

DEPARTMENT OF ELECTRICAL, MECHATRONIC AND INDUSTRIAL ENGINEERING

<http://www.kempi.fei.tuke.sk>

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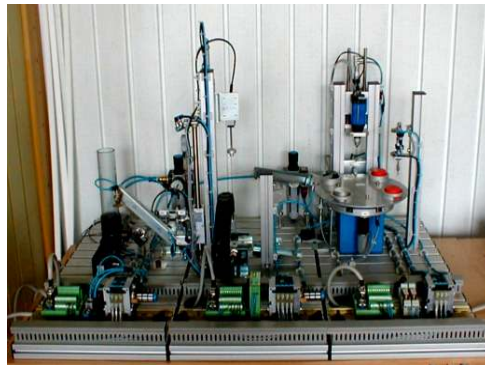
Head of Department
doc. Ing. Michal Girman, PhD.
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1 DEPARTMENT'S PROFILE

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. Pavol Fedor, PhD. prof. Ing. Irena Kováčová, PhD. prof. Ing. Jaroslav Timko, CSc. doc. Ing. Pavel Záskalický, PhD. - extra ordinary professor
Associate Professors:	doc. Ing. Jaroslav Dudrik, PhD. doc. Ing. Viliam Fedák, PhD. doc. Ing. Želmíra Ferková, PhD. doc. Ing. Ján Fetyko, PhD. doc. Ing. Michal Girman, PhD. doc. Ing. Felicita Chromjaková, PhD. doc. Ing. Michal Kostelný, CSc. doc. Ing. Peter Kováčik, PhD. doc. Ing. Jozef Ondera, PhD. doc. Ing. Daniela Perduková, PhD.
Assistant Professors:	Ing. Peter Bober, PhD. Ing. František Ďurovský, PhD Ing. Peter Kmec, PhD. Ing. Peter Košč, PhD. Ing. Ján Kaňuch, PhD. Ing. Jaroslava Žilková, PhD.
Assistants:	Ing. Peter Girovský Ing. Jana Harvanová
Senior Scientists:	Ing. Peter Keusch doc. Ing. Juraj Oetter, PhD. Ing. Peter Višnyi, PhD., Peter Hajsák prof. Ing. Ladislav Zboray, CSc.
Technical Staff:	Ing. Gabriela Brečková Zuzana Olexová Ing. Vladimír Suchý František Hajsák
Ph.D. Students:	Ing. Ľubomír Cibula Ing. Milan Lacko Ing. Peter Macko Ing. Ľubomír Matis (by September 30, 2007) Ing. Martin Olejár Ing. Vladimír Ruščin

3 EQUIPMENT

3.1. Teaching and Research Laboratories

- Laboratories of Electrical Engineering
- Power Electronics Laboratory
- Laboratory for CAD (COSMOS, ProEngineer, MATLAB, PSpice, and applied SW)
- Laboratory of Industrial Automation
- Laboratory of Electrical Machines
- Laboratory of Electrical Drives
- Laboratory of Controlled Electrical Drives and Mechatronics
- Laboratory of Process Modelling and Simulation
- Laboratory of Control Systems and Robotics

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 - 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, SIMATIC ET200M, SIMATIC Touch Panels.

Apparatus

- Logic Analyser PHILIPS
- Controlled electrical drives and converters
- DSP controlled AC drive
- DSP based dSpace DS1102 for Hardware in the Loop simulation
- DOMINOPUTER - 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)

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 8 Business Intelligence
- ELCAD for electrical engineering design
- Macromedia Director
- Matlab, Simulink, dSpace
- PS-8 project management software,
- PV 4 simulation software
- SIMPLE++ simulation software
- Arena simulation software
- CosmosEMS 3.0
- Pro/Engineer Wildfire
- CarSim and CarSim RT
- RT-Lab simulator for HIL

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	1 st	2/2	Kaňuch
Electrical Machines	3 rd	3/3	Záskalický
Applied Electronics	3 rd	2/2	Kováčová
Electrical Actuators and Drives	4 th	3/3	Timko
Electrical Apparatuses	4 th	1/2	Ferková
Digital Electronics	4 th	2/2	Kováčová
Power Electronics	4 th	2/2	Dudrik
Microcomputer Techniques	4 th	2/2	Perduková
CAD SW in El. Engineering	4 th	2/2	Fedák
Automation Equipment I.	5 th	3/3	Fedor
Semiconductor Supply Sources and Converters	5 th	3/3	Ondera
Semester Project	5 th	0/5	supervisor
Electrical Equipment of Vehicles	5 th	2/2	Đurovský
Electrical Systems Projecting	5 th	0/2	Kaňuch
Electromechanical Systems Dynamics	5 th	2/2	Fedák
Electrotechnics in Vehicles	5 th	2/2	Đurovský
Control Electronics	5 th	2/2	Kováčová
Information Systems in Industry	5 th	2/2	Girman, Košč
Controlling and Visualisation Systems	6 th	3/3	Perduková
Controlled Drives	6 th	3/3	Đurovský

Industrial Electrical Systems	6 th	2/1	Fetyko,
Bachelor Thesis	6 th	0/4	supervisor

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

Subject	Semester	Lectures/exercises (hours per week)	Name of Lecturer
Electrical Engineering Fundamentals	1 st	2/2	Kaňuch
Computer Applications	3 rd	2/2	Perduková
Electrical Machines	3 rd	3/3	Záskalický
Microcomputer Techniques	4 th	2/2	Perduková
Electrical Actuators and Drives	4 th	3/3	Timko
Electrical Apparatuses	4 th	1/2	Ferková
Digital Electronics	4 th	2/2	Kováčová
Projecting of Electrical Systems	4 th	2/2	Ďurovský
CAD in Mechatronics	4 th	2/2	Fedák
Automation Equipment I.	5 th	2/2	Fedor
Semester Project	5 th	0/4	supervisor
Dynamics of Electromechanical Systems	5 th	2/2	Fedák
Electrotechnics in Vehicles	5 th	2/2	Ďurovský
Intelligent Control in Mechatronics I.	5 th	2/2	Perduková, Žilková
Control and Visualisation Systems	6 th	2/2	Perduková
Controlled Drives	6 th	3/3	Ďurovský
Bachelor Thesis	6 th	0/4	supervisor
Robotics	6 th	2/2	Fetyko
Automation Techniques II.	6 th	2/2	Fedor
Mechatronic Production Systems	6 th	2/2	Fetyko

