



CONFERENCE PRELIMINARY PROGRAM

(version 4; 5 September 2019)

Notation: **Pz** – Plenary presentation: z – order of the plenary lecture
Lx.y-z – Lecture presentation: x – conference day, y – session in the day, z – order of the lecture
Dx.y-z – Dialogue presentation

Tuesday, 24 September 2019 Day 1

9:00 - 9:30		Opening Session: Introduction, EDPE History, Information	Room A
9:30 - 10:00	P1	Modern Methods of Electric Power Quality Signals Analysis	
10:00 - 10:30	P2	The State-of-The Art: DC-to-DC Converters for Fuel Cell Vehicular Power Train – Power Electronics in Fuel Cell Technology	
10:30 - 11:00		Coffee Break	Corridor
11:00 - 12:20	L1.1	Fault Detection in Electrical Machines	Room A
11:00 - 12:20	L1.2	Power Semiconductor Converters	Room B
12:30 - 14:00		Lunch	Restaurant
14:00 - 15:30	D1.1	Control of Electrical Drives	Room C (& Coffee – Corridor)
	D1.2	Power Semiconductor Converters	
	D1.3	Measurement and Signal Processing. Robotics	

Wednesday, 25 September 2019 Day 2

8:30 - 10:00	D2.1	Electrical Machines	Room C (& Coffee – Corridor)
	D2.2	Electrical Vehicles and Traction	
	D2.3	Batteries. Associated Topics	
10:00 - 11:20	L2.1	Observers and Estimators in Electrical Drives	Room A
10:00 - 11:20	L2.2	Control of Electrical Drives	Room B
11:30 - 12:00	P3	Electric Vehicles – Key to Energy Transition	Room A
12:00 - 13:30		Lunch	Restaurant
13:30		Departure to Conference Trips, continuing discussion	Entrance

Thursday, 26 September 2019 Day 3

8:30 - 10:00	D3.1	Faults and Optimization of Electrical Machines	Room C (& Coffee – Corridor)
	D3.2	Power Electronics	
10:00 - 11:20	L3.1	Design of Electrical Machines	Room A
10:00 - 11:20	L3.2	Control of Power Converters	Room B
11:30 - 12:00	P4	Fault Tolerant Control of Induction Motor	Room A
12:00 - 12:30	P5	Energy Harvesting from Vibrations as Autonomous Source of Energy for Sensing and Monitoring	
12:30 - 13:00		Closing Session: Evaluation, Announcement of conferences PEMC 2020 (Gliwice), PEDG 2020 (Dubrovnik), EDPE 2021 (HR)	Room A
13:00		Lunch	Restaurant



Tuesday, 24 September 2019

Day 1

Opening Session

Tuesday, 24 September 2019, 09:00 – 09:30

Room A

Opening and Instructions

Viliam Fedák, Technical University of Košice, Slovakia, Jadranko Matuško, University of Zagreb, Croatia

Plenary Lectures P1, P2

Tuesday, 24 September 2019, 9:30 – 10:30

Room A

Chairs: Jiri Lettl, Czech Technical University in Prague, Czech Republic
Željko Jakopović, University of Zagreb, Croatia

P1 -----

Modern Methods of Electric Power Quality Signals Analysis

Vladimir Katić, University of Novi Sad, Serbia

P2 -----

**The State-of-The Art: DC-to-DC Converters for Fuel Cell Vehicular Power Train
– Power Electronics in Fuel Cell Technology**

Sanjeevikumar Padmanaban, Aalborg University, Esbjerg, Denmark

Session L1.1: Fault Detection in Electrical Machines

Tuesday, 24 September 2019, 11:00 – 12:20

Room A

Chairs: Jan Bauer, Czech Technical University in Prague, Czech Republic
Mateusz Dybkowski, Wroclaw University of Science and Technology, Poland

L1.1-1 ----- Paper ID: 63 -----

**Simulation Finite Element based Investigation of the Static Eccentricity Fault Influence
during the Induction Motor No-load Start-up**

Virgiliu Fireteanu, Politehnica University of Bucharest, Romania

L1.1-2 ----- Paper ID: 48 -----

Application of Hybrid Neural Network to Detection of Induction Motor Electrical Faults

