

12th International Conference

 **ELEKTRO** 2018

Mikulov, Czech Republic
www.elektro.uniza.sk

May 21st – 23rd, 2018

CALL FOR PAPERS

UNIVERSITY OF ŽILINA
www.uniza.sk



FACULTY OF ELECTRICAL ENGINEERING
www.fel.uniza.sk



TECHNICALLY CO-SPONSORED BY



CONFERENCE TOPICS

TPC1 ICT and Services

Wireless, Optical and Photonic Systems and Networks, Advanced Networks and Services, Modelling and Simulations in ICT, Digital Signal Processing, Multimedia Technologies, E-Society

TPC2 Power Electronics and Autotronics

Power Electronic Devices and Converter topologies, Modeling, Simulation, Measurement, Control systems, Digital Control and Microelectronics, Thermal Performance and Optimization, Power Electronic Systems and Applications, Autotronics, Automotive applications (EV, HEV, etc...), Power Train and Communication in Vehicles, Battery Management and Energy Storage

TPC3 Power Electrical Systems

Electrical Machines, Drives and Traction, Power Electrical Engineering, Smart Grids, Renewable Power Sources, Power Supply for Electrical Railways Applications, Electrical Measurements and Instrumentations

TPC4 Control and Information Systems in Transport and Industry

Intelligent Transport Systems, Transport Telematics and Smart Cities, E – Safety, Risk Analysis, Theory and Methods of Safety Control, Artificial Intelligence in Process Control, Communication Systems in Transport and Industry

TPC5 Trends in Theoretical, Applied Electrical and Biomedical Engineering

Electromagnetic Fields in Various Materials and Coupled Problems, Utilization of Electromagnetic Field Effects in Material Nondestructive Evaluation, Analysis of Electromagnetic Field and Electrical Circuits using Analytical Methods, Technical Tools and Computer-aided Methods in Biomedical Engineering

TPC6 Materials and Technologies for Electrical Engineering

New and Perspective Materials and their Physical Properties, New Experimental Methods, Techniques and Technologies, Thin Layers and Heterostructures, Microelectronic and Optoelectronic Devices, Optical Fibers and Cables

TPC7 Robotics and Cybernetics

Industrial and mobile Robotics, Mobile and Compliant manipulators, Multiagent Systems, Intelligent Vehicles, Visual Servoing, Data Processing, Control Systems

TPC8 Mechatronics

Design, Modeling, Simulation and Optimization, Sensors and Actuators, Automation Devices, Biologically Inspired Robotics, Collaborative Robotics

TPC9 Education in Electrical Engineering and ICT

Attractiveness of Engineering Education, Project and Problem Based Learning, E-learning

IMPORTANT DATES

December 11, 2017

Deadline for uploading the full papers

February 5, 2018

Notification of acceptance

February 19, 2018

Early registration deadline

March 5, 2018

Final submission of accepted papers and regular fee payment

May 21-23, 2018

Conference

PUBLICATION - GENERAL INFORMATION

Accepted papers will be published on USB conference proceedings and will be submitted for indexing in IEEE Xplore®, Thomson Reuters Conference Proceedings Citation Index and SCOPUS.

Best papers with relevant scope will be selected for special issue of the journal:

- *Electronic Engineering Journal, Archiv für Elektrotechnik*, ISSN 0948-7921 (Print), 1432-0487 (Online)

Selected papers will be proposed for publication in impacted international scientific journals according to the scope of the papers:

- *International Journal of Thermal Sciences*, Founded as *Revue Générale de Thermique* in 1962, ISSN 1290-0729
- *Advances in Electrical and Electronic Engineering*, ISSN 1336-1376 (Print), ISSN 1804-3119 (Online)

The registration fee payment and paper presentation is necessary to involve the paper to proceedings.

REGISTRATION AND FEES

Type of registration	Early*	Regular
Authors (first paper)	€ 450	€ 490
Participants (w/o papers)	€ 460	€ 460
Additional paper	€ 170	€ 170
Students (PhD)	€ 330	€ 350
IEEE Members	€ 390	€ 440
Accompanying person	€ 300	€ 300

*The early registration deadline is midnight EST, February 19, 2018.

The registration fee includes the attendance at all conference sessions, lunches, coffee breaks, conference dinner, documentation and social programme. The registration fee for accompanying person includes lunches, coffee breaks, conference dinner and social programme.

THE CONFERENCE

The conference is the twelve of the series of international conferences which began in 1995 initially as a national conference with international participation. The conference is organized by the Faculty of Electrical Engineering, University of Žilina, every two years. The purpose of the conference is to provide an international forum for researchers and professionals interested in electrical and electronic engineering, information and communication technologies as well as interdisciplinary areas with the main attention to the conference topics.

VENUE AND LOCATION

The Hotel GALANT is situated in the town Mikulov. The hotel offers perfect comfort in the magical atmosphere of Moravian Mikulov's rare sights and offers relax or work only a few steps away from the town's historic centre. The town offers unique history embodied in architectural monuments, and for nature lovers and people preferring active rest it is the unique natural conditions of the region. Mikulov and its surroundings is a traditional wine centre. More information is available on the hotel web page <http://www.galant.cz/>.