c) Bc. study programme on Industrial Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Economy	3 rd	2/1	Chromjaková
Information Systems in Industry	3 rd	2/2	Girman, Košč
Production Technologies in Electrical Industry	3 rd	2/2	Kostelný
Marketing	3 rd	2/2	Kováčová
Multimedia Techniques	3 rd	2/2	Kováčik, Girovský
Programming Seminar I.	3 rd	0/4	Girman, Keusch
Human Resource Management	4 th	2/2	Girman, Košč
Simulation of Production Systems	4 th	2/2	Girman, Bober
Automation of Technological Processes	4 th	2/2	Kováčik
Database Systems for CIS	4 th	2/2	Fedor
Programming Seminar II.	4 th	0/4	Girman, Keusch
Management of Companies	5 th	2/2	Kováčik, Kmec
Production Management and Logistics	5 th	2/2	Kováčik
Semester Project	5 th	0/4	supervisor

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

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	7 th	2/2	Záskalický
Models of Dynamic Systems	7 th	2/2	Fedák
Power Semiconductor Systems	7 th	2/2	Ondera
Electromagnetic Compatibility	8 th	3/2	Kováčová
Control Circuits for Power Electronics	8 th	3/3	Višnyi
Motion Control	8 th	3/3	Fetyko
Semester Project	8 th	0/4	supervisor
Projecting of Electrical Machines	8 th	2/2	Ferková
Logic and Non-linear Control	8 th	2/0	Fedor
Artificial Intelligence Methods in Control	8 th	2/2	Žilková
Electrical Apparatuses Construction	8 th	2/2	Ferková
Projecting of Electrical Engineering Systems	9 th	3/3	Đurovský
Semiconductor Converters Applications	9 th	2/2	Ondera
Signal Processors	9 th	2/2	Višnyi
Control of Robots	9 th	2/2	Fetyko
Semiconductor Converters Construction	9 th	2/2	Ondera
Economic Analysis and Accounting	10 th	2/0	Kováčová
El. Engineering Production	10 th	2/0	Záskalický

c) Ing. study programme on Industrial Engineering

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Operational Management	7 th	2/2	Girman
Financial Management of Companies	7 th	2/2	Chromjaková
Strategic Management	8 th	2/2	Girman
Design of Manufacturing Systems	8 th	2/2	Girman
Statistical Process Control	8 th	2/2	Kováčik, Kmec
Human Resources Development	8 th	2/2	Kováčik, Košč
Economics for Managers	8 th	2/2	Chromjaková
Semester Project	8 th	0/5	supervisor
Project Management	9 th	2/2	Girman, Kmec

Subject	Semester	Lectures/exercises (hours per week)	Name of lecturer
Modelling, Simulation, and Optimization of Processes	9 th	2/2	Girman
Software Quality Engineering	9 th	2/2	Girman, Bober
Financial and Economic Analysis	10 th	2/2	Kováčik
Fuzzy Systems	10 th	2/2	Fedor

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

All subjects listed above are offered in English language for foreign students.

4.4. Ph.D Postgraduate Course in Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Electronics	1 st	2/0	
Ph.D Project I	1 st	0/2	
Foreign Language I	1 st	2/0	
Servosystems	2 nd	2/0	
Ph.D Project II	2 nd	0/2	
Foreign Language I	2 nd	2/0	
Ph.D Project III	3 rd	0/4	
Subject of specialization	3 rd	2/0	
Scientific activity	3 rd	0/8	
Ph.D Project IV	4 th	0/2	
Scientific activity	4 th	0/8	
Ph.D Project IV	5 th	0/2	
Scientific activity	5 th	0/8	
Ph.D Thesis	5 th	0/9	

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 and special electrical machines*. VEGA (Scientific Grant Agency) project No 1/2178/05 (2005 - 2007). Co-ordinator: DUDRIK, J.
- *Analysis and quality quantification of building construction projects from EMC aspect*. VEGA (Scientific Grant Agency) project No 1/4174/07, (01/2007 - 12/2009). Co-ordinator: KOVÁČOVÁ, I.
- *Modern Methods of the Electrical Drives Control*. VEGA (Scientific Grant Agency) project No 1/4076/07 (2007 - 2009). Co-ordinator: TIMKO, J.
- *Testing equipments for controlling and setting of the circuit breaker thermal and magnetic releases*. APVT project No. APVT-20-P03105 (2005-2007). Project contractor: FEI TU Košice, co-operation - SEZ Krompachy
- *Implementation of new technology into the production of residual current circuit*

- breakers with overcurrent protection*. APVV project No. APVV -99-P04705 (2005-2007). Project contractor: SEZ Krompachy, co-operation - FEI TU Košice.
- *Research and Development of New Generations Electric linear Drives with High Resolution of Position*. APVV project No. APVV -99-031205 (2006-2008). Project contractor: Elektrotechnický výskumný a projektový ústav, a.s., Nová Dubnica, co-operation FEI TU Košice.
- *Research of behaviour of the small electrical motor by a non harmonic supply*; APVV project No: APVV 0510-06, Co-ordinator, ZÁSKALICKÝ,P.

6 CO-OPERATION

6.3. 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: U.S.STEEL Košice, SIEMENS, ABB, BSH Drives and Pumps Michalovce, Křížík Prešov, Schneider Electric Slovakia, Spell Procont Prešov, Vonsch Brezno, Kybernetika Košice, 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, SEZ Krompachy, STAPRO Ltd. Košice.

