

# DEPARTMENT OF ELECTRICAL ENGINEERING AND MECHATRONICS

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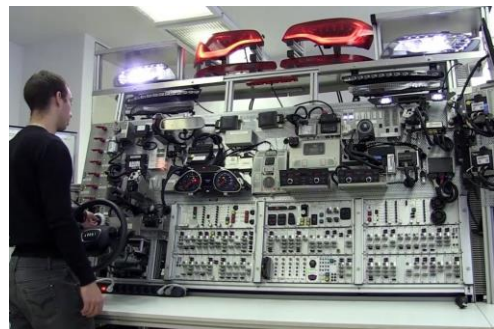
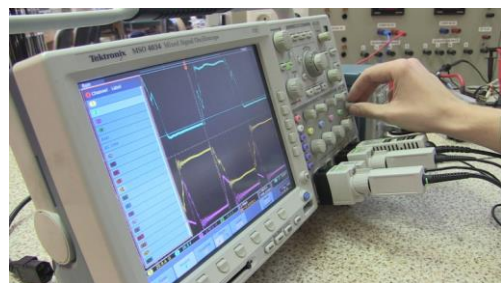


## 1 DEPARTMENT'S PROFILE

The Department was established at foundation of the Faculty of Electrical Engineering in 1969 as the Department of Electrical Drives but originally it was derived from the Department of Electrical Engineering established at foundation of the Technical University of Kosice (1953). Through the years the name of the department was changed in order to express closer its activities and development.

Staff members of the department are experienced in wide areas of electrical engineering, incl. automotive electrical engineering, mechatronics, and robotics what they utilise in teaching and research. Currently, the department is responsible for education and research in systems of electrical engineering, namely in fields of power and industrial electronics, electrical machines and apparatuses, sensors, electromechanical systems, controlled drives, multi-motor drives, control systems, industrial and automotive mechatronic systems up to drives of robots.

The Department offers all types of university courses: bachelor, master and Ph.D. courses.



## 2 STAFF

- Professors:** prof. Ing. Jaroslav Dudrik, PhD.  
prof. Ing. Pavol Fedor, PhD.  
prof. Ing. Daniela Perduková, PhD.  
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. Jaroslava Žilková, PhD.
- Assistant Professors:** Ing. Ján Bačík, PhD. (since July 2016)  
Ing. Peter Bober, PhD.  
Ing. Peter Girovský, PhD.  
Ing. Ján Kaňuch, PhD.  
Ing. Karol Kyslan, PhD.  
Ing. Milan Lacko, PhD.  
Ing. Marek Pástor, PhD.
- Senior Scientists:** Ing. Peter Hajsák  
Ing. Viktor Šlapák, PhD. (since July 2016)
- Technical Staff:** Ing. Gabriela Brečková  
Zuzana Olexová  
doc. Ing. Michal Kostelný, CSc.  
prof. Ing. Jaroslav Timko, CSc.
- Full time Ph.D. Students:** Ing. Ján Bačík (till June 2016)  
Ing. Milan Biroš  
Ing. Godem Ali M. Ismeal (till June 2016)  
Ing. Martin Lešo  
Ing. Radoslav Sivý (till June 2016)  
Ing. Ľuboš Suchý  
Ing. Viktor Šlapák (till June 2016)  
Ing. Peter Talian  
Ing. Marek Vacek (till June 2016)  
Ing. Róbert Űveges  
Ing. Róbert Žatkovič

### 3 LABORATORIES

- Laboratory of Electrical Engineering
- Power Electronics Laboratory
- Laboratory for CAD (COSMOS, ProEngineer, MATLAB, PSpice, and applied SW, ABBRobotStudio)
- Laboratory of Industrial Automation
- Laboratory of Electrical Machines
- Laboratory of Electrical Drives
- Laboratory of Controlled Electrical Drives and Mechatronics
- Laboratory of Automotive Mechatronics
- Laboratory of Pneumatic and Hydraulic Systems
- Virtual Laboratory of Technological Processes Control by Programmable Logic. [www.virtual.laboratory.kempi.fei.tuke.sk](http://www.virtual.laboratory.kempi.fei.tuke.sk)
- Virtual Laboratory of Mechatronic Systems Control: <http://andromeda.fei.tuke.sk>