Maciej Skowron; Marcin Wolkiewicz; Czeslaw T. Kowalski; Teresa Orłowska-Kowalska, Wroclaw University of Science and Technology, Poland

L1.1-3 ----- Paper ID: 81 -----

Investigation of Induction Machine with Rotor-Bar Faults

Ludek Schreier; Miroslav Chomat, Czech Academy of Sciences, Prague, Czech Republic

L1.1-4 ----- Paper ID: 62 -----

**Detection and Localization of Electrical Faults in a Three Phase Synchronous Generator
with Rectifier**

Russell Sabir, TU Berlin and SEG Automotive; Daniele Rosato, SEG Automotive; Sven Hartmann, SEG Automotive Germany GmbH, Germany; Clemens Guehmann, Technische Universitaet Berlin, Germany

Session L1.2: Power Semiconductor Converters

Tuesday, 24 September 2019, 11:00 – 12:20

Room B

Chairs: Valentin Oleschuk, Moldovan Academy of Sciences, Moldova
Marek Pástor, Technical University of Košice, Slovakia

L1.2-1 ----- Paper ID: 52 -----

**Feasibility of High Frequency Zero-Voltage Switching Boost Converters Achieving High Power
Density Using Wide-Bandgap**

Piotr Zimoch; Kamil Kierepka; Marcin Kasprzak, Silesian University of Technology, Gliwice, Poland

L1.2-2 ----- Paper ID: 58 -----
Evaluation of Switching Performance of Si, SiC and GaN Power Transistors within ZVS Mode
Michal Frivaldsky; Michal Pipiska; Peter Sojka, University of Zilina, Slovakia

L1.2-3 ----- Paper ID: 12 -----
Zero-Current-Switching Buck Converter
Felix Himmelstoss; Michael Jungmayer, Technikum Wien, Austria

L1.2-4 ----- Paper ID: 53 -----
Design and Functional Demonstration of a 100 A Battery Testing Unit with Minimal Power Supply Load
Thomas Winkler; Herbert Ziegerhofer, Montanuniversitaet Leoben, Austria

Poster Sessions D1

Tuesday, 24 September 2019, 14:00 – 15:30

Room C

Session D1.1: Control of Electrical Drives

D1.1-1 ----- Paper ID: 50 -----
A Fuzzy Approach to Optimal DC Motor Controller Design
Daniela Perdukova; Pavol Fedor; Viliam Fedak; Technical University of Košice, Slovakia

D1.1-2 ----- Paper ID: 10 -----
Minimum Terminal Voltage on Running 3-Phase Induction Motors During Large Motors Starting
Ali Alameer; Hussain Balfaqih; Hussain Marzoug; Ahmed Humoud, Saudi Aramco, Saudi Arabia

D1.1-3 ----- Paper ID: 39 -----
BLDC Motor Control with Cascade Structure Utilizing ARM MCU
Jiri Ctibor; Jan Knobloch; Pavel Vorel; Ivo Pazdera, Brno University of Technology, Czech Republic

D1.1-4 ----- Paper ID: 69 -----
Influence of the Stator Current Approximation Form on the Discrete Sliding Mode Torque Control for Induction Motor Drive
Grzegorz Tarchala, Wroclaw University of Science and Technology, Poland

D1.1-5 ----- Paper ID: 45 -----
Control Strategies for the Identification and Reduction of Cogging Torque in PM Motors
Martin Sumega; Pavol Rafajdus, University of Zilina, Slovakia; Marek Stulrajter, NXP Semiconductors, Czech Republic; Giacomo Scelba, University of Catania, Italy

Session D1.2: Power Semiconductor Converters

D1.2-1 ----- Paper ID: 64 -----
High Efficiency DC-DC Buck Converter with a Passive Snubber Circuit
Jung-Ha Kim; Sang-Won Lee; Hyeon-Seok Lee; Sang-Hoon Lee; Yoon-Geol Choi; Bongkoo Kang Pohang University of Science and Technology, South Korea

