DEPARTMENT OF ELECTRICAL ENGINEERING AND MECHATRONICS

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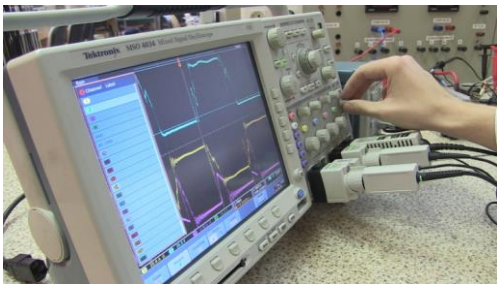
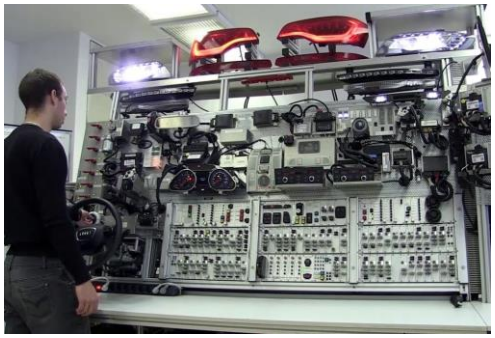
1 DEPARTMENT'S PROFILE

The Department was established at foundation of the Faculty of Electrical Engineering in 1969 as the Department of Electrical Drives but originally it presents a continuation of the Department of Electrical Egineering established at foundation of the Technical University of Kosice (1953). Through the years the name of the department was changed in order to express closier 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 area 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, and 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. Ján Kaňuch, PhD. doc. Ing. Karol Kyslan, PhD. (since June 2020) doc. Ing. Milan Lacko, PhD. doc. Ing. Jaroslava Žilková, PhD.
Assistant Professors:	Ing. Ján Bačík, PhD. Ing. Peter Bober, PhD. Ing. Peter Girovský, PhD. Ing. Karol Kyslan, PhD. (till June 2020) Ing. Marek Pástor, PhD.
Senior Scientists:	Ing. Milan Biroš, PhD. Ing. Peter Hajsák Ing. Tomáš Merva (since October 2020) Ing. Viktor Šlapák, PhD.
Technical Staff:	Ing. Gabriela Brečková Zuzana Olexová doc. Ing. Michal Kostelný, CSc. prof. Ing. Jaroslav Timko, CSc.
Full time Ph.D. Students:	Ing. Stanislav Alexovič (since September 2020) Ing. Juraj Biľanský Ing. Jozef Ivan Ing. Adrián Marcinek (since September 2020) Ing. Viktor Petro (since September 2020) Ing. Richard Olexa

3 LABORATORIES

- Laboratory of Electrical Engineering
- Power Electronics Laboratory
- Laboratory for CAD
  (COSMOS, ProEngineer, MATLAB, PSpice, and applied SW, ABB RobotStudio)
- 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. 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) Bachelor study programme in Automated Electrical Systems (title: Bc.)

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

4.2. Graduate Study (Ing.)

a) Master study programme in Electrical Systems (title: Ing.)

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Semiconductor Systems	7th	2/2	Dudrik

Non-linear Electro-Mechanical Systems	7th	2/2	Fedor
Servosystems	7th	2/2	Ďurovský
Dynamic Phenomena of Electrical Machines	7th	2/2	Záskalický
Electrical Machines for Automation	7th	2/2	Ferková
Technology of Production in Electronics	7th	2/2	Slosarčík
Vehicle Mechatronics	8th	2/2	Ďurovský
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
Diploma Project	8th	0/4	Supervisor
Fundamentals of Robotics	8th	2/2	Žilková
Diploma Project II	9th	0/6	Supervisor
Mechatronic Production Systems	9th	2/2	Ďurovský
Intelligent Control of Electrical Systems	9th	2/2	Žilková
Three-Dimensional Modelling and Simulation	9th	2/2	Ferková
Signal Processors	9th	2/3	Lacko
Technology of Production in Electrotechnics	9th	2/2	Girman
Design of Documentation in Electrical Engineering	9th	1/3	Lacko
Diploma Thesis	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 Systems

Subject	Semester	Lectures/exercises (hours per week)	Lecturer
Power Electronics	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

5 RESEARCH PROJECTS

- *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).
- *Modular Development System for Control of Power Plant Units based on DCS.* Project supported by the Slovak Research and Development Agency under the contract No. APVV-16-0206. Principal investigator: FEDOR, P. (2017-2020).