### 4 TEACHING

#### 4.1. Undergraduate Study (Bc.)

##### a) Bc. study programme in Automated Electrical Systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Fundamentals of Electrical Engineering	1 <sup>st</sup>	2/2	Kaňuch
Computer Applications	3 <sup>th</sup>	2/2	Perduková
Electrical Machines	3 <sup>rd</sup>	2/2	Záskalický
Electrotechnics in Vehicles	3 <sup>th</sup>	2/2	Ďurovský
Industrial Electronics	3 <sup>th</sup>	2/2	Záskalický
Electrical Drives	4 <sup>th</sup>	2/2	Žilková
Microprocessor Technique	3 <sup>rd</sup>	2/2	Lacko
CAD Programs in Electrical Engineering	4 <sup>th</sup>	2/2	Fedák
Power Electronics	4 <sup>th</sup>	3/3	Dudrik
Sensors and Measurement of Nonelectrical Variables	4 <sup>th</sup>	2/2	Girovský
Industrial Control Systems	4 <sup>th</sup>	2/2	Fedor
Bachelor Thesis I.	5 <sup>th</sup>	0/8	Supervisor
Simulation of Production Systems	5 <sup>th</sup>	2/2	Bober
Controlled Electrical Drives	5 <sup>th</sup>	2/2	Ďurovský
ManMachine Interface	5 <sup>th</sup>	2/2	Perduková
Bachelor Project	5 <sup>th</sup>	0/8	Supervisor
Bachelor Thesis II.	6 <sup>th</sup>	0/8	Supervisor
Modeling of Electromechanical Systems	6 <sup>th</sup>	2/2	Fedák
Projecting of Electrical Systems	6 <sup>th</sup>	2/2	Ferková
Pneumatic and Hydraulic Drives	6 <sup>th</sup>	2/2	Bober

#### 4.2. Graduate Study (Ing.)

##### a) Ing. study programme in Electrical systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Semiconductor Systems	7 <sup>th</sup>	2/2	Dudrik
Non-linear Electro-Mechanical Systems	7 <sup>th</sup>	2/2	Fedor

Servosystems	7 <sup>th</sup>	2/2	Ďurovský
Dynamic Phenomena of Electrical Machines	7 <sup>th</sup>	2/2	Záskalický
Electrical Machines for Automation	7 <sup>th</sup>	2/2	Ferková
Technology of Production in Electronics	7 <sup>th</sup>	2/2	Slosarčík
Vehicle Mechatronics	8 <sup>th</sup>	2/2	Ďurovský
Construction and Design of Converters	8 <sup>th</sup>	2/2	Dudrik
Control of Assembly Lines with Programming Controllers	8 <sup>th</sup>	2/2	Fedor
Statistical Process Control	8 <sup>th</sup>	2/2	Bober
Diploma Project	8 <sup>th</sup>	0/4	Supervisor
Robotics	8 <sup>th</sup>	2/2	Žilková
Diploma Project II	9 <sup>th</sup>	0/6	Supervisor
Mechatronic Production Systems	9 <sup>th</sup>	2/2	Ďurovský
Intelligent Control in EI Systems	9 <sup>th</sup>	2/2	Žilková
Three-Dimensional Modelling and Simulation	9 <sup>th</sup>	2/2	Ferková
Signal Processors	9 <sup>th</sup>	2/3	Lacko
Technology of Production in Electrotechnics	9 <sup>th</sup>	2/2	Girman
Diploma Thesis	10 <sup>th</sup>	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 systems

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

## 5 RESEARCH PROJECTS

- *Research of New Principles and Methods for Design of Electrotechnical Systems.* Project VEGA 1/0464/15 Scientific Grant Agency of the Ministry of Education, science, research and sport of the Slovak Republic and the Slovak Academy of Sciences. Principal investigator: DUDRIK, J. (2015-2018).
- *Electrical Drive with Highfrequency 2-phase Induction Motor.* Project VEGA 2/0192/15. Scientific Grant Agency of the Ministry of Education, science, research and sport of the Slovak Republic and the Slovak Academy of

Sciences. Principal investigator: ZASKALICKÝ, P. (2015-2018)

- *Modular power converter for compact actuators with high precision gears.* Project supported by the Slovak Research and Development Agency under the contract No. APVV-15-0750. Principal investigator: ĎUROVSKÝ, F. (2016-2020).
- *Mains Charger for Electrical vehicle batteries.* Grant FEI TUKE. Principal investigator: PÁSTOR, M. (2016)

## **6 CO-OPERATION**

### **6.1. Co-operation in Slovakia**

The Department co-operates with many industrial enterprises in Slovakia having joint projects at modernising of the electrical drive systems, control and mechatronic applications: U.S.STEEL Košice, SIEMENS, ABB, BSH Drives and Pumps Michalovce, BWG Prešov, Křížík 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, SLOVRES Košice, STATON Turany, CAG Český Brod (ČR).

