DEPARTMENT OF ELECTRICAL ENGINEERING AND MECHATRONICS

http://www.kem.fei.tuke.sk
Tel.: ++421 55 602 2279, Fax: ++421 55 633 0115

Head of Department
doc. Ing. Michal Girman, PhD.
E-mail: Michal.Girman@tuke.sk

1 DEPARTMENT'S PROFILE

The Department belongs to the first departments, established at foundation of the Faculty of Electrical enigneering (founded in 1969). In 2005 staff members from the Laboratory of Industrial Engineering joined the department and it was renamed to Department of Electrical, Mechatronic and Industrial Engineering that was changed to Department of Electrical Engineering and Mechatronics in the year 2010.

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 all types of university courses (bachelor in 2 branches, two master courses and two Ph.D. courses).

2 STAFF

Professors:	prof. Ing. Jaroslav Dudrik, PhD. prof. Ing. Pavol Fedor, PhD. prof. Ing. Irena Kováčová, PhD.(till August 2012) prof. Ing. Daniela Perduková, PhD. (since Sept.2012) prof. Ing. Pavel Záskalický, PhD.
Associate Professors:	doc. Ing. František Ďurovský, PhD. doc. Ing. Viliam Fedák, PhD. doc. Ing. Želmíra Ferková, PhD. doc. Ing. Michal Girman, PhD. doc. Ing. Daniela Perduková, PhD. (till August 2012) doc. Ing. Jaroslava Žilková, PhD.
Assistant Professors:	Ing. Peter Bober, PhD. Ing. Peter Girovský, PhD. Ing. Mgr. Peter Kmec, PhD. (till April 2012) Ing. Peter Košč, PhD. (till April 2012) Ing. Ján Kaňuch, PhD. Ing. Milan Lacko, PhD. Ing. Karol Kyslan, PhD. (since September 2012) Ing. Peter Višnyi, PhD. (till April 2012)
Assistants:	Ing. Jana Harvanová (till April 2012)
Senior Scientists:	Ing. Peter Keusch Bc. Peter Hajsák Ing.Michal Pajkoš (since November 2012)
Technical Staff:	Ing. Gabriela Brečková Zuzana Olexová František Hajsák (till June 2012) doc.Ing.Michal Kostelný, PhD. prof. Ing. Jaroslav Timko, CSc.
Full time Ph.D. Students:	Ing. Ján Bačík (since September 2012) Ing. Mišel Batmed Ing. Tomáš Béreš (till August 2012) Ing. Marcel Bodor (till August 2012) Ing. Matúš Hric (till August 2012) Ing. Godem Ali M. Ismeal Ing. Michal Kaľavský (till August 2012) Ing. Karol Kyslan (till August 2012) Ing. Peter Nguyen (till August 2012) Ing. Marek Pástor Ing. Radoslav Sivý (since September 2012) Ing.Viktor Šlapák (since September 2012) Ing. Marek Vacek

3 LABORATORIES

- Laboratory 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 Automotive Mechatronics
- Virtual Laboratory of Technological Processes Control by Programmable Logic. www.virtual.laboratory.kempi.fei.tuke.sk
- Virtual Laboratory of Mechatronic Systems Control: http://andromeda.fei.tuke.sk
- Laboratory for Integrated Mechatronic Modules for Adaptive Drives. Joint Laboratory of Department of Electrical Engineering and Mechatronics TU Košice, ZTS VVÚ Košice, a.s. and SPINEA, s.r.o. Prešov.

4 TEACHING

4.1. Undergraduate Study (Bc.)

a) Bc. study programme in Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Electrical Engineering Fundamentals	1st	2/2	Kaňuch
Industrial Electronics	2nd	2/2	Kováčová
Electrical Machines	3rd	2/2	Záskalický
Microprocessor Techniques	3rd	2/2	Lacko
Electrical Drives and Power Electronics	4th	2/2	Záskalický
Man-Machine Interfaces	4th	2/2	Perduková
Semiconductor Supplies and Converters	5th	3/2	Dudrik
Automation in Industrial Systems	5th	2/2	Fedor
Bachelor Thesis I.	5th	0/5	Supervisor
Controlled Drives	6th	2/2	Ďurovský
Electrical Systems Projecting	6th	2/2	Ferková
Bachelor Thesis II.	6th	0/9	Supervisor

b) Bc. study programme in Automation of Mechatronic Systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Business and Management	1th	2/0	Kmec
Industrial Electronics	2nd	2/2	Kováčová
Microcontroller Techniques	3th	2/2	Perduková
Computer Applications	3th	2/2	Perduková
Electrical Machines	3rd	2/2	Záskalický
Electrotechnics in Vehicles	3th	2/2	Ďurovský
Electrical Actuators and Drives	4th	2/2	Žilková
ManMachine Interface	4th	2/2	Peduková