D1.2-2 ----- Paper ID: 75 -----
A Novel Boost Converter with Two Independently Controlled Switches
Delia-Anca Botila, Ioana-Monica Pop-Calimanu, Dan Lascu, Politehnica University Timisoara Timisoara, Romania

D1.2-3 ----- Paper ID: 24 -----
On the Operational Modes of LCC Resonant Converter with a Capacitive Output Filter
Yoram Horen, SCE; Svetlana Bronshtein, SCE; Dmitry Baimel, SCE - Shamoon College of Engineering, Israel; Alexander Abramovitz, Tel Aviv University, Israel

D1.2-4 ----- Paper ID: 65 -----
Line-interactive UPS as Shunt Active Power Filter
Ante Perić; Viktor Šunde; Željko Ban; University of Zagreb, Croatia

D1.2-5 ----- Paper ID: 26 -----

12 kW Flyback Converter with a Passive Quasi-resonant Snubber

Jan Martis; Pavel Vorel; Petr Prochazka, Brno University of Technology, Czech Republic

D1.2-6 ----- Paper ID: 5 -----

Fault Diagnosis for Multilevel Inverter with Space Vector Recognition

Rudolf Mecke, Harz University of Applied Sciences, Germany

D1.2-7 ----- Paper ID: 32 -----

Experimental DC/DC Converter for Photovoltaic Panel with Fully Digital Control Based on Flyback Topology with Nontraditional Snubber Circuit

Dušan Benda; Pavel Vorel, Brno University of Technology, Czech Republic

Session D1.3: Measurement and Signal Processing. Robotics

D1.3-1 ----- Paper ID: 84 -----

Statistical Parameters of the Measured Voltage in the Network

Milan Guzan; Adam Fehér; Tibor Vince, Technical University of Košice, Slovakia

D1.3-2 ----- Paper ID: 86 -----

Improvement of the Measurement Accuracy of Resistance Standard with UNI-T UT 805 and UT 803 Multimeters

Milan Guzan; Adam Fehér, Technical University of Košice, Slovakia

D1.3-3 ----- Paper ID: 73 -----

High Accurate Robotic Machining based on Absolute Part Measuring and On-line Path Compensation

Tomas Kubela; Ales Pochyly; Vladislav Singule, Brno University of Technology, Czech Republic

D1.3-4 ----- Paper ID: 36 -----

Simultaneous Estimation of the Stator and Rotor Resistances in an Induction Motor Drive Using Novel Active and Reactive Power Based Model Reference Adaptive System

Szymon Bednarz; Mateusz Dybkowski, Wrocław University of Science and Technology, Poland

Wednesday, 25 September 2019

Day 2

Poster Sessions D2

Wednesday, 25 September 2019, 8:30 – 10:00

Room C

Session D2.1: Electrical Machines

D2.1-1 ----- Paper ID: 82 -----

The Factors Affecting Positioning Accuracy of Geared Servodrives

Viktor Šlapák, Technical University of Košice, Slovakia; Michal Pajkos, Matus Hric, SPINEA Technologies, Slovakia

D2.1-2 ----- Paper ID: 54 -----

Stator Winding Faults investigation in Permanent Magnet Synchronous Motor using Motor Signatures: Part I

Adil Usman; Nikhil. T. Doiphode; Bharat S. Rajpurohit, Indian Institute of Technology, Mandi, India

D2.1-3 ----- Paper ID: 72 -----

Finite Element Modeling of Stator Winding Faults in Permanent Magnet Synchronous Motor: Part II

Adil Usman; Nikhil. T. Doiphode; Bharat S. Rajpurohit, Indian Institute of Technology, Mandi, India

D2.1-4 ----- Paper ID: 57 -----

Synchronous Reluctance Machines: Theory, Design and the Potential Use in Traction Applications

Branko Ban, ALTEN, Croatia; Stjepan Stipetic; Mario Klanac, University of Zagreb, Croatia

D2.1-5 ----- Paper ID: 17 -----
A Design of Neodymium Free Spoke-type Machine for High Power Density and Efficiency
Jungmoo Seo; Joochan Kim, Korea Electronics Technology Institute, Korea; Jangho Seo, Kyungpook National University, Korea