### **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
- Czech Academy of Science, Prague.
- Silesian Polytechnic Institute of Gliwice
- University of Oradea, Romania
- University of Maribor, Slovenia
- University of Zagreb, Croatia

#### **6.2.1. Visits of Staff Members to Foreign Institutions**

- BAČÍK, J., UVEGES, R.: TRADR Summer School 2016 on Heterogeneity in Robotics Systems, University of Oulu – Oulu (Finland), 22-26 August 2016.
- BAČÍK, J., TALIAN, P.: Ampér 2016, Brno (ČR), 22-25 March 2016.
- DUDRIK, J., FEDÁK, V., FERKOVÁ, Ž., PÁSTOR, M., SUCHÝ, L., ŽATKOVIČ, R.: PEMC 2016, Varna, Bulgaria, 25-30 September 2016.
- FERKOVÁ Ž., SPEEDAM 2016, Capri (IT), June 2016.
- FERKOVÁ, Ž., PÁSTOR, M., ŠLAPÁK, V.: ELECTRONICS 2016, Palanga, Lithuania, 13-15 June 2016.
- FERKOVÁ, Ž.: TechSoft Engineering Praha, August 2016
- FERKOVÁ, Ž.: VUT Brno (CZ), October 2016.
- FERKOVÁ, Ž.: Technical University of Liberec (CZ), December 2016.
- FERKOVÁ, Ž.: ČVUT Praha, General meeting of Czechoslovakia section

IEEE (CZ), December 2016.

- KAŇUCH, J.: VUT Brno (ČR), 5-7 September 2016.
- ZÁSKALICKÝ, P., KAŇUCH, J.:KOMEL Katowice, Rytro (PL), 18-20 May 2016
- TALIAN, P., BAČÍK, J: B&R Corporate, Welcome in B&R Automation Academy, Eggelsberg, (AT), 27-29 January 2016.

### **6.3. Membership in International Organizations, Societies and Committees**

- FEDÁK, V.: Vicechairman of the PEMC Council (Power Electronics and Motion Control) with the headquarters in Budapest.
- DUDRIK, J; FERKOVÁ, Ž, KYSLAN, K, PÁSTOR, M: IEEE members.
- FEDÁK, V.: IEEE ICETA 2016, Starý Smokovec. Program Chairman.
- PERDUKOVÁ, D.; ŽILKOVÁ, J.: members of Programme Committee: 11<sup>th</sup> International Conference on Soft Computing Models in Industrial and Environmental Applications – SOCO 2017, San Sebastian, Spain, October, 2016.

### **6.4. Membership in Slovak Professional Bodies**

- FEDÁK, V.; KAŇUCH, J.; TIMKO, J.; ZÁSKALICKÝ, P.; FEDOR, P.; FERKOVÁ, Ž.; GIROVSKÝ, P.; HAJŠÁK, P.; LACKO, M.; PERDUKOVÁ, D.: members of The SES (Slovak Electrotechnical Society), Branch at FEI TU Košice.
- FERKOVÁ, Ž.: member of Technical Standards Commission on Electrical Machines in SR.
- PERDUKOVÁ, D.: member of Accreditation Commission working group for research in Electrical and Power Engineering.
- PERDUKOVÁ, D.: Council of the Secondary Technical School for EE, Košice (delegate of the FEI TU Košice).
- KOVÁČOVÁ, I., (chairman), DUDRIK, J., GIRMAN, M., PERDUKOVÁ, D., ZÁSKALICKÝ, P.: members of board for the PhD. Study in Electrical Systems at FEI TU Košice.

### **6.5. National Educational Projects**

- *E-MLAB a set of original laboratory workstations to support and extend research and teaching laboratories in the field of Mechatronics.* KEGA 011TUKE-4/2013. Coordinator: PERDUKOVÁ, D.