CAD Programs in Mechatronics	4th	2/2	Fedák
Bachelor Thesis I.	5th	0/8	Supervisor
Industrial Control Systems	5th	2/2	Fedor
Sensors and Measurement of Nonelectrical Variables	5th	2/2	Fedor
Pneumatic nad Hydraulic Drives	5th	2/2	Bober
Automotive Mechatronics	5th	2/2	Ďurovský
Power Semiconductor Converters	5th	2/2	Dudrik
Bachelor Thesis II.	6th	0/8	Perduková
Motion Control	6th	2/2	Ďurovský
Projecting of Electrical Systems	6th	2/2	Ferková
Technical Practice	6th	0/6	Perduková

c) Bc. study programme in Industrial Engineering

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Business and Management	1th	2/0	Kmec
Information Systems in Industry	2nd	2/2	Košč
Industrial Electronics	2nd	2/2	Kováčová
Electrical Machines	3rd	2/2	Záskalický
Human Resource Management	3th	2/2	Košč
Pneumatic and Hydraulics Drives	3th	2/2	Bober
Microcomputer Techniques	3th	2/2	Lacko
Electrical Actuators and Drives	4th	2/2	Žilková
Simulation of Production Systems	4th	2/2	Bober
Man-Machine Interface	4th	2/2	Perduková
Automation of Industrial Systems	5th	2/2	Fedor
Microprocessor Technique	5th	2/2	Lacko
Computer Suport of Management	5th	2/2	Fedák
Sensors and Measurement of Non-electrical Variables	5th	2/2	Fedor
Design of Electrical Systems	5th	2/2	Ferková
Power Semiconductor Converters	5th	2/2	Dudrik
Controlled Drives	6th	2/2	Ďurovský
Technical Practice in Enterprise	6th	0/6	Perduková
Bachelor Thesis	6th	0/4	Supervisor

4.2. Graduate Study (Ing.)

a) Ing. study programme in Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Semiconductor Systems	7th	2/2	Dudrik
Applied Electronics	7th	2/2	Kaňuch
Dynamic Phenomena of Electrical Machines	7th	2/2	Záskalický
Technology of Production in Electronics	7th	2/2	Slosarčík
Enterprise Control Management	7th	2/2	Girman
Control Management	7th	2/2	Kmec
Electromagnetic Compatibility	8th	2/2	Kováčová
Electrical Machines for Automatisation	8th	2/2	Ferková
Construction and Design of Converters	8th	2/2	Dudrik
Control of Assembly Lines with Programming Controllers	8th	2/2	Fedor
Statistical Process Control	8th	2/2	Bober
Semester Project	8th	0/4	Supervisor

Databases Systems	8th	2/2	Perduková
Control Intelligent Control in El. Systems	9th	2/2	Žilková
Three-Dimensional Modelling and Simulation	9th	2/2	Ferková
Signal Processors	9th	2/2	Višnyi
Electro Energetic			Kolcun
Servosystems	9th	2/2	Ďurovský
Technology of Production in Electrotechnics	9th	2/2	Girman
Diploma Thesis	9th	0/12	Supervisor

b) Ing. study programme in Automation of Mechatronic Systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Models of Mechatronic Systems	7th	2/2	Fedák
Non-linear Mechatronic Systems	7th	2/2	Fedor
Power Semiconductor Systems	7th	2/2	Dudrik
Semester Project	8th	0/4	Fedor
Control of Production Systems by PLC	8th	2/2	Fedor
Electrical Machines for Automation	8th	2/2	Ferková
Robotics	8th	2/2	Žilková
Database Systems	8th	2/2	Perduková
Diploma Thesis I.	9th	0/6	Fedor
Production Technologies in Mechatronics	9th	2/2	Girman
Servosystems	9th	2/2	Ďurovský
Project Control	9th	2/2	Girman
Intelligent Control of El. Systems	9th	2/2	Žilková
Mechatronic Production Systems	9th	2/2	Ďurovský
Diploma Thesis II.	10th	0/18	Supervisor

