EDPE 2021 CONFERENCE PROGRAM

WEDNESDAY, 22.09.2021.

9:00-9:45	Opening session
9:45-10:30	Plenary lecture PL1: **From Backstage to Center Stage: Auxiliary Automotive Drives,** *Annette Muetze, Austria*
10:30-11:00	Coffee break
11:00-12:30	**Oral session PEA-1** **(PEA1,PEA2,PEA3,PEA5,PEA7)** **Oral session EDM-1** **(EDM1,EDM2,EDM3,EDM4,EDM5)**
12:30-14:00	Break
14:00-15:30	**Oral session PEA-2** **(PEA4,PEA6,PEA9,PEA10,PEA11)** **Oral session EDM-2** **(EDM6,EDM7,EDM8,EDM9,EDM11)**
20:00-22:00	**Welcome Reception** (CAAS Atrium)

THURSDAY, 23.09.2021.

9:00-9:45	Plenary lecture PL2: **"New" Power Converter Topologies, a Way to go Beyond the Limits,** *Petar Grbović, Austria*
9:45-10:15	Coffee break
10:15-11:45	**Oral session PEA-3** **(PEA8,PEA12,PEA13,PEA14,PEA15)** **Oral session MCM-1** **(MCM1,MCM2,MCM3,MCM4,MCM5,MCM6)**
12:00-13:30	**Typhoon HIL Workshop**
14:30–22:00	**Conference trip** (Departing in front of Hilton Hotel, lunch package included)

FRIDAY, 24.09.2021.

9:00-9:45	Plenary lecture PL3: **Predictive control and optimization procedures in energy management of buildings and infrastructure**, *Mario Vašak, Croatia*
9:45-10:15	Coffee break
10:15-11:45	**Oral session PEA-4** **(PEA16,PEA17,PEA18,PEA19,PEA20)** **Oral session EDM-3** **(EDM10,EDM12,EDM13,EDM14,EDM15)**
12:00-12:30	Closing session

Violet Room   Green Room

PEA1: Simulation verification of topologies of balancing systems with flyback converters, *Marek Šimčák*

PEA2: Power Quality and Electromagnetic Compatibility- Syncretism or Dichotomy?, *Mircea I Buzdugan*

PEA3: Review on high power WPT coil system design, *Jakub Skorvaga, Miroslav Pavelek*

PEA4: Simulation design of output-stage for residential smart-grid, *Kristián Takács, Peter Drgona*

PEA5: Control structure and Converter losses of a 3L-ANPC with GaN HEMTs switching at 100 kHz, *Martin Geppert, Günter Schröder*

PEA6: Evaluation of high-voltage GAN transistor in 3-phase PFC circuit, *Michal Frivaldsky, Michal Pipiska*

PEA7: Semi-Flexible Power Control for Grid-Connected Converter, *Petr Šimek, Martin Bejvl, Viktor Valouch*

PEA8: Investigation of the High Voltage GaN transistor module, *Richard Zelnik*

PEA9: A Floating Double Buck-Boost Converter as Driver for a Permanent Exited DC Machine, *Felix A Himmelstoss, Helmut Votzi*

PEA10: High Step-down Converters for Battery Charging in Photovoltaic Applications, *Zvonimir Malović, Nikola, Viktor Šunde, Željko Ban*

PEA11: UPS with PFC input stage for railway applications with improved immunity on input overvoltage and energy strikes, *Ivan Šolc, Ante Hećimović, Viktor Šunde, Željko Ban*

PEA12: Unbalanced Load Modeling and Control in Microgrid with Isolation Transformer, *Hao Jiang, Shuyu Cao, Chew Beng Soh, Feng Wei*

PEA13: Modeling and Predictive Control of LLC Resonant Converter for Solar Powered E-Bicycle Charging Station, *Karla Draženović, Ante Perić, Željko Jakopović, Viktor Šunde*

PEA14: Quality Evaluation of Jointly Used Modular Multilevel Converters and Battery Energy Storages, *Alexander Bubovich, Maksims Vorobjovs, Ilya Galkin, Tenuun Dovdon*

PEA15: Harmonic content of the input current of the boost converter in quasiperiodicity, *Željko Stojanović, Denis Pelin*

PEA16: Grid-connected and Islanded Control of Energy Storage Converter, *Božo Terzić, Ozren Bego, Marin Despalatović, Goran Majić, Ante Kriletić, Mislav Blajić*

