Nov. 2005, Zlín, Czech Republic
21. ZÁSKALICKÝ, P., ZÁSKALICKÁ, M.: Behaviour of the Two-Phase Synchronous Permanent Magnet Motor Supplied by a Triacs from Single-Phase Voltage. In: Proceedings of *XLI International Symposium on Electrical Machines SME´2005*, 14-17 June, part I. pp. 168-172, Opole-Jarnołtowek, Poland. ISBN 83-88492-74-8.
22. ZÁSKALICKÝ, P.: Dynamic Model of the Reluctance Stepping Motor; *International Symposium on Electric Machinery, ISEM 2005*, 7-8 September 2005, pp.200-206; Prague Czech Republic. ISBN 80-01-03328-7
23. ZÁSKALICKÁ, M., ZÁSKALICKÝ, P.: Calculation of the Current Waveform of an AC Converter by Fourier Series; *International Symposium on Electric Machinery*, ISEM 2005, 7-8 Sept. 2005, pp. 194-199; Prague Czech Republic. ISBN 80-01-03328-7
24. ZÁSKALICKÝ, P., DUPEJ, J.: Dynamic Modelof the Universal Motor Supplied by a Harmonic Voltage; *Joint Czech- Polish Conference on Low Voltage Electrical Machines*, 14-15 November 2005, Brno, Czech Republic, pp. 151-159, ISBN 80-214-3047-8

Conferences in Slovakia

1. BAUER P. – FEDÁK, V. – HÁJEK, V.: e-Learning in Electrical (Power) Engineering; from Idea to Reality: State of the Art and Challenges. *4th International Conference on Emerging Telecommunications Technologies and Applications, ICETA 2005,* Kosice, Slovakia, 13-14 Sept. 2005, pp. 431-434. ISBN 80-89066-85-2.
2. BAUER, P. – FEDÁK, V.: Implementation of E-Learning Platform for Electrical Engineering, In. Proc. of *Computer Based Learning in Science International Conference, CBLIS 2005,* Žilina, July 2005, ISBN 9963-907-63-2, pp. 387 – 395.
3. BORBEĽ M.: Optimal Neural Control of DC motor. *5-th Conference of PhD. Students of FEI TU of Kosice*, pp.21 -22, 25 May 2005, Kosice, ISBN 80-969224-4-0
4. ĎUROVSKÝ, F.: Adaptive Headlights as a Contribution to the Vehicles Safety. *2nd International Scientific Conference on Safety, Quality, Reliability*. Košice 2005. ISBN 80-8073-258-2. (in Slovak)
5. FABRICI, D.: Creating Multiagent Applications with the JADE Environment. In: *5th PhD student conference* and scientific and technical competition of students

of Faculty of Electrical Engineering and informatics Technical University of Kosice. Proceeding from Conference and Competition: 25.5.2005, Kosice, Slovakia. Košice : Equilibria, 2005. pp. 33-34. ISBN 80-969224-4-0.

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