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 on Electrical Engineering

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Converter Systems	1st	2/0	Dudrik
Ph.D. Project I	1st	0/2	Supervisor
Foreign Language I	1st	2/0	Dept. of Foreign Languages
Servosystems	2nd	2/0	Fedor
Ph.D. Project II	2nd	0/2	Supervisor
Foreign Language II	2nd	2/0	Dept. of Foreign Languages
Ph.D. Project III	3rd	0/4	Supervisor
Subject of Specialization	3rd	2/0	According to the subject
Scientific Activity	3rd	0/8	Supervisor
Ph.D. Project IV	4th	0/2	Supervisor
Scientific Activity	4th	0/8	Supervisor
Ph.D. Project IV	5th	0/2	Supervisor
Scientific Activity	5th	0/8	Supervisor
Ph.D. Thesis	5th	0/9	Supervisor

4.5. Ph.D Postgraduate Course on Mechatronic Systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Theory of Mechatronic Systems	1st	2/0	Fedor
Ph.D. Project I	1st	0/2	Supervisor
Foreign Language I	1st	2/0	Dept. of Foreign Languages
Servosystems	2nd	2/0	Fedor
Ph.D. Project II	2nd	0/2	Supervisor
Foreign Language II	2nd	2/0	Dept. of Foreign Languages
Ph.D. Project III	3rd	0/4	Supervisor
Subject of Specialization	3rd	2/0	According to the subject
Scientific Activity	3rd	0/8	Supervisor
Ph.D. Project IV	4th	0/2	Supervisor
Scientific Activity	4th	0/8	Supervisor
Ph.D. Project IV	5th	0/2	Supervisor
Scientific Activity	5th	0/8	Supervisor
Ph.D. Thesis	5th	0/9	Supervisor

5 RESEARCH PROJECTS

- *Research of power semiconductor converters with high efficiency of electric energy conversion.* APVV - 0185-10 (Slovak Research and Development Agency), 2011-2014. Principal investigator: DUDRIK, J.
- *Centre of excellence of power electronics systems and materials for their components II.* Code ITMS: ITMS: 26220120046, (9/2010 - 8/2013) The project is funded by European Community, ERDF – European regional development fund. Project contractor: University of Žilina, co-operation FEI TU Košice. Co-ordinator: DUDRIK, J.
- *Centre of excellence on integrated research and application of progressive materials and technologies in automotive electronics. ITMS 26220120055.* Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU. (2010 – 2013).
- *Research and developement of a small power drives with two-phase motors,* APVV-0138-10, 2011-2014, Coordinator: Záskalický, P.

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: U.S.STEEL Košice, SIEMENS, ABB, BSH Drives and Pumps Michalovce, BWG Prešov, Křižík Prešov, Schneider Electric Slovakia, Spell Procont Prešov, Spinea Prešov, Vonsch Brezno, Kybernetika Košice, TEKO Košice, ENERGO CONTROL Košice, ZŤS VVU Košice, ŽP Podbrezová, Bukóza Hencovce, Genesis Prešov, Embraco Slovakia Spišská Nová Ves, Kopex Košice, Slovak Union for Quality, Innovation and Design Q-IMPULZ, Košice, SEZ Krompachy, DATAKON Košice.

6.2. 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 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
- University of Maribor, Slovenia
- INPL-ENSEM Nancy, France

6.2.1. Visits of Staff Members to Foreign Institutions

- DUDRIK, J.: EPE-PEMC2012, Novi Sad, Serbia, 3-6 September 2012.
- ĎUROVSKÝ, F.: Automatica 2012, München (D), 23-25 May 2012.
- ĎUROVSKÝ, F.: SPS IPC Drives 2012, Nürnberg (D), 27-29 November 2012.
- ĎUROVSKÝ, F.: Czech Academy of Sciences, Institute of Computer Science. 19 October 2012.
- FERKOVÁ,Ž.: TechSoft Praha (CZ), 11-13 April 2012, 5-8 June 2012.
- FERKOVÁ,Ž.: SME 2012, Politechnika Wroclawska, Wroclaw (PL), 16-20 June 2012.
- FERKOVÁ,Ž.: Ansys 2012, TechSoft Praha, Špindleruv Mlyn (CZ), 5-7 September 2012.
- PÁSTOR, M.: ELECTRONICS 2012, Palnga (LT), 18-20 June 2012.
- ZÁSKALICKÝ, P., KAŇUCH, J.; KOMEL Katowice, Rytro (PL), 23-25 May 2012.
- ZÁSKALICKÝ, P., KAŇUCH, J., FERKOVÁ, Ž. VUT Brno (ČR), 14-16 October 2012.