### **6.6. Editorial Boards**

- BOBER, P. Editorial board of journal "Quality, Innovation, Prosperity" (Kvalita, Inovácia, Prosperita), 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.
- DUDRIK, J.: International Editorial Board of Power Electronics and Drives, Wroclaw, Poland, ISSN: 2451-0262, eISSN: 2543-4292.
- FEDÁK, V.: Editorial board of the Journal on Power Electronics and Drives (Wroclaw University of Technology), ISSN 0033-2097.

- FEDÁK, V.: Editorial board of the Journal “Przegląd Elektrotechniczny” (Polish Academy of Sciences, Warszawa), ISSN 0033-2097, e-ISSN 2449-9544.
- 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.
- PERDUKOVÁ, D.; FEDÁK, V.; DUDRIK, J.; ĎUROVSKÝ, F.; FEDOR, P.; GIROVSKÝ, P.; LACKO, M.; KYSLAN, K.; PÁSTOR, M.: Editorial board of Elektrotechnické listy, ISSN 2453-8981
- ZÁSKALICKÝ, P.: Editorial board of Acta Technica CSAV. Journal of Czech Academy of Science, Prague. Czech Republic. ISSN 0001-7043.
- ZÁSKALICKÝ, P.: Editorial board of KOMEL, Branżowy ośrodek badawczo-rozwojowy Maszyn elektrycznych, Katowice, Poland. ISSN 0239-3646.

## 7. THESES Defened Ph.D. Theses in 2016

- BAČÍK, J.: Models of Drones as a non-linear Mechatronic Systems. Supervisor: Fedor, P.
- GODEM Ali M. Ismeal: System Identification and Controller Optimization Using Soft Computing Methods. Supervisor: Fedák, V.
- SIVÝ, R.: Methods of localisation and mapping based on intelligent sensor systems. Supervisor: Perduková, D.
- ŠLAPÁK, V.: Advanced methods of Servodrives Control. Supervisor: Ďurovský, F.

Thesis type	Bachelor	Master	Doctoral
Number	8	28	4

## 8 OTHER ACTIVITIES

### 8.1. Symposia, Workshops, Conferences

SYMEP 2016 – International Symposium of Electrical Drives Teachers. Herľany, 22-24 June 2016.

### 8.2. Projects for Industry

- *Control of Rotary Knife*. For Datakon Košice, 2016. Co-ordinator: Ďurovský, F.
- *Technical co-operation at determination the accident cause of main mill drive motors at Hot Roll Mill Stand TŠP 1700 in Hot Roll Mill Division U.S. Steel Košice*. Co-ordinator: Ferková, Ž.
- *Calculation of magnetic field of ARC cathode*. For STATON , s.r.o. Turany. Co-ordinator: Ferková, Ž.

### 8.3. Student Competitions and Rewards

- BAČÍK Ján: SCYR 2016 – (17 May 2016) FPT Slovakia Award.
- MOLNÁR Tomáš: MATLAB and Simulink Hardware Challenge 2016 – Praise from HUMUSOFT company for participation and presentation of project on international competition of MathWorks company.

- ŠLAPÁK Viktor: SCYR 2016 (17 May 2016) – Award of ELFA s.r.o. company for the EEE section “4<sup>th</sup> year PhD students”.
- ÜVEGES Róbert: SCYR 2016 (17 May 2016) - 1<sup>st</sup> place (Dean’s Award) in EEE section 1<sup>st</sup> year.
- ŽATKOVIČ Róbert: SCYR 2016 (17 May 2016) – Award of ELFA s.r.o. company for the EEE section “2<sup>nd</sup> year PhD students”.

#### 8.4. Compositions for Dissertation Examinations

- BIROŠ, M.: Power management in mobile systems. Supervisor: Ďurovský, F.

### 9 PUBLICATIONS

#### 9.1. Books

- [1] VACEK, Marek - ŽILKOVÁ, Jaroslava - LEŠO, Martin: **Optický bezpečnostný systém robotického pracoviska**. 1. vyd. Košice, TU 2016. 95 p. ISBN 978-80-553-2611-5.
- [2] FEDÁK Viliam, ZÁSKALICKÝ Pavel: **Support for Learning of Dynamic Performance of Electrical Rotating Machines by Virtual Models**. Chapter in the book "E-Learning - Instructional Design, Organizational Strategy and Management", editor Boykja Gradinarova, INTECH Croatia, 2016, pp. 3-31. ISBN 978-953-51-2188-6.