PEA17: LCL Filter Design with Amorphous Core Inductor for 100 kVA Energy Storage Converter, *Božo Terzić , Ozren Bego, Marin Despalatović, Goran Majić, Ante Kriletić , Mislav Blajić*

PEA18: Power Loss Analysis of Multi-converter System with Single Wire and Wireless Energy Trasfer, *Marcin A Zygmanowski , Marcin Kasprzak, Kamil Kierepka, Jarosław Michalak, Grzegorz Jarek, Krzysztof Przybyła*

PEA19: Analysis of Regenerative Cycles and Energy Efficiency of Regenerative Elevators, *Dora Erica, Damjan, Martina Kutija, Luka Pravica, Ivana Pavlić*

PEA20: DC/DC Converter Topologies for Elevator Energy Storage Systems Based on Supercapacitors, *Martin Makar, Martina Kutija, Luka Pravica, Filip Jukić*

EDM1: Qualitative comparison of the behavior for a five-phase induction motor in error states for different stator windings connections, *Jakub Kellner*

EDM2: Calculation Methodology of Common Capability Diagram for Parallelly Connected Generator Group, *Boris Glavan, Zlatko Hanić, Mario Vražić, Marinko Kovačić*

EDM3: Encapsulated Air Cooling System for Scalable Axial Flux Motors, *Sebastian Berndl*

EDM4: Mechanical Analysis of Different Rotor Topologies for High Speed PMSM in Automotive Application, *Michal Kováčik, Pavol Rafajdus, Ronald Bastovanský*

EDM5: Analysis of Temperature Change in a Permanent Magnet Synchronous Generator Under Load due to Stator Winding Inter-Turn Short Circuit, *Michael Barrett*

EDM6: Observability Conditions for Speed Sensorless Induction Motor Models with Neglected or Included Iron Loss Representation, *Krisztián Horváth*

EDM7: A Comparative Study of Different SMO Switching Functions for Sensorless PMSM Control, *Viktor Petro, Karol Kyslan*

EDM8: Contactless Energy Transmission using a Transformer with Movable Secondary, *Mariusz Stepien*

EDM9: General approach of radial active magnetic bearings design and optimization, *Cristina Adascalitei, Martis Radu, Claudia Martis*

EDM10: Loss Minimization Control and Energy Consumption Improvements in PMSM drive, *Martin Novak*

EDM11:The Application of Neural Network Metamodels for Interior Permanent Magnet Machine Performance Prediction, *Zlatko Hanić, Ana Hanić, Marinko Kovačić*

EDM12: State of Health and Aging Estimation Using Kalman Filter in Combination with ARX Model for Prediction of Lifetime Period of Li-Ion Batteries, *Lukáš Krčmář, Pavel Rydlo, Ales Richter, Jakub Eichler, Pavel Jandura*

EDM13: Online Optimization of Firing Angles for Switched Reluctance Motor Control, *Peter Bober, Želmíra Ferková*

EDM14: Influence of Rotor Slot Number on Magnetic Noise in a Squirrel-cage Induction Motor for Traction Applications, *Ivan Milažar, Damir Žarko*

EDM15: Application of a Simplified Inverse Fuzzy Model for an Induction Motor Drive Control, *Daniela Perdukova, Pavol Fedor, Marek Fedor, Viliam Fedak*

MCM1: Determination of material parameters using video extensometry during tensile testing, *Jaroslav Bulava, Libor Hargaš, Dušan Koniar, Silvia Štefunová*

MCM2: ICE Vehicle Energy Consumption Measurement and Calculation Methodology for the Purpose of EV Battery Pack Design, *Antonio Peršić, Hrvoje Kristek, Mario Vražić, Vladimir Peršić*

MCM3: Sensorless speed control of brushed DC machine, *Lukas Gorel, Michal Vidlák, Vladimir Vavrúš, Pavol Makyš*

MCM4: Testing predictive vehicle dynamics control algorithms using a scaled remote controlled car and a roadway simulator, *Petar Makarun, Marko Švec, Goran Josipović, Šandor Ileš*

MCM5: Kalman Filter Based Sensor Fusion for Omnidirectional Mechatronic System, *Blaž Korotaj, Branimir Novoselnik, Mato Baotić*

MCM6: Analysis of FPGA Implementation of Set-based Predictive Control algorithm for Grid-tied Inverters, *Bruno Vilić-Belina, Renato Babojelić, Šandor Ileš, Jadranko Matuško*