- *Smart Drive with Five-Phase Asynchronous Motor.* Project supported by the Slovak Research and Development Agency under the contract No. APVV-16-0270. Principal investigator: ZASKALICKÝ, P. (2017-2021).
- *Development of Modular Traction Battery and Optimization of Electrical Power Consumption in Electric Midibus.* Project supported by the Slovak Research and Development Agency under the contract No. APVV-18-0436. Principal investigator: LACKO, M. (2019-2023)
- *HIL Emulator for Small Hydropower Plant Control. Project supported by the Slovak Research and Development Agency under the contract No. APVV-19-0210. Principal investigator: PERDUKOVÁ, D. (2020-2023).*
- *Development of Dynamically Demanding and Energy-Optimal Electromechanical Systems.* Project VEGA 1/0187/18 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. (2018-2020)
- *Dynamic Emulation of Mechanical Loads,* Project VEGA 1/0493/19, Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences. Principal investigator: KYSLAN, K. (2019 – 2022).
- *Modeling and Controlling of Small hydropower plant,* Project supported by the Faculty of Electrical Engineering and Informatics, Technical University of Kosice, Slovakia, under the Grant FEI- 2020-64. Principal investigator: OLEXA, R. (2019-2020).
- *Device for cyclic charging and discharging of battery cells with a programmable profile,* Research grants for young researchers under 30 and PhD students at TUKE. No. 04/TUKE/2020. Principal investigator: BIĽANSKÝ, J. (2020).

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, Křižík Prešov, Schneider Electric Slovakia, Spell Procont Prešov, Spinea Prešov, Vonsch Brezno, Kybernetika Košice, TEKO Košice, ENERGO CONTROL Košice, ZTS VVU Košice, ŽP Podbrezová, Bukóza Hencovce, Embraco Slovakia Spišská Nová Ves, Slovak Union for Quality, Innovation and Design Q-IMPULZ, Košice, SEZ Krompachy, DATAKON Košice, SLOVRES Košice, STATON Turany, ROŠERO-P, Sp.N.Ves.

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

- Silesian University of Technology, Gliwice
- Széchenyi István University, Győr, Hungary
- Delft University of Technology, The Netherlands
- Czech Academy of Science, Prague.
- University of Oradea, Romania
- University of Maribor, Slovenia
- University of Zagreb, Croatia
- University of Novi Sad, Serbia
- CAG Electric Machinery, Český Brod, Czech Republic

6.2.1. Visits of Staff Members to Foreign Institutions

- ĎUROVSKÝ, F.; BIĽANSKÝ, J., IVAN, J., KYSLAN, K.: Humusoft Praha, (CZ), 2-4 March 2020.
- FERKOVÁ, Ž.: ZU Plzeň (CZ), March 2020.
- KAŇUCH, J., ZÁSKALICKÝ, P.: SEKEL 2020, Tomas Bata University in Zlín (CZ), September 2020

6.3. Membership in International Organizations, Societies and Committees

- FEDÁK, V.: Vicechairman of the Power Electronics and Motion Control Council (PEMC) with the headquarters in Budapest. Scientific Committee member of the 19th IEEE-PEMC) Power Electronics and Motion Control Conference), Gliwice 25*29 April 2021.
- DUDRIK, J; FERKOVÁ, Ž, KYSLAN: IEEE members.
- PERDUKOVÁ, D.: member of Programme Committee: 15th International Conference on Soft Computing Models in Industrial and Environmental Applications – SOCO 2020, Burgos, Spain, 16-18 September 2020.
- PERDUKOVÁ, D.: member of Programme Committee: 21st IFAC Word Congress: „Automatic Control – Meeting Societal Challenges“, Berlin, Germany, 12-17 July 2020.
- ZÁSKALICKÝ, P.: member of International Scientific Committee: KOMEL, Rytro, Poland, May 2020.