#### 9.2. Textbooks

- [1] FEDOR, Pavol - PERDUKOVÁ, Daniela: **Priemyselná automatizácia**. 1.vyd. Košice, TU 2016. 103 p. ISBN 978-80-553-2477-7.
- [2] ĎUROVSKÝ, František - KAŇUCH, Ján: **Elektrické zariadenia v automobiloch 1**. 1.vyd. Košice, Technická univerzita 2016. 73 p. ISBN 978-80-553-2620-7.
- [3] ĎUROVSKÝ, František - KAŇUCH, Ján: **Elektrické zariadenia v automobiloch 2**. 1.vyd. Košice, Technická univerzita 2016. 85 p. ISBN 978-80-553-2622-1.
- [4] KYSLAN, Karol - ĎUROVSKÝ, František: **Regulované pohony - Návod na cvičenia**. 1.vyd. Košice, Technická univerzita 2016. 68 p. ISBN 978-80-553-2627-6.
- [5] LACKO, Milan: **Mikroprocesorová technika** návody na cvičenia a riešené príklady. 1.vyd. Košice, Technická univerzita 2016. 65 p. ISBN 978-80-553-2626-9.
- [6] PÁSTOR, Marek - DUDRIK, Jaroslav - ŽATKOVIČ, Róbert: **Výkonová elektronika 1** zberka riešených príkladov a návody na cvičenia. 1.vyd. Košice, TU 2016. 115 p. ISBN 978-80-553-2596-5.
- [7] PERDUKOVÁ, Daniela: **Autivo – fyzikálny model autonómneho vozidla**. 1.vyd. Košice, TU 2016. 64 p. ISBN 978-80-553-2589-7.
- [8] ZÁSKALICKÝ, Pavel - KAŇUCH, Ján: **Návody na cvičenia z Elektrických strojov**. 1.vyd. Košice, TU 2016. 64 p. ISBN 978-80-553-2579-8.

#### 9.3. Scientific Journals

##### Journals indexed in Thomson Reuters “Current Contents” list

- [1] FEDORKO, Gabriel - MOLNÁR, Václav - FERKOVÁ, Želmíra - PETERKA,



- Pavel - KREŠÁK, Jozef - TOMAŠKOVÁ, Marianna: **Possibilities of failure analysis for steel cord conveyor belts using knowledge obtained from non-destructive testing of steel ropes**. 2016. In: Engineering Failure Analysis. Vol. 67 (2016), pp. 33-45. ISSN 1350-6307.
- [2] ŠLAPÁK, Viktor - KYSLAN, Karol - LACKO, Milan - FEDÁK, Viliam - ĎUROVSKÝ, František: **Finite control set model predictive speed control of a DC motor**. 2016. In: Mathematical Problems in Engineering. Vol. 2016, no. ID 9571972 (2016), pp. 1-10. ISSN 1024-123X.

#### Foreign Journals

- [1] ANANTHAVEL, Saraswathi - PADMANABAN, Sanjeevikumar - SHANMUGHAM, Sutha - BLAABJERG, Frede - ERTAS, Ahmet H. - FEDÁK, Viliam: **Analysis of enhancement in available power transfer capacity by STATCOM integrated SMES by numerical simulation studies**. 2016. In: Engineering Science and Technology, an International Journal. Vol. 19, no. 2 (2016), pp. 671-675. ISSN 2215-0986.
- [2] FERKOVÁ, Želmíra: **Influence of the arrangement and sizes of magnets on the cogging torque of PMSM**. 2015. In: Technical Transactions: Electrical Engineering. Vol. 112, no. 1-E (8) (2015), pp. 161-171. ISSN 1897-6301.
- [3] KAŇUCH, Ján - DUČAY, Andrej: **Design and technical solution of a special motor with permanent magnets**. 2016. In: Maszyny elektryczne: Zeszyty problemowe. Vol. 109, no. 1 (2016), pp. 83-88. - ISSN 0239-3646.
- [4] PERDUKOVÁ, Daniela - BATMEND, Mišiel - FEDOR, Pavol: **Automated Headstone Photo Engraving**. 2015. In: Applied Mechanics and Materials: Applied Mechanics and Mechatronics 2. Vol. 816 (2015), pp. 313-320. ISSN 1662-7482.
- [5] ZÁSKALICKÝ, Pavel: **Study of current space phasor trajectory of the three-phase asynchronous motor with one phase open circuit fault**. 2016. In: Maszyny elektryczne. Vol. 111, no. 3 (2016), pp. 147-151. ISSN 0239-3646.