INTERNATIONAL SCIENTIFIC COMMITTEE

ALTUS, J.	University of Zilina, Slovakia	NIKOLIC, G.	RWTH Aachen University, Germany
BLAZEK, V.	RWTH Aachen, Germany	ORAVEC, M.	STU Bratislava, Slovakia
BRACINIK, P.	University of Zilina, Slovakia	OTCENASOVA, A.	University of Zilina, Slovakia
BRANDSTETTER, P.	VSB-TU Ostrava, Czechia	PANDZIC, H.	University of Zagreb, Croatia
BUDAJ, J.	EVPU Nova Dubnica, Slovakia	PEREPPEL, D. A.	Ryazan State Radio Engineering University, Russia
BURY, P.	University of Zilina, Slovakia	PEROUTKA, Z.	University of West Bohemia, Czechia
CACCIATO, M.	University of Catania, Italy	PRIBYL, P.	Czech Technical University in Prague, Czechia
CAP, I.	University of Zilina, Slovakia	PROFUMO, F.	Politecnico di Torino, Italy
CAPOVA, K.	University of Zilina, Slovakia	PUDIS, D.	University of Zilina, Slovakia
DADO, M.	University of Zilina, Slovakia	PYRHONEN, J.	LUT Lappeenranta, Finland
DOBRUCKY, B.	University of Zilina, Slovakia	QIANG, G.	Shanghai Jiao Tong University, China
DUCHON, F.	STU Bratislava, Slovakia	RACITI, A.	University of Catania, Italy
FAKTOROVA, D.	University of Zilina, Slovakia	RAFAJDUS, P.	University of Zilina, Slovakia
FRIVALDSKY, M.	University of Zilina, Slovakia	RASTOCNY, K.	University of Zilina, Slovakia
GERADA, CH.	University of Nottingham, United Kingdom	ROZINAJ, G.	STU Bratislava, Slovakia
GLESK, I.	University of Strathclyde, United Kingdom	RYVKIN, S.	Russian Academy of Sciences, Russia
GROSS, U.	TU-Bergakademie Freiberg, Germany	SAGHI, B.	Budapest University of Technology and Economics, Hungary
GROUMPOS, P.	University of Patras, Greece	SCARCELLA, G.	University of Catania, Italy
GUTTEN, M.	University of Zilina, Slovakia	SCELBA, G.	University of Catania, Italy
HRABOVCOVA, V.	University of Zilina, Slovakia	SIMAK, B.	Czech Technical University in Prague, Czechia
HUDEK, R.	University of Zilina, Slovakia	SKALA, B.	University of West Bohemia, Czechia
CHEBEN, P.	National Research Council, Canada	SNASEL, V.	VSB-TU Ostrava, Czechia
CHEN, H.	China University of Mining and Technology, China	SOWA, P.	Silesian University of Technology, Poland
CHLEBIS, P.	VSB-TU Ostrava, Czechia	SPALEK, J.	University of Zilina, Slovakia
JANOUSEK, L.	University of Zilina, Slovakia	SPANIK, P.	University of Zilina, Slovakia - <i>chairman</i>
JUHAR, J.	TU Kosice, Slovakia	SVITEK, M.	Czech Technical University in Prague, Czechia
JURECKA, S.	University of Zilina, Slovakia	SZABO, L.	Technical University of Cluj Napoca, Romania
KARBAN, P.	University of West Bohemia, Czechia	SZYCHA, E.	Lodz University of Technology, Poland
KELEMEN, M.	TU Kosice, Slovakia	TREBUNA, F.	TU Kosice, Slovakia
KOTERAS, D.	Opole University of Technology, Poland	VASINEK, V.	VSB-TU Ostrava, Czechia
KOTSPOULOS, S.	University of Patras, Greece	VOKOROKOS, L.	TU Kosice, Slovakia
KOUDELKA, O.	TU Graz, Austria	VOZNAK, M.	VSB-TU Ostrava, Czechia
KURYTNIK, P.	State Higher School in Oswiecim, Poland	WEISS, H.	MU Loeben, Austria
LUFT, M.	UTH Radom, Poland	WHEELER, P.	University of Nottingham, United Kingdom
ŁUKASIK, Z.	UTH Radom, Poland	WIAK, S.	Lodz University of Technology, Poland
MARCINIAK, M.	National Institute of Telecommunications, Poland	YASKIV, V.	Ternopil Ivan Puluj NTU, Ukraine
MARTIS, C.	Technical University of Cluj Napoca, Romania	ZASKALICKY, P.	TU Kosice, Slovakia
MARTINCEK, I.	University of Zilina, Slovakia	ZGANK, A.	University of Maribor, Slovenia
MIKULSKI, J.	Polish Association of Transport Telematics, Poland	ZUKOWSKI, P.	Lublin University of Technology, Poland
MULLEROVA, J.	University of Zilina, Slovakia		

ORGANIZING COMMITTEE

BENCO, Miroslav	HOCK, Ondrej	MARKOVIC, Miroslav	ROCH, Marek
BORIK, Stefan	HOCKICKO, Peter	PACHA, Matej	SEBOK, Milan
BRODNANOVA, Katarina	JANEK, Marian	PIRNIKOVA, Silvia	SCHOLTZ, Lubomir
DUBOVAN, Jozef	JUROSKOVA, Katarina	PRAZENICA, Michal	SIMAK, Vojtech
GREGOR, Michal	KASCAK, Slavomir	PSENAKOVA, Zuzana	
HARDON, Stefan	MAKYS, Pavol	REGULA, Michal	

University of Žilina

Faculty of Electrical Engineering
ELEKTRO 2018
Univerzitná 1, 010 26 Žilina
Slovakia

Phone: +421 41 513 2058 (2062)
Fax: +421 41 513 1515
E-mail: elektro@fel.uniza.sk
web: www.elektro.uniza.sk