6.3. Membership in International Organizations, Societies and Committees

- DUDRIK, J. – IEEE member
- DUDRIK, J., FEDÁK, V., TIMKO, J.: Power Electronics and Motion Control Council EPE-PEMC – Budapest. Council and Steering Committee members.
- FEDÁK, V.: EPE – European Power Electronics and Drives Association, Brussels. Executive Council member, General Assembly member, ISC
- FERKOVÁ, Ž: member of Steering Committee ISEM **(**INTERNATIONAL SYMPOSIUM ON ELECTRIC MACHINERY) ČVUT Praha.
- FEDÁK, V: EDPE 2013, Dubrovnik, Co-chairman.
- PERDUKOVÁ, D.: member of Programme Committee: 7th International Conference on Soft Computing Models in Industrial and Environmental Applications – SOCO 2012, Ostrava.

6.4. Membership in Slovak Professional Bodies

- FEDÁK, V.; KAŇUCH, J.; TIMKO, J.; ZÁSKALICKÝ, P.: members of The SES (Slovak Electrotechnical Society), Branch at FEI TU Košice
- FEDÁK, V.: Council of the Secondary Technical School for EE, Košice (delegate of the FEEI TU Košice)
- FEDOR, P.: member of board for the PhD. Course in Mechatronic Systems at FEI TU Košice.
- FERKOVÁ, Ž.: member of Technical Standards Commission on Electrical Machines in SR
- PERDUKOVÁ, D.: member of board for the PhD. Study in Electrical Engineering at FEI TU Košice
- PERDUKOVÁ, D.: member of board for the PhD. Study in Mechatronic systems at FEI TU Košice
- TIMKO, J. (Vice-chairman); FEDÁK, V.; FEDOR, P. DUDRIK J. - members of Joint Slovak Board for the Ph.D. Study in Electrical Engineering
- TIMKO, J. (chairman), GIRMAN, M., KOVÁČOVÁ, I., FEDOR, P., FEDÁK, V., DUDRIK, J.: members of board for the PhD. Study in Electrical Engineering at FEI TU Košice
- TIMKO, J.: member of board for the PhD. Study in Electrical Engineering at EF ZU Žilina
- TIMKO, J.: member of board for the PhD. Study in Mechatronics at SjF TU Košice
- ZÁSKALICKÝ, P.: member of board for the PhD. Study in Electrical Engineering at EF ZU Žilina
- ZÁSKALICKÝ, P.: member of board for the PhD. Study in Electrical Engineering at FEI TU Košice
- ZÁSKALICKÝ, P.: member of board for the PhD. Study in Mechatronic systems at FEI TU Košice

6.5. National Educational Projects

- Teaching innovation in control of mechatronic systems. KEGA 042TUKE-4/2012. Coordinator: LACKO, M.

6.6. Editorial Boards

- BOBER, P. Editorial board for journal “Quality Innovation Prosperity”, ISSN 1335-1745 (print), ISSN 1338-984X (online).
- DUDRIK, J. – Member of the Series Editorial Board of Annals of the Academy of Romanian Scientists.
- DUDRIK, J.: Editorial board of Transactions on electrical engineering, Czech Republic, ISSN 1805-3386
- FEDOR, P: Editorial board of Acta Electrotechnica et Informatica – AEI. Journal of the Faculty of Electrical Engineering and Informatics. ISSN 1335-8243
- PERDUKOVÁ, D.: Editorial board of Elektroenergetika journal, ISSN 1337-6756.
- ZÁSKALICKÝ, P.: Editorial board of Acta Technica CSAV. Journal of Academy of Sience of the Czech republic, Praha. ISSN 0001-7043.
- ZÁSKALICKÝ, P.: Editorial board of KOMEL, Branzowy osrodek badavczo-rozwojovy Maszyn elektrycznych, Katowice, Poland. ISSN 0239-3646.

7. THESESDefened Ph.D. Theses

- BÉREŠ, T.: Bidirectional DC–DC Converter for Hybrid Battery in Electric Vehicle, Supervisor: Dudrik, J.
- BODOR, M.: Soft Switching DC/DC Power Converter, Supervisor: Dudrik, J.
- HRIC, M.: Control of Serovdrives Having High Requirements to Precision. Supervisor: Fedák, V.
- KAĽAVSKÝ, M.: Application of Potential Field for Determination of Electro Mobiles Motion**.** Supervisor: Ferková Ž.
- KYSLAN, K.: Load Torque Emulator. Supervisor: Ďurovský, F.
- NGUYEN, P.: Sensorless Vector Control of IM by AI methods. Supervisor: Žilková, J.