#### Foreign Journals indexed in Web of Science or Scopus databases

- [1] FEDOR, Pavol - PERDUKOVÁ, Daniela: **Model-Based Fuzzy Control Applied to a Real Nonlinear Mechanical System**. 2016. In: Iranian Journal of Science and Technology, Transactions of Mechanical Engineering. Vol. 40, no. 2 (2016), pp. 113-124. ISSN 2228-6187.

#### National Journals indexed in Web of Science or Scopus databases

#### National Journals

- [1] BAČÍK, Ján ml.: **Triediaci mobilný robot - platforma pre súťaž Robot Challenge**. 2016. In: Elektrotechnické listy. Roč. 1, č. 1 (2016), pp. 1-3. ISSN 2453-8981.
- [2] BOBER, Peter: **Meranie vplyvu uhlov komutácie na index účinnosti trojfázového BLDC motora**. 2016. In: Posterus. Roč. 9, č. 8 (2016), pp. 1-7. ISSN 1338-0087. Spôsob prístupu: <http://www.posterus.sk/?p=18751>.
- [3] DUDRIK, Jaroslav - PÁSTOR, Marek - LACKO, Milan - ŽATKOVIČ, Róbert: **ZVZCS PWM DC-DC converter with controlled secondary rectifier for arc welding**. 2016. In: Acta Electrotechnica et Informatica. Roč. 16, č. 2 (2016), pp. 33-41. ISSN 1335-8243.

- [4] FERKOVÁ, Želmíra - SUCHÝ, Ľuboš: **Vplyv uloženia PM na väzobné momenty medzi zubami statora a rotorom synchronného motora s PM.** 2016. In: Strojárstvo. Roč. 20, č. 3 (2016), pp. 78-79. ISSN 1335-2938.
- [5] GIROVSKÝ, Peter - FEKETE, Jakub: **Udržiavanie rýchlosti pomocou tempomatu.** 2016. In: Strojárstvo. Roč. 20, č. 4 (2016), pp. 102-104. ISSN 1335-2938.
- [6] GIROVSKÝ, Peter: **Riadenie synchronného motora s permanentnými magnetmi pomocou fuzzy regulátora.** 2016. In: Elektrotechnické listy. Roč. 1, č. 1 (2016), pp. 1-4. ISSN 2453-8981.
- [7] GIROVSKÝ, Peter: **Ovládanie pohybu robotického ramena pomocou rukavice so snímačmi.** 2016. In: Elektrotechnické listy. Roč. 1, č. 1 (2016), pp. 1-3. ISSN 2453-8981.
- [8] GIROVSKÝ, Peter: **Control of induction motor based on neural estimator.** 2016. In: Acta Electrotechnica et Informatica. Roč. 16, č. 2(2016), pp. 29-32. ISSN 1335-8243.
- [9] GIROVSKÝ, Peter - KOLLÁRIK, Marek: **Protišmykový systém vozidla s Fuzzy riadením.** 2016. In: Elektrotechnické listy. Roč. 1, č. 2 (2016), pp. 1-3. ISSN 2453-8981. Spôsob prístupu: [http://www.elektrotechnickelisty.eu/casopis/rocnik\\_I/clanky/EL\\_17\\_2016.pdf](http://www.elektrotechnickelisty.eu/casopis/rocnik_I/clanky/EL_17_2016.pdf).
- [10] KAŇUCH, Ján: **Nové trendy a smery vo vývoji akumulátorov pre elektromobily.** 2016. In: Posterus.sk. Roč. 9, č. 3 (2016), pp. 1-14. ISSN 1338-0087. Spôsob prístupu: <http://www.posterus.sk/?p=18414>.
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#### 9.4. Other publications (papers in conference proceedings, etc.)

Publication Type	Confereces		Other
	Foreign	Home	
Number	4	21	16