6.3.1. Visitors to the Department

- KONEČNÁ, E. TU Liberec, Czech Republic, Sept. 2007, study visit in framework of the joint bilateral Czech-Slovak project
- RICHTER, A., RYDLO, P., KOPRNICKÝ, J., TU Liberec, Czech Republic, Sept. 24 – 26, 2007- study visit in framework of the joint bilateral Czech-Slovak project
- Schreier, L.: ČSAV Prague, Department of Electrical Machines; Visit in framework of *APVV 0510-06 project*.
- Prof. István Nagy, Budapest University of Technology and Economy, Sept 22-27, 2007, visit in framework of bilateral SK-HU cooperation, participation in EDPE 2007, lecture presentation
- Dr. Rafael Kálmán Járdán, Budapest University of Technology and Economy, Sept 22-26, 2007, visit in framework of bilateral SK-HU cooperation, participation in EDPE 2007, lecture presentation

6.4. International Co-operation

- 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
- National Technical University of Athens, Greece
- University of Technology and Economy, Budapest, Hungary
- University of Miskolc, Hungary
- Delft University of Technology, The Netherlands

- Warsaw University of Technology, Poland
- Czech Academy of Science, Prague.
- Silesian Polytechnic Institute of Gliwice
- Transilvania University of Brasov, Romania
- University of Oradea, Romania
- Procter & Gamble - Rakona Rakovník.

6.4.1. Visits of Staff Members to Foreign Institutions

- ĎUROVSKÝ, F, OLEJÁR, M: Škoda Auto Mladá Boleslav, Czech Republic, Jan. 17 – 19, 2007
- ZÁSKALICKÝ, P, KOSTELNÝ, M., FERKOVÁ, Ž., KAŇUCH, J.: Brno, Czech Republic, Jan 22 – 25, 2007
- FEDÁK, V., PERDUKOVÁ, D.: Lisabon, Portugal, Mar. 17 – 22, 2007 (project IDENTITY - Workshop on using VR in Education and Coordinating Committee meeting)
- FETYKO, J.: Brussels, Belgium
- FEDÁK, V.: Poland, April 11 – 13, 2007 (project PRO_NMS - First Periodic Review Meeting)
- FEDÁK V., PERDUKOVÁ, D.: Genova, Italy, May 19 – 23, 2007 (project IDENTITY – 2nd Coordinating Committee meeting)
- Cibula L.: Pilsen Czech Republic, June 12 – 14, 2007 (participation in the XXX. 2007 Electrical Drive Conference)
- FEDÁK, V., DUDRIK, J.: Romania, July 9 – 22, 2007 (Lecturing in framework of the Erasmus programme)
- FEDÁK, V., FETYKO, J.: Miskolc, Hungary, July 1 – 3, 2007 (participation in the SEFI 2007 Conference)
- FERKOVÁ, Ž.: Liberec, Czech Republic,
- FERKOVÁ, Ž.: Prague, Czech Republic,
- FERENCOVÁ J., MACKO, P.: Brno, Czech Republic, Aug. 26 – 31, 2007
- KAŇUCH J., KOSTELNÝ, M., ONDERA, J., ZÁSKALICKÝ, P.: Prague, Czech Republic, Sept. 2 – 7, 2007
- GIRMAN, M.: Pilsen, Czech Republic, Sept. 19 – 22, 2007
- KOVÁČOVÁ, I.: Pilsen, Czech Republic, Sept. 2007
- OLEJÁR, M.: Rožnov p/Radhoštěm, Czech Republic, Oct. 24 – 25, 2007
- KOVÁČIK, P.: Zlín, Czech Republic, Nov. 1 – 3, 2007
- FEDÁK V., PERDUKOVÁ, D.: Athens, Greece, Oct. 30 – Nov. 4, 2007 (project EDIPE – 2nd Joint Co-ordinator Committee meeting)
- ĎUROVSKÝ, F., OLEJÁR, M.: Liberec, Czech Republic, Nov. 4 – 9, 2007
- KAŇUCH, J., ZÁSKALICKÝ, P.: Brno, Czech Republic, Nov. 11 – 4, 2007
- ZÁSKALICKÝ, P.: Brno, Czech Republic, Dec. 13 – 14, 2007

6.5. Membership in International Organizations, Societies and Committees

- FEDÁK, V.: EPE – European Power Electronics and Drives Association, Brussels: Executive Council member, General Assembly member
- FEDÁK, V., FETYKO, J., TIMKO, J.: Power Electronics and Motion Control Council EPE-PEMC – Budapest: Council members

- 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
- ZÁSKALICKÝ, P.: Steering Committee of ISEF 2007 Conference in Prague, 13-15. 9. 2007.
- ZÁSKALICKÝ, P.: Journal KOMEL, Maszyny elektryczne; Sience committee, Poland.

Members of the Programme and Steering Committees of the International Conferences

- FEDÁK, V.: General Chairman of the 16th *Int. Conference on Electrical Drives and Power Electronics*, EDPE 2007, The High Tatras, Sept. 24 – 26, 2007EDPE 2007
- DUDRIK, J.; FETYKO, J.; ZÁSKALICKÝ, P. – ISC members of the *EDPE 2007*
- FEDÁK, V.: Programme Committee Chairman of the 5th *Int. Conference on Emerging eLearning Technologies and Applications*, ICETA 2007, The High Tatras, Sept. 6-8, 2007

6.6. Membership in Slovak Professional Bodies

- 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., GIRMAN, M., KOVÁČOVÁ, I., FEDOR, P., FEDÁK, V., DUDRIK, J.: members of board for the Ph.D. Study in 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 TU Košice)
- 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. Editorial board for Journal „Kvalita, Inovácia, Prosperita” (Quality, Innovation, Prosperity), ISSN 1335-1745

6.7. Contracts, International Projects

- Project name: **E-learning Distance Interactive Practical Education - EDIPE**
EU programme: Leonardo da Vinci
Project No: CZ/06/B/F/PP-168022,
Project Duration: 10/2006 - 09/2008
Contracting Institution: VUT Brno,
Project co-ordinator for FEEI: FEDÁK, V.

The objective of the project is to develop a complete set of 18 different interactive design oriented virtual or distance laboratories covering basic fields of applied

electrical engineering starting from fundamentals of EE, through electronics, power electronics, applications of power electronics, dynamics of electro-mechanical systems including industrial application of electrical drives, motion control and also complex drive systems. The experiments will be not only analysis oriented (to measure and see the results) but also synthesis oriented (involving a design aspect).