6.4. Membership in Slovak Professional Bodies

- FEDÁK, V.; KAŇUCH, J.; TIMKO, J.; ZÁSKALICKÝ, P.; FEDOR, P.; FERKOVÁ, Ž.; GIROVSKÝ, P.; HAJSÁK, 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 Slovak Republic.
- PERDUKOVÁ, D.: Council of the Secondary Technical School for EE, Košice (delegate of the FEI TU Košice).
- PERDUKOVÁ, D.: Program Committee of 20th Scientific Conference of Young Researchers of the Faculty of Electrical Engineering and Informatics, Technical University of Košice – SCYR 2020.
- 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

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 "Przeglad Elektrotechniczny" (Polish Academy of Sciences, Warsszaw, http://www.red.pe.org.pl/), 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.
- KYSLAN, K; Associate Editor of journal „Power Electronics and Drives", Wroclaw, Poland, ISSN 2543-4292.
- KYSLAN, K; Topic Editor of journal „Electronics", MDPI, 2079-9292
- 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 Sience, Praque. Czech Republic. ISSN 0001-7043.
- ZÁSKALICKÝ, P.: Editorial board of KOMEL, Branzowy osrodek badavczo-rozwojowy Maszyn elektrycznych, Katowice, Poland. ISSN 0239-3646.

7. THESES Defened Ph.D. Theses in 2020

Thesis type	Bachelor	Master	Doctoral
Number	26	24	-

8 OTHER ACTIVITIES

8.1. Symposia, Workshops, Conferences

- *International colloquium of the Electrical Machines Teachers* - KOPES 2020, January 21 -23. Košice, Slovakia.

8.2. Projects for Industry

- *Testing of synchronous reluctance motor prototype.* For CAG Electric Machinery, Český Brod. Co-ordinator: FERKOVÁ, Ž.
- *Development of software for output part of galvanizing line in U.S.Steel Košice*. For Datakon Košice. Co-ordinator: ĎUROVSKÝ, F.
- *PCU firmwafe analysis. For GLUNZ&JENSEN s.r.o. Prešov, Co-ordinator: FEDOR, P.*
- *Communication protocol between PLC B&R and microprocessor ATMEL*. For

B+R automatizace s.r.o. Nové Mesto nad Váhom. Co-ordinator: FEDOR, P.
- *Control system for small hydroelectric power plant.* For EnergoControl s.r.o. Košice. Co-ordinator: FEDOR, P.

8.3. Student Competitions and Rewards

8.4. Compositions for Dissertation Examinations

- SMOLEŇ, P.: *Control of Selected Nodes of Continuous Production Lines*. Supervisor: Ďurovský, F.

9 PUBLICATIONS

9.1. Books

9.2. Textbooks

[1] PERDUKOVÁ, Daniela: **Modelovanie a riadenie dvojosového polohového systému.** 1. vyd. Košice : Technická univerzita v Košiciach - 2020. - 88 s. [CD-ROM]. - ISBN 978-80-553-3578-0.

9.3. Scientific Journals

Journals indexed in Thomson Reuters "Current Contents" database

[1] FERKOVÁ, Želmíra - SUCHÝ, Ľuboš - BOBER, Peter: **Comparison of 64 and 128 switched reluctance motor models using direct torque control with torque lookup table.** 2020. In: Electrical Engineering: Archiv für Elektrotechnik. Vol. 102, No. 1 (2020), p. 75-83 [print]. - ISSN 0948-7921 Access: *https://link.springer.com/article/10.1007/s00202-019-00775-z*.

[2] GIROVSKÝ, Peter - ŽILKOVÁ, Jaroslava - KAŇUCH, Ján: **Optimization of Vehicle Braking Distance Using a Fuzzy Controller.** 2020. In: Energies. - Basel (Switzerland): Multidisciplinary Digital Publishing Institute Vol. 13, No. 11 (2020), p. 1-15 [online]. - ISSN 1996-1073 (online). Access: *https://www.mdpi.com/1996-1073/13/11/3022*.

[3] BOBER, Peter – FERKOVÁ, Želmíra: **Comparison of an Off-Line Optimized Firing Angle Modulation and Torque Sharing Functions for Switched Reluctance Motor Control.** 2020. In: Energies. - Basel (Switzerland): Multidisciplinary Digital Publishing Institute Vol. 13, No. 10 (2020), p.1-14. ISSN 1996-1073 (online). Access: *https://www.mdpi.com/1996-1073/13/10/2435*.