Thesis type	Bachelor	Master	Doctoral
Number	48	56	6

8 OTHER ACTIVITIES

8.1. Symposia, Workshops, Conferences

- KOPES 2012. Symposium of teachers of electrical machines subjects. Herľany, 17 – 19 January 2012.

8.2. Projects for Industry

- Structure Optimization of Compact Drive Modules. For ZTS VVÚ Košice. 84/104001/12/D, Co-ordinator: ĎUROVSKÝ, F.

8.3. Student Competitions and Rewards

- BAČIK Ján: ISTRORBOT Bratislava, (21 April 2012). 1st place in Free Style category (with robot Prometheus).
- BODOR Marcel: The best paper award for students at the 15th International Power Electronics and Motion Control Conference – EPE-PEMC2012, Novi Sad, Serbia, 2012.
- KYSLAN Karol: Dean award for the best poster presentation at the 12th Scientific Conference of Young Researchers of Faculty of Electrical Engineering and Informatics Technical University of Košice (SCYR 2012).
- PÁSTOR Marek: Dean Award for best oral presentation at the 12th Scientific Conference of Young Researchers of Faculty of Electrical Engineering and Informatics Technical University of Košice (SCYR 2012).
- Bosch Electromobil Race 2012. Miskolc, participation of 2 teams.

8.4. Compositions for Dissertation Examinations

- BATMEND, M.: Riadený mechatronický systém pre gravírovanie obrazov. Supervisor: Perduková, D.
- PÁSTOR, M.: Cascade Inverter for Photovoltaic Systems Supervisor: Dudrik, J.

9 PUBLICATIONS

9.1. Books

[1] BANÍK, František - FEDOR, Pavol - PERDUKOVÁ, Daniela: Metódy inteligentnej navigácie autonómneho vozidla. TU Košice 2012. 96 pp. ISBN 978-80-553-0850-0.

[2] FEDÁK, Viliam - ĎUROVSKÝ, František - KEUSCH, Peter: E-learning in Mechatronic Systems Supported by Virtual Experimentation. In: E-Learning - Engineering, On-Job Training and Interactive Teaching. Rijeka, InTech, 2012 pp. 85-106. ISBN 978-953-51-0283-0.

[3] FEDÁK, Viliam – BALOGH, Tibor – ZÁSKALICKÝ, Pavel: Dynamic Simulation of Electrical Machines and Drive Systems Using MATLAB GUI. In: MATLAB - A Fundamental Tool for Scientific Computing and Engineering Applications - Volume 1. Rijeka: InTech, 2012 pp.317-342. ISBN 978-953-51-0750-7. *http://www.intechopen.com/books/matlab-a-fundamental-tool-for-scientific-computing-and-engineering-applications-volume-1/dynamic-simulation-of-electrical-machines-and-drive-systems-using-matlab-gui*.

[4] SLOBODA, Aurel - ĎUROVSKÝ, František - BUGÁR, Tibor - SLOBODA, Oskár: Experimentálne vozidlá. Košice, Vienala 2012. 278 pp. ISBN 978-80-8126-062-9.

9.2. Textbooks

[1] BOBER, Peter: Pneumatické a hydraulické pohony. Košice: TU, 2012. 107 pp. ISBN 978-80-553-0893-7.

[2] BOBER, Peter: Pneumatické a hydraulické pohony 2. Riešené úlohy. Košice: TU, 2012. 153 pp. ISBN 978-80-553-1078-7.

[3] FEDOR, Pavol - PERDUKOVÁ, Daniela: Automatizácia priemyselných systémov. Košice, TU 2012. 100 pp. ISBN 978-80-553-1140-1.

[4] GIRMAN, Michal: Modelovanie podnikových procesov, TU Košice, 151 p. ISBN 978-80-553-1185-2.

9.3. Scientific Journals

Foreign Journals

[1] ŽILKOVÁ, Jaroslava - TIMKO, Jaroslav - GIROVSKÝ, Peter: Modelling and control of tinning line entry section using neural networks. In: International Journal of Simulation Modelling. Vol.11, no.2 (2012), p.1-12. ISSN 1726-4529.