Project partners: Brno University of Technology (CZ), Technische Universiteit Delft (NL), Technische Universität Wien (A), Ruhr Universität Bochum (D), National Technical University of Athens (EL), Institut National Polytechnique de Lorraine (F), Budapest Muszaki es Gazdasagtudomanyi Egyetem (H), Simulation Research CASPOC (NL), Politechnika Warszawa (PL), Politehnica University Timișoara (RO), FEEI Technical University of Košice (SK), Trenčín University of A. Dubček v Trenčíne (SK), University of Maribor (SI).

Co-operating institutions: ATAS Náchod (CZ), Brno University of Defence (CZ), Exendis (NL), Ganz Transelektro Electric Co. Ltd. (H), APS Energia (PL), NES Nova Dubnica (SK), RMC, s.r.o. (SK), AMET, S.r.l., Torino, (I), Delft Koptech (NL)

- Project name: Learning Enhanced by Virtual Reality - IDENTITY
EU programme: SOCRATES/MINERVA: ODL and ICT in EDUCATION
Project No: 229930-CP-1-2006-1-RO-MINERVA-M
Project Duration: 10/2006 - 09/2008.
Contracting Institution: Transylvania University of Brasov, Romania
Project co-ordinator for FEEI: FEDÁK, V.
The overall project objective is to produce a high level quality learning environment in an academic European network ensuring an open access to improved educational resources, as well as to the best practices.
Project partners: Transilvania University of Brasov (RO), Noema-CMI Oy, FINLAND, Technical University of Ilmenau (D), DIBE - University of Genoa (I), Laboratorio delle Idee (I), Universidade Nova de Lisboa (PT), SIEMENS PSE (RO), FEEI, Technical University of Kosice, (SK), The Swedish TelePed. Knowledge Centre (S), EMMERCE EEIG (S)
- In 2007 we continued in cooperation with Dept. of El. Engineering 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: FERKOVA, Ž.
- SOCRATES Program: Higher education (ERASMUS), SOCRATES project, partner: University of Vaasa (Finland), duration: 2003 - 2007, contact: (BOBER, P.), activity: Co-operation within the SOCRATES Program - students and teachers exchange program.
- SOCRATES Program: Higher education (ERASMUS), SOCRATES project, partner: University of Oradea (Romania), duration: 2006 – 2010 contact: DUDRIK, J., activity: Co-operation within the SOCRATES Program - students and teachers exchange program.

6.8. National Educational Projects

- Key Competences Development at PhD. Students for Creating Research Teams, for Research Project Preparation and Management in Mechatronics and Relative Fields. European Social Fund.
Goal of the project: to prepare 10 PhD. students in order to be able to submit

research projects in framework of European Union research programmes and to teach them to all skills to be able to manage such projects and research teams.
Project co-ordinator: GIRMAN, M., project manager: FEDÁK, V.

- Virtual Laboratory of Technological Processes Control by Programmable Logic Controllers, 2006-2008, KEGA, No 3/4196/06. Project co-ordinator: PERDUKOVÁ, D.
- Virtual Laboratory of Mechatronic Systems Control, 2007-2009, KEGA, No 3/5240/07. Project co-ordinator: ĎUROVSKÝ, F.

7 **THESES**

7.1. Bachelor Theses

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7.2. Masters Theses

a) Master Theses, study program Electrical Drives, full –time students

1. Anderko B.: Meranie čiastkových výbojov v izolácii statorových vinutí. Supervisor: Balogh, J.
2. Benča, A.: Meniče pre malé solárne nabíjačky. Supervisor: Ondera, J.
3. Bevilaqua, B.: Učebná pomôcka s BLDC motorčekom. Supervisor: Ferková, Ž.
4. Blaščák, P.: Piezoelektrický motorček. Supervisor: Ferková, Ž.
5. Bodnár, J.: Riadenie fyzikálneho modelu zásobníka kvapaliny pomocou logického automatu. Supervisor: Perduková, D.
6. Dubinský, M.: Návrh spúšťača pre asynchrónny motor. Supervisor: Ďurovský, F.
7. Horník, M.: Obojsmerný DC-DC menič pre hybridnú batériu. Supervisor: Dudrik, J.
8. Hrabčák, M.: Pohon elektrického skútra. Supervisor: Ďurovský, F.
9. Iglai, F.: Riadenie fyzikálneho modelu dopravného prístupového systému pomocou logického automatu. Supervisor: Perduková, D.
10. Jakab, Z.: Riadenie kyvadla. Supervisor: Fetyko, J.
11. Juhás, J.: Univerzálny motor pri harmonickom napájaní. Supervisor: Záskalický, P.
12. Karafa, M.: Experimentálne metódy identifikácie v e-learningovom spracovaní. Supervisor: Fedák, V.
13. Kertis, D.: Dynamika podsystémov mechatronického systému v e-learningovom spracovaní. Supervisor: Fedák, V.
14. Krempaský, J.: Pohon pojazdu mobilného robota. Supervisor: Ďurovský, F.
15. Kušiak, I.: Neurónový model vstupnej časti pocínovacej linky. Supervisor: Timko, J.
16. Lazár, V.: Riadiaci systém pre riadenie chladiaceho tunela CHT650-DP. Supervisor: Žilková, J.
17. Luta, J.: Nelineárna regulácia trakčného pohonu trolejbusu. Supervisor: Ďurovský, F.
18. Marcinčák, M.: Generovanie elektrickej energie pomocou veterných elektrární. Supervisor: Tkáč, J.
19. Nižník, M.: Riadenie fyzikálneho modelu dopravníkov sypkých materiálov pomocou logického automatu. Supervisor: Perduková, D.
20. Peprík, Z.: Bezkeťové jednosmerné motory. Supervisor: Kaňuch, J.
21. Petrušanský, P.: Vysokofrekvenčný menič s mäkkým spínaním so sekundárnymi

