

# 2024 24<sup>th</sup> International Scientific Conference on Electric Power Engineering (EPE)

Thursday, May 16, 2024 - second day of the conference

Session **Electrical Engineering and Light I, II** (ROOM 500), 08:45–12:00

Guarantee: **Tomáš Novák** (VŠB - Technická univerzita Ostrava, CZ)

Chairpersons: **Petr Toman** (Vysoké učení technické v Brně, CZ) and **Peter Janiga** (Slovenská technická univerzita v Bratislavě, SK)



Time	No	Authors	Title of paper
8:45 - 10:15	3	Pavel Cyprich, Petr Cyprich, Jan Strossa, Vladislav Damec, Ales Havel	Comparison of Hysteresis Current Control and VOC Control with SPWM and SVPWM applied to Vienna Rectifier
	4	Tomas Blodek, Pavel Vrtal, Tomas Kohout, Zdenek Svaty, Lubos Nouzovsky	Verification of Night Road Safety Inspection by Luminance Analysis
	7	Marek Kubatko, Stepan Kirschner, Vojtech Sotola, Kamal Hamani, Martin Kuchar	Sensorless induction motor drive based on reactive power MRAS estimator using artificial neural network
	17	Tadeas Holy	Mathematical Models of Multiphase Machines Based on Symmetrical Components Decomposition in Relation to Space Harmonics
	22	Michal Sahul, Peter Janiga	Optimization of ESD Protection Design for Assembly Lines of Headlights Through Risk Analysis
	49	Ali Aljazaeri, Petr Toman, Jan Klusacek	Modelling and Testing of Phasor Measurement Unit in PSCAD
	53	Ardian Hyseni, Dusan Medved, Jaroslav Petras	Benford's Law in Electric Power Engineering
10:15 - 10:30	Coffee break		
10:30 - 12:00	54	Obed Muhayimana, Mohammed Laamim, Ali Aljazaeri, Abdellilah Rochd, Petr Toman	Comparative Study Between Model-in-the-loop Offline and Real-time Simulations for Phasor Measurement Units
	56	Patrik Kucera, Hana Karnikova, Lenka Maierova	Use of Satellite Imagery to Identify Light Pollution Sources in Urban Structure – The Limits and the Benefits
	57	Peter Janiga, Jozef Bendik, Matej Cenky, Zanita Eleschova, Anton Belan, Boris Cintula, Juraj Packa	Operation of Public Lighting Networks at Voltage Lower than Nominal
	61	Jan Zbojovsky, Roman Cimbala, Peter Gabris	Analysis of dielectric parameters of XLPE insulation by impedance relaxation spectroscopy
	73	Vladimir Mostyn, Lubomir Ivanek, Petr Orsag, Stanislav Kocman, Stanislav Zajaczek, Karel Shee	Train Approach Detection System Based on Track Impedance Measurements
	74	Slavka Seckova, Florinda F. Martins, Frantisek Janicek, Miroslava Farkas Smitkova, Juraj Packa, Milan Perny	Heat Pump Performance Design for Heating System in the Building
	60	Maya Almansour, Jiri Drapela	Complementary Reactive Power Control of Three-phase AC/DC Voltage Source Converters for Grid Support Applications