[2] LENGYEL, L. - ZGODAVOVÁ, Kristína - BOBER, Peter: Modeling and Simulation of Relocation of a Production in SIMPRO-Q Web Based Educational Environment. In: International Journal of Advanced Corporate Learning. Vol.5, no.1 (2012), p.26-31. ISSN 1867-5565. *http://dx.doi.org/10.3991/ijac.v5i1.1878*.

[3] EÖTVÖS, Erik - DUDRIK, Jaroslav - BÉREŠ, Tomáš: Resonant DC-DC Converter for Photovoltaic Systems. In: Transactions on electrical

engineering. Vol.1, no.1 (2012), p. 25-29. ISSN 1805-3386.
[4] ZÁSKALICKÝ, Pavel: Analytical method of a calculation of a torque ripple a two-phase pmsm supplied by a pwm controlled inverter. In: Maszyny elektryczne: Zeszyty Problemowe. Vol. 94, no.1 (2012), p.125-130. ISSN 0239-3646.
[5] ZÁSKALICKÝ, Pavel - KAŇUCH, Ján: Complex fourier series mathematical model of a universal motor supplied by an IGBT transistor. In: Maszyny elektryczne: Zeszyty Problemowe. Vol.94, no.1 (2012), p.33-37. ISSN 0239-3646.
[6] KAŇUCH, Ján - FERKOVÁ, Želmíra: Design and electromagnetic field simulation of disk stepper motor with permanent magnets. In: Zagadnenia maszyn, napedow i pomiarov elektrycznych. Vol.1, no.66/32 (2012), p.48-59. ISSN 1733-0718.
[7] PÁSTOR, Marek - DUDRIK, Jaroslav: Grid-tied Multilevel Inverter With Predictive Current Control. In: Journal of Electrical and Electronics Engineering. Vol.5, no.1 (2012), p.173-178. ISSN 1844-6035.
[8] GIROVSKÝ, Peter - TIMKO, Jaroslav - ŽILKOVÁ, Jaroslava: Shaft Sensor-less FOC Control of an Induction Motor Using Neural Estimators. In: Acta Polytechnica Hungarica. Vol.9, no.4 (2012), p.31-45. ISSN 1785-8860.
[9] ZÁSKALICKÝ, Pavel - DOBRUCKÝ, Branislav: Complex Fourier series mathematical model of a three-phase inverter with improved PWM output voltage control. In: Electronics and Electrical Engineering. No.7 (123) (2012), p.65-68. ISSN 1392-1215.
[10] KYSLAN, Karol - ĎUROVSKÝ, František: Control of a Test Bench for Dynamic Emulation of Mechanical Loads. In: Procedia Engineering. No.48 (2012), p.352-357. ISSN 1877-7058. *http://www.sciencedirect.com/science/journal/18777058/48/supp/C*
[11] PÁSTOR, Marek - DUDRIK, Jaroslav: Grid-tied 15-level Cascade Inverter with Predictive Current Control. 2012.In: Electronics and Electrical Engineering. 2012 Vol.18, no.9 (2012), p.19-22. ISSN 1392-1215. *http://www.eejournal.ktu.lt/index.php/elt/article/view/2798/1980*.
[12] PERDUKOVÁ, D. – FEDOR, P. – BATMEND, M.: Dynamic Analysis and Optimizing a Path of Electromagnetic Diamond Percussion Tool. Precision Instrument and Mechanology – PIM, The World Academic Publishing CO, Volume 1, Issue 2, July 2012, pp.. 42-47, ISSN 2304-1811, www. pim-journal.org@ World Academic Publishing.

National Journals

[1] DUDRIK, Jaroslav: Výkonové polovodičové súčiastky pre mäkké spínanie. In: EE časopis. Vol.18, No.2 (2012), p.14-15. ISSN 1335-2547.
[2] HRIC, Matúš - FEDÁK, Viliam - ĎUROVSKÝ, František: Vplyv nelinearít cykloidnej prevodovky na presnosť polohovania. In: Strojárstvo extra. No.5 (2012), p.1-4. ISSN 1335-2938.
[3] GIROVSKÝ, Peter - LACKO, Milan: Simulácia neurónového pozorovateľa rýchlosti pomocou real-time system. In: ATP Journal. Vol.19, No.5 (2012), p.66-68. ISSN 1335-2237.
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9.4. Patents

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9.5. Other publications

Publication Type	Confereces		Other
	Foreign	Home	
Number	18	20	3