- spínačmi. Supervisor: Dudrik, J.
22. Reiner, J.: Návrh pohonov vertikálnych valcov na Teplej širokopásovej trati v U.S.Steel Košice. Supervisor: Fetyko, J.
 23. Schmuczer, V.: Napájač pre reluktančný krokový motor. Supervisor: Záškalický, P.
 24. Smolej, D.: Pohon veterných turbín s toroidným synchronným motorom s permanentnými magnetmi. Supervisor: Kostelný, M.
 25. Smolej, M.: Návrh riadiacej jednotky pre ovládanie zámkov dverí automobilu. Supervisor: Ďurovský, F.
 26. Sobek, J.: Interaktívny e-vzdelávací modul „Jednosmerné stroje“. Supervisor: Kostelný, M.
 27. Szanyo, O.: Interaktívny e-vzdelávací modul „Striedavé elektrické stroje - Asynchronne stroje“. Supervisor: Kostelný, M.
 28. Šebo, J.: Elektromagnetická kompatibilita v automobilovej technike. Supervisor: Kaňuch, J.
 29. Ševčík, L.: Riadiaci systém motorovej nabíjačky olovených akumulátorov. Supervisor: Perduková, D.
 30. Šimon, P.: Elektronicky riaditeľná odporová záťaž pre laboratórne použitie. Supervisor: Ondera, J.
 31. Varga, T.: Obojsmerný menič pre obnoviteľné zdroje energie. Supervisor: Dudrik, J.

b) Master Theses, study program Industrial Engineering, full –time students

1. Bartko, J.: Metodika plánovania optimálnych deliacich plánov. Supervisor: Bober, P.
2. Bartovič, P.: Rozvoj internetového portálu Crossmap CS. Supervisor: Kmec, P.
3. Béres, Z.: Littlov zákon v malopredaji. Supervisor: Kmec, P.
4. Černota, S.: Marketingový výskum – návrh modulu pre vybranú výrobnú firmu. Supervisor: Chromjaková, F.
5. Čižmár, E.: Klient-server aplikácia pre dotazníkový prieskum kvality výučby. Supervisor: Košč, P.
6. Fenčák, M.: Využitie modelovania vzdelávacích procesov pre ich zlepšenie. Supervisor: Bober, P.
7. Fuga, P.: Implementácia nadstavbových modulov pre CRM systém. Supervisor: Košč, P.
8. Hakala, R.: Efektivita predaja v malopredaji. Supervisor: Kmec, P.
9. Halgaš, M.: Nové aplikácie v projektovom riadení. Supervisor: Kmec, P.
10. Hrabčák, G.: Analýza prínosov zmeny spôsobu dopravy zostáv. Supervisor: Bober, P.
11. Hvizdošová, Š.: Diskrétna simulácia v prostredí ARENA. Supervisor: Košč, P.
12. Chovanec, D.: Modelovanie a zlepšovanie procesov v oblasti služieb cestovného ruchu. Supervisor: Košč, P.
13. Illés, P.: Implementácia základných modulov pre CRM systém. Supervisor: Košč, P.
14. Jánošík, R.: Budovanie autonómneho tímu. Supervisor: Košč, P.
15. Karoliová, M.: Analýza metódik modelovania podnikových procesov. Supervisor: Košč, P.
16. Kertéssová, A.: Rozvoj komunikačných zručností vo firemných podmienkach. Supervisor: Košč, P.
17. Kľučár, M.: Manažérsky informačný systém pre podporu riadenia katedry. Supervisor: Bober, P.

18. Koblunický, P.: Návrh použitia bezkontaktných identifikačných čipov pre sledovanie toku materiálu vo výrobe. Supervisor: Bober, P.
19. Kohl, L.: Riadenie školskej linky FESTO pomocou B&R. Supervisor: Girman, M.
20. Košalko, T.: Implementácia e-learning technológií vo firemných podmienkach. Supervisor: Košč, P.
21. Kreheľ, F.: Simulačná hra pre výučbu predmetu Inžinierstvo kvality softvéru. Supervisor: Bober, P.
22. Kukan, F.: Analýza rizík v doprave. Supervisor: Kmec, P.
23. Lengyelová, J.: Riadenie školskej linky FESTO pomocou SIMATIC. Supervisor: Girman, M.
24. Leško, J.: Návrh procesného modelu pre riadenie údržby vo firme LPH, Vranov n/Topľou. Supervisor: Chromjaková, F.
25. Mešková, A.: Kreslenie stromu čiastkových cieľov. Supervisor: Kmec, P.
26. Mižanin, I.: Návrh prostredia na modelovanie podnikových procesov. Supervisor: Girman, M.
27. Modrák, J.: Optimalizácia výrobných dávok pomocou simulácie. Supervisor: Bober, P.
28. Niskáčová, A.: Analýza a tvorba didaktických testov. Supervisor: Košč, P.
29. Olbricht, L.: Aplikácia „Usability Engineering“ na informačný systém. Supervisor: Bober, P.
30. Palenčár, J.: Výkazníctvo pre podporu tvorby rozvrhu. Supervisor: Bober, P.
31. Pivková, L.: Analýza stavu projektovo orientovanej organizácie. Supervisor: Kmec, P.
32. Pivovarník, P.: Analýza kvality rozvrhu z hľadiska študenta, učiteľa a školy nástrojmi Cognos. Supervisor: Bober, P.
33. Sajko, P.: Návrh systému na sledovanie výrobných ukazovateľov. Supervisor: Girman, M.
34. Trembecký, L.: Analýza, hodnotenie a zlepšenie kvality učebných materiálov pre predmet Simulácia výrobných systémov. Supervisor: Bober, P.
35. Valko, R.: Technická stavebnica pre navrhovanie experimentov. Supervisor: Kmec, P.
36. Vaško, V.: Analýza distribúcie tovaru. Supervisor: Kmec, P.
37. Yilmaz, K.: Modelling multiple equipment failures. Supervisor: Kmec, P.
38. Želinský, P.: Zvyšovanie produktivity pomocou nástrojov štihlej výroby. Supervisor: Chromjaková, F.
39. Jurko, D.: Marketingová stratégia feminizácie elektrotechnických odborov. Supervisor: Kováčová, I.

c) Master Theses, study program Industrial Engineering, part-time students

1. Bačová, M.: Analýza a zefektívnenie personálnej práce v spoločnosti SAD Michalovce. Supervisor: Košč, P.
2. Baraní, J.: Analýza procesov v expedícii výrobkov firmy Embraco. Supervisor: Girman, M.
3. Boško, J.: Bezpečnosť práce a pracovného prostredia. Supervisor: Košč, P.
4. Dzurňák, P.: Implementácia e-learning technológií v spoločnosti Embraco Slovakia. Supervisor: Košč, P.
5. Fehér, M.: Aplikácia Teórie obmedzení vo výrobe. Supervisor: Kmec, P.
6. Florianová, M.: Modelovanie výrobného procesu kábelových zväzkov. Supervisor: Girman, M.
7. Fotta, J.: Zvýšenie objemu výroby a optimalizácia výrobných dávok na statorovej linke JOTA. Supervisor: Bober, P.