[4] ZGODAVOVÁ, Kristína - BOBER, Peter - MAJSTOROVIC, Vidosav - MONKOVÁ, Katarína - SANTOS, Gilberto - JUHÁSZOVÁ, Darina: **Innovative Methods for Small Mixed Batches Production System Improvement: The Case of a Bakery Machine Manufacturer.** - 2020. In: Sustainability. - Basel (Switzerland): Multidisciplinary Digital Publishing Institute Vol. 12, No. 5 (2020), p. 1-20 [online]. - ISSN 2071-1050 (online). Access: *https://doi.org/10.3390/su12156266*.

[5] NOVÁK, Miroslav - FERKOVÁ, Želmíra: **Two-pulse magnetization process of the NdFeB multi-pole ring magnet for BLDC motors.** 2020. In: Electrical Engineering: Archiv für Elektrotechnik. (2020), p. [1-9] [print]. - ISSN 0948-7921.

[6] KINDL, Vladimír - ČERMÁK, Radek - FERKOVÁ, Želmíra - SKALA, Bohumil: **Review of Time and Space Harmonics in Multi-Phase Induction Machine.**

2020. In: Energies. Basel (Switzerland): Multidisciplinary Digital Publishing Institute. Vol.13, No. 2 (2020), p. 1-17 [online]. - ISSN 1996-1073 (online).

[7] PERDUKOVÁ, Daniela - PALACKÝ, Petr - FEDOR, Pavol - BOBER, Peter - FEDÁK, Viliam: **Dynamic Identification of Rotor Magnetic Flux, Torque and Rotor Resistance of Induction Motor.** 2020. In: IEEE Access: practical innovations, open solutions. - Piscataway (USA): Institute of Electrical and Electronics Engineers Vol. 8 (2020), p. 142003-142015 [online]. - ISSN 2169-3536 (online). Access: *https://ieeexplore.ieee.org/document/9154689*.

[8] BAČÍK, Ján et al.: **Phollower—the Universal Autonomous Mobile Robot for Industry and Civil Environments with COVID-19 Germicide Addon Meeting Safety Requirements.** In: Applied sciences. - Basel (Switzerland): Multidisciplinary Digital Publishing Institute Vol. 10, No. 21 (2020), p. [1-16] ISSN 2076-3417.

Foreign Journals

[1] OLEXA, Richard - FEDOR, Pavol - PERDUKOVÁ, Daniela: **Model of hydraulic turbine taking into account the impact of efficiency.** 2020. In: Mathematical modeling: international scientific journal. - Sofia (Bulgaria): Scientific-technical union of mechanical engineering industry 4.0 Vol. 4, No. 2 (2020), p. 64-67 [print, online]. - ISSN 2535-0986.

[2] KAŇUCH, Ján: **Analýza, vlastnosti a použitie pohonov s päťfázovým indukčným motorom.** 2020. In: Trilobit. - Zlín (CZ): Fakulta aplikované informatiky No. 2 (2020), p. 1-11 [print, online]. - ISSN 1804-1795.

[3] FEDOR, Pavol - PERDUKOVÁ, Daniela: **Power Systems Emulator Based on DCS.** 2019. In: Innovations: international scientific journal. - Sofia (Bulharsko). Scientific Technical Union of Mechanical Engineering Vol. 7, No. 2 (2019), p. 77-79 [print, online]. - ISSN 2603-3763.

[4] ZÁSKALICKÝ, Pavel: **Electromagnetic torque ripple waveform calculation of a five-phase pentacle connected in under one phase failure.** 2019. In: Maszyny Elektryczne: Zeszyty Problemowe. Vol. 121, No. 1 (2019), p. 129-134 [print]. - ISSN 0239-3646.

[5] ZÁSKALICKÝ, Pavel: **Päťfázový IM v zapojení do pentagonu pri strate napájacej fázy.** 2020. In: Trilobit. - Zlín (CZ): Fakulta aplikované informatiky No. 2 (2020), p. [1-10] [print, online]. - ISSN 1804-1795. Access: *http://trilobit.fai.utb.cz/cislo-2-2020-sekel*.