8. Ganaj, J.: Motivácia pracovníkov pre zvyšovanie výkonnosti vo výrobnjej firme. Supervisor: Chromjaková, F.
9. Hacsí, A.: Manažérske informačné systémy. Supervisor: Košč, P.
10. Hrabovský, Š.: Projektové riadenie v praxi. Supervisor: Kmec, P.
11. Hviždáková, A.: Analýza systému Daňovej správy SR a rozvoj komunikačných zručností. Supervisor: Košč, P.
12. Joppa, J.: Analýza kritickosti zariadení. Supervisor: Kmec, P.
13. Karpinský, M.: Udržiavanie systému riadenia kvality podľa ISO 9000. Supervisor: Girman, M.
14. Klein, J.: Optimalizácia procesu výroby textilných ložísk v Kinex Bytča a.s. Supervisor: Girman, M.
15. Kokošová, O.: Časový manažment v dennej praxi. Supervisor: Kmec, P.
16. Macurová, M.: Analýza podnikových procesov v spoločnosti Viard-H. Supervisor: Košč, P.
17. Marcinčáková, D.: Podnikové vzdelávanie. Supervisor: Košč, P.
18. Maršalek, K.: Analýza príčin a návrh opatrení pre zníženie počtu opráv vôle medzi satorom a rotorom. Supervisor: Bober, P.
19. Pačnár, M.: Modelovanie procesov vo výrobe snímačov. Supervisor: Girman, M.
20. Pardehkhorrám, N.: Zlepšovanie procesov vo výrobe. Supervisor: Kmec, P.
21. Pjatak, S.: Virtuálny model pracoviska. Supervisor: Girman, M.
22. Pohly, A.: Riadenie vybraného firemného projektu. Supervisor: Kmec, P.
23. Rusóová, M.: Hodnotenie kvality softvéru vo firme EMBRACO. Supervisor: Bober, P.
24. Sabol, P.: Využitie lasera v komunikačnom systéme priemyslu. Supervisor: Kováčik, P.
25. Staroň, R.: Firemné zlepšovanie v strojárstve. Supervisor: Girman, M.
26. Škovirha, M.: Optimalizácia výroby plastov metódou teórie obmedzení. Supervisor: Girman, M.
27. Wagnerová, Ž.: Modelovanie dodávateľského reťazca a aplikácia robustného systému kvality. Supervisor: Girman, M.
28. Wantruba, I.: Optimalizácia montážnej linky na výrobu kompresorov Midi. Supervisor: Girman, M.
29. Závadská, L.: Analýza a návrh informačného systému na evidenciu a predaj kníh. Supervisor: Košč, P.

Note: All theses are in Slovak language.

7.3. Theses to the PhD. Exam.

1. MACKO, P.: Fuzzy modelling and control of mechatronic systems. Supervisor: Perduková D.
2. LACKO, M.: Power semiconductor converters for renewable sources of energy. Supervisor: Dudrik, J.

7.4. PhD. Theses

1. Dupej, Ján: Study of the behaviour of an universal motor supply by a triac convertor; February 2007

8 OTHER ACTIVITIES

8.1. Symposia, Workshops, Conferences

- The 16th *Int. Conference on Electrical Drives and Power Electronics, EDPE 2007* (and simultaneously the 3rd *Joint Slovak-Croatian Conference*), <http://www.tuke.sk/edpe> was held in the GrandHotel Permon, Podbanské, The High Tatras, on Sept. 24 – 26, 2007. 90 papers were presented there by participants from 18 countries. Altogether we had 3 keynote, 8 technical and 3 dialogue sessions. The lectures were issued on a CD ROM proceedings. The dean of FEEI TU Kosice, Prof. Liberios Vokorokos awarded outstanding specialists who contributed to development of the EDPE conference and cooperation with the FEEI by the Medal of the FEEI TU Kosice. They were:
 - Dr. eng. habil. Pavol Bauer, Delft University of Technology, The Netherlands
 - Dr. Mike J. Case, University of Johannesburg, South Africa
 - Prof. Ing. Branislav Dobrucký, University of Žilina, Slovakia
 - Prof. Marian Piotr Kaźmierkowski, Warsaw University of Technology, Poland
 - Prof. Jiří Pavelka, Czech Technical University, Prag, Czech Republic
 - Prof. Ján Vittek, University of Žilina, SlovakiaOur colleagues were awarded by a Dialogue Paper Award for the paper titled *Bi-directional DC/DC Converter for Hybrid Battery*
authors: Olejar M., Ruscin V., Lacko M., Dudrik J.
- INDUSTRIAL ENGINEERING '07, international scientific conference, October 3 – 5, 2007, Nový Smokovec, Vysoké Tatry
- *High-Tech Workshop, Herľany 2007* (May 4 -6, 2007). 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). Organiser: Perduková D. More information about this activity is to be found in www.tuke.sk/hth.
- STRAPING'07: Seminar and Meeting of Industrial Engineers, May 11 - 13, 2007, Herľany, Slovakia
- Workshop training "Introduction to Executive Information Systems and Business Intelligence", October 12, 2007
- Student visit in enterprises (October 1 – 5, 2007): Železiarne Podbrezová, SIEMENS Vienna (AT), Slovalco Žiar n.Hr., SE Gabčíkovo, Volkswagen Bratislava, Osram Nové Zámky, Neusiedler Ružomberok, NDS – highway tunnel Branisko (29 students + 2 pedagogical staff). Organiser: Ďurovský F.
- Workshop training "WinCC Flexible", December 2007
- Student visit in enterprises - SI week in Procter & Gamble – Rakona, Rakovník, Czech Republic

8.1. Student Competitions and Rewards

- VÚB IT award, second price for Maroš Fidermák and Milan Revák.

8.2. Projects for Industry

Project title: Analysis of speedsizer rolls control.
Done for: Mondi Business Paper SCP Ružomberok
Project manager: Fetyko, J.
Co-operating staff: Ďurovský, F., Takáč, T.

- Project title: Development and realization of new control structure for speedsizer rolls control.
Done for: Mondi Business Paper SCP Ružomberok
Project manager: Fetyko, J.
Co-operating staff: Ďurovský, F., Takáč, T.
- Project title: Control of flying steel sheet cutter on thick slitting line in U.S.Steel, Košice.
Done for: Kybernetika, s.r.o. Košice
Project manager: Fetyko, J.
Co-operating staff: Ďurovský, F.
- Project title: Control of roughing mill vertical rolls at hot strip rolling mill U.S.Steel, Košice.
Done for: Kybernetika, s.r.o. Košice
Project manager: Fetyko, J.
Co-operating staff: Ďurovský, F., Reiner, L.
- Project title: Reseting of main drive controllers on cellulose making machine.
Done for: Bukocel, s.r.o. Hencovce
Project manager: Fetyko, J.

9 PUBLICATIONS

9.3. Books, theses

1. DUDRIK, J.: Výkonové vysokofrekvenčné DC-DC meniče s mäkkým spínaním. 1. vyd. Košice : Elfa, 2007. 126 s. ISBN 978-80-8086-055-4.
2. ZÁSKALICKÝ, P.: Krokové motory. C-press Košice. 2007. 99 s. ISBN 978-80-8073-778-8.
3. ŽILKOVÁ, J.: Príspevok k modelovaniu a riadeniu elektrických pohonov s využitím UNS. 2007. Košice. Habilitation thesis

9.4. Journals

1. BOBER, P.: Optimalizácia deliacich plánov pre viac strojov pomocou úplného stromu riešení. In: Kvalita Inovácia Prosperita. roč. 11, č. 2 (2007), s. 9-17. ISSN 1335-1745.
2. DUDRIK, J.: ZVZCS PS-PWM full load range DC-DC converter. In: International Review of Electrical Engineering (IREE). vol. 2, no. 1 (2007), p. 21-27. ISSN 1827-6600.
3. DUDRIK, J. - OETTER, J.: Highfrequency soft-switching DC-DC converters for voltage and current DC power sources. In: Acta Polytechnica Hungarica : Journal of Applied Sciences at Budapest Tech Hungary. vol 4, no. 2 (2007), p. 29-46. ISSN 1785-8860.
4. DUDRIK, J. - ONDERA, J. - VIŠNYI, P. - RINDOŠ, P. - LENHARDT, P.: Nízko-frekvenčný spínaný zosilňovač veľkého výkonu. In: ELEKTRO : Odborný časopis pre elektrotechniku. vol. 12, no. 10 (2007), p. 4-7. ISSN 1210-0889.
5. FEDÁK, V. - BAUER, P.: Methods in teaching industrial mechatronic systems. In: Communications : Vedecké listy Žilinskej univerzity. roč. 9, č. 1 (2007), s. 47-51. ISSN 1335-4205.
6. FERKOVÁ, Ž. - ZBORAY, L.: Robust control design of a DC drive. In: Acta Electrotechnica et Informatica. roč. 7, č. 2 (2007), s. 5-8. ISSN 1335-8243.
7. FERKOVÁ, Ž. - ZBORAY, L.: Contribution to control of an elastic two-mass

- system by means of genetic algorithm. In: Advances in Electrical and Electronic Engineering. roč. 6, č. 1 (2007), s. 32-34. ISSN 1336-1376.
- 8 FETYKO, J.: Fuzzy adaptívna regulácia rýchlosti servopohonov. In: Acta Mechanica Slovaca. roč. 11, č. 1-a/2007 artep 2007 (2007), s. 205-210. ISSN 1335-2393.
 - 9 FETYKO, J. - ŠIMKO, O. - FEDÁK, V.: Neural network based parameter identification of dynamic equations of multi-joint mechanisms. In: AT&P Journal plus. č. 1 (2007), s. 253-257. ISSN 1336-5010.
 - 10 HALAMA, M. - ŠMÍD, P. - ŽILKOVÁ, J. - JEROLITSCH, D. : Využitie umelých neurónových sietí pre predikciu atmosférickej korózie konštrukčných materiálov. In: Konstrukce. vol. 6, no. 1 (2007), p. 36-38. ISSN 1213-8762.
 - 11 KOVÁČIK, P. - KEUSCH, P.: Využitie umelej inteligencie a technických príkladov pre výcvik manažérov. In: Horizonty dopravy. roč. 15, č. 1 (2007), s. 28-30. ISSN 1210-0978.
 - 12 KOVÁČIK, P. - KEUSCH, P.: Využitie automatizačných systémov pre zvýšenie bezpečnosti v doprave. In: Horizonty dopravy. roč. 15, č. 1 (2007), s. 25-27. ISSN 1210-0978.
 - 13 KOVÁČIK, P.: Autonómne systémy merania výšky letu pre riadenie lietadla. In: Horizonty dopravy. roč. 8, č. 4 (2000), s. 29-31. ISSN 1210-0978.
 - 14 KOVÁČOVÁ, I. - KOVÁČ, D.: „Electromagnetic Coupling of the Electrical Drive – EMC (Part I.)“, Eletrical Power Quality and Utilisation, Poland, Vol. 13., No. 2, 2007, pp. 81-87
 - 15 KOVÁČOVÁ, I. – KOVÁČ, D.: „Galvanic Coupling - EMC of Electrical Drives (Part II.)“, Journal of Electrical Engineering, Romania, Vol. 7, No. 4, 2007, pp. 16-21
 - 16 MOLNÁR, J. - KOVÁČOVÁ, I.: "Distance remote measurement of magnetic field", Acta Electrotechnica et Informatica, Vol.7, No.4, pp. 52-55, 2007
 - 17 VINCE, T. – KOVÁČOVÁ, I.: "Distance control of mechatronic systems via Internet ", Acta Electrotechnica et Informatica, Vol.7, No.3, pp. 63-68, 2007
 - 18 KOVÁČOVÁ, I. - KOVÁČ, D.: EMC of electrical systems electromagnetic coupling (part 2). In: Advances in Electrical and Computer Engineering. vol. 7 (14), no. 1 (27) (2007), p. 13-18. ISSN 1582-7445.
 - 19 MACKO, P. - PERDUKOVÁ, D. - FEDOR, P.: Zjednodušený fuzzy model asynchrónneho motora. In: AT&P Journal plus. č. 1 (2007), s. 157-162. ISSN 1336-5010.
 - 20 MAXIM, V. - ŽIDEK, K. - LUPTÁK, M. - DUDRIK, J.: Model of the switched reluctance motor with approximation of profile phase inductance. In: Machines technologies materials. no. 6-7 (2007), p. 3-5. Internet: <http://www.mech-ing.com/journal/Archive/6-7-2007/1.Mashini/1_8.Maxim.model%20SRM.pdf>. ISSN 1313-0226.
 - 21 MIHALÍKOVÁ, J. - FERENCOVÁ, J. - LÍŠKA, Ondrej: Zvýšenie úrovne vzdelávania v 3. stupni vysokoškolského štúdia. In: Acta Mechanica Slovaca. roč. 11, č. 1-a/2007 artep 2007 (2007), s. 277-280. ISSN 1335-2393.
 - 22 OLEJÁR, M. - ĐUROVSKÝ, F. - DUDRIK, J. - KOPRNICKÝ, J.: Ultrakapacity a jejich uplatnění v sekundárních zdrojích elektrické energie. In: Technický týdeník. vol. 55, no. 16 (2007), p. 7. ISSN 0040-1064.
 - 23 OLEJÁR, M. - KOPRNICKÝ, J.: Lithium-iontové akumulátory: Jeden z nejperspektivnějších sekundárních zdrojů elektrické energie současnosti. In: Elektroinstalátér. vol. 13, no. 4 (2007), p. 33-34. ISSN 1211-2291.
 - 24 OLEJÁR, M.: Hybridná batéria: Žeby alternatívna náhrada dnešných akumulátorov?. In: Elektroinstalátér. vol. 13, no. 4 (2007), p. 36-37. ISSN 1211-2291.