[6] BIĽANSKÝ, Juraj - LACKO, Milan: **Design and Simulation of Cyclic Battery Tester.** 2020. In: Power Electronics and Drives. - Warsaw (Poland): De Gruyter Open Vol. 5, No. 1 (2020), p. 229-241 [print]. - ISSN 2451-0262.

[7] PETRO, Viktor (50%) - KYSLAN, Karol (50%): **Design and Simulation of Direct and Indirect Back EMF Sliding Mode Observer for Sensorless Control of PMSM.** 2020.In: Power Electronics and Drives. Warsaw (Poland): De Gruyter Open Vol. 5, No. 1 (2020), p. 215-228 [print]. - ISSN 2451-0262. Access: *https://content.sciendo.com/view/journals/pead/5/1/article-p215.xml*.

Journals indexed in Web of Science or Scopus databases

[1] ZÁSKALICKÝ, Pavel: **Behavior of a Pentacle Connected Five-Phase IM Supplied by a Rectangular Voltage.** 2020. In: Advances in Electrical and Electronic Engineering. - Žilina (Slovakia): Elektrotechnická fakulta, 2008 Vol. 18, No. 2 (2020), p. 65-71 [print, online]. - ISSN 1336-1376.

[2] OLEXA, Richard - PERDUKOVÁ, Daniela - FEDOR, Pavol: **Fuzzy Approach of Modeling a Hydraulic Turbine Efficiency.** 2020. In: MM Science Journal.

Prague (Česko): MM Publishing Vol. 2020, No. November (2020), p. 4086-4092 [print, online]. - ISSN 1803-1269. Access: *https://www.mmscience.eu/journal/issues/november-2020/articles/fuzzy-approach-of-modeling-a-hydraulic-turbine-efficiency*.

National Journals

[1] BOROVSKÝ, Tomáš - ĎUROVSKÝ, František: **Nepriama optimalizácia nastavenia valcovacích medzier profilovej valcovacej trate.** 2020. In: QuoVadis Research @ FEI. - Košice (Slovakia): Technická univerzita v Košiciach, Vol. 3, No. 1 (2020), p. 4-11 [print]. - ISSN 2585-9587. Access: *http://quovadis.fei.tuke.sk/quovadis-v3-n1.pdf*.

[2] ÜVEGES, Róbert - ĎUROVSKÝ, František: **Riadenie šmyku robotickej platformy s využitím kamerových systémov.** 2020. In: QuoVadis Research @ FEI. Košice (Slovakia): Technická univerzita v Košiciach, Vol.3, No. 1 (2020), p. 80-89 [print]. - ISSN 2585-9587. Access: *http://quovadis.fei.tuke.sk/quovadis-v3-n1.pdf*.

[3] SUCHÝ, Ľuboš - FERKOVÁ, Želmíra: **Vývoj pohonu so spínaným reluktančným motorom.** 2020. In: QuoVadis Research @ FEI. Košice (Slovakia): Technická univerzita v Košiciach, Vol.3, No. 1 (2020), p. 68-79 [print, online]. - ISSN 2585-9587. Access: *http://quovadis.fei.tuke.sk/quovadis-v3-n1.pdf*.

[4] PERDUKOVÁ, Daniela: **Rôzne prístupy k modelovaniu hydraulickej turbíny.** 2020. In: Elektrotechnické listy: Česko-Slovenský vedecký časopis. Vol.5, No. 1 (2020), p. 1-3 [online]. - ISSN 2453-8981 (online). Access: *http://elektrotechnickelisty.eu/casopis/rocnik_V/cislo_1_2020.html*.

[5] FEDOR, Pavol: **Small Hydropower Plant Modelling and Controlling.** 2020. In: Elektrotechnické listy: Česko-Slovenský vedecký časopis. Vol.5, No.1 (2020), p. 1-4 [online]. ISSN 2453-8981 (online). Access: *http://elektrotechnickelisty.eu/casopis/rocnik_V/cislo_1_2020.html*.

Patents and Utility Models

9.4. Other publications (papers in conference proceedings, etc.)

Publication Type	Confereces		Other
	Foreign	Home	
Number	3	11	2