- 25 PERDUKOVÁ, D. - FEDOR, P.: Application of fuzzy logic in motion control. In: Machines, technologies, materials : International virtual journal for science, technics and Innovations for the industry. no. 2-3 (2007), p. 28-31. ISSN 1313-0226.
- 26 PERDUKOVÁ, D. - FEDOR, P.: Fuzzy model based control of dynamic system. In: Journal of Electrical Engineering. vol. 7, no. 3 (2007), 4 p. Internet: <www.jee.ro>. ISSN 1582-4594.
- 27 ŠPÁNIK, P. - ŠUL, R. - DUDRIK, J.: Nové materiály na báze SiC vo výkonových elektronických systémoch. In: Strojárstvo : Strojárstvo extra. č. 5 (2007), s. 150/4-151/5. ISSN 1335-2938.
- 28 TIMKO, J. - ŽILKOVÁ, J. - GIROVSKÝ, P.: Shaft sensorless vector control of an induction motor. In: Acta Technica CSAV. vol. 52, no. 1 (2007), p. 81-91. ISSN 0001-7043.
- 29 VINCE, T. - KOVÁČOVÁ, I.: Distance control of mechatronic systems via Internet. In: Acta Electrotechnica et Informatica. roč. 7, č. 3 (2007), s. 63-68. ISSN 1335-8243.
- 30 ZÁSKALICKÝ, P. - ZÁSKALICKÁ, M.: Torque ripple calculation of universal motor supplied by a triac converter. In: Acta Technica CSAV. vol. 52, (2007), p. 33-43. ISSN 0001-7043.

9.5. Textbooks

- 1 TIMKO, J. - ŽILKOVÁ, J. - GIROVSKÝ, P.: Electrical drives. 1. vyd.. Košice : FEI TU, 2007. 147 s. ISBN 80-8073-529-8.
- 2 TIMKO, J. - ŽILKOVÁ, J. - GIROVSKÝ, P.: Elektrotechnika. 1. vyd.. Košice : FEI TU, 2007. 212 s. ISBN 978-80-8073-779-5.
- 3 TIMKO, J. - ŽILKOVÁ, J. - GIROVSKÝ, P.: Elektrické pohony a výkonová elektronika. 1. vyd. Košice : TU FEI, 2007. 183 s.

9.6. Conferences

Conferences Abroad

- 1 BAUER, P. - FEDÁK, V. - HÁJEK, V.: Remote controlled practical education for power electronics and electrical drives. In: Joining Forces In Engineering Education Towards Excellence : SEFI and IGIP Joint Annual Conference 2007 : Proceedings : 1-4 July 2007, Miskolc, Hungary. Miskolc : University of Miskolc, 2007. 6 p. ISBN 978-963-661-772-1.
- 2 CIBUĽA, I. - TIMKO, J. - ŽILKOVÁ, J.: Priame momentové riadenie asynchrónneho motora. In: 30. celostátní konference o elektrických pohonech : Plzeň, 12.-14.6.2007. Praha : Česká elektrotechnická společnost, 2007. 10 p. ISBN 978-80-02-01921-3.
- 3 ĎUROVSKÝ, F. - ZBORAY, L.: Variable structure control by genetic algorithm. In: LIPO : Liberecké elektrické pohony 2007 : Sborník příspěvků z celostátní konference : Liberec, 6.-7. listopadu 2007. Liberec : TU, 2007. p. 19-24. ISBN 978-80-7372-272-2.
- 4 FEDÁK, V. - FETYKO, J.: E-learning in industrial mechatronic systems education. In: Joining Forces In Engineering Education Towards Excellence : SEFI and IGIP Joint Annual Conference 2007 : Proceedings : 1-4 July 2007, Miskolc, Hungary. Miskolc : University of Miskolc, 2007. 6 p. ISBN 978-963-661-772-1.
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