D2.1-6 ----- Paper ID: 80 -----
Identification of Sludge in Water Pumping System Using Support Vector Machine
Umashankar Subramaniam, Prince Sultan University, Nabanita Dutta, VIT University, Vellore, India, Sanjeevikumar Padmanaban, Aalborg University, Esbjerg, Denmark, Dhafar Almakhlles, Prince Sultan University, Riyadh, Saudi Arabia; Karol Kyslan, Viliam Fedak, Technical University of Košice, Slovakia

Session D2.2: Electrical Vehicles and Traction

D2.2-1 ----- Paper ID: 7 -----
Sustainable Electromobility in the Liberec Region and in the Middle Europe in General
Josef Černohorský; Pavel Jandura; Klara Kuprova, Technical University of Liberec, Czech Republic

D2.2-2 ----- Paper ID: 18 -----
Pairing of Traction DC Motors, Long Term Experiences from Practice and Simulations
Jiří Kubín; Ales Richter, Technical University of Liberec, Czech Republic; Želmíra Ferková, Technical University of Košice, Slovakia

D2.2-3 ----- Paper ID: 21 -----
Design of Rear Wheel Steering System of an Experimental Electric Vehicle
Lukáš Krčmář; Josef Břoušek; Tomáš Petr, Technical University of Liberec, Czech Republic

D2.2-4 ----- Paper ID: 20 -----
Locomotive Wheel Slip Controller based on Power Dissipation in Wheel-rail Contact
Petr Pichlík (Czech Technical University in Prague, Czech Republic)

D2.2-5 ----- Paper ID: 76 -----
Skid Steering of Robotic Vehicle for Autonomous Applications
Róbert Üveges; František Ďurovský; Viliam Fedak, Technical University of Košice, Slovakia

Session D2.3: Batteries. Associated Topics

D2.3-1 ----- Paper ID: 40 -----
Modeling of Lithium-ion Battery Charging and Discharging Using the Preisach Hysteresis Model
Jakub Eichler; Miroslav Novak, Technical University of Liberec, Czech Republic

D2.3-2 ----- Paper ID: 22 -----
Identification of Li-ion Battery Model Parameters
Radoslav Cipin; Marek Toman; Petr Prochazka; Ivo Pazdera; Brno University of Technology, Czech Republic

D2.3-3 ----- Paper ID: 6 -----
Modeling and Analysis of a Fuzzy Type MPPT Algorithm
Jenica Ileana Corcau; Liviu Dinca, University of Craiova, Romania

D2.3-4 ----- Paper ID: 27 -----
Impact of External Low-dynamic Magnetic Field on Human Body with Metal Implants, Combination of Energy Conversation Principle and Maxwell Equations
Ales Richter, TU Liberec; Želmíra Ferková, Technical University of Košice, Slovakia; Václav Bittner, Technical University of Liberec, Czech Republic

Session L2.1: Observers and Estimators in Electrical Drives

Wednesday, 25 September 2019, 10:00 – 11:20

Room A

Chairs: Miroslav Chomát, Czech Academy of Sciences, Czech Republic
Jadranko Matuško, University of Zagreb, Croatia

L2.1-1 ----- Paper ID: 59 -----

Discrete Implementation of Sensorless IM Drive with MRAS-Type Speed Estimator

Mateusz Korzonek; Teresa Orłowska-Kowalska, Wrocław University of Science and Technology, Poland

L2.1-2 ----- Paper ID: 25 -----

Induction Motor Control with Respect to Maximum Efficiency in a Wide Range of Speed and Torque

Pavel Vorel; Marek Toman; Jan Martis, Brno University of Technology, Czech Republic

L2.1-3 ----- Paper ID: 34 -----

Reactive Power MRAS for Rotor Resistance Estimation Taking Into Account Load-Dependent Saturation of Induction Motor

Ondrej Lipcak; Jan Bauer; Miroslav Chomatm, Czech Technical University in Prague, Czech Republic

L2.1-4 ----- Paper ID: 55 -----

Analysis of Stability Improvement Method with Additional Feedback for Stator Current Error Based Speed Estimator MRASCC

Mateusz Korzonek; Teresa Orłowska-Kowalska, Wrocław University of Science and Technology, Poland

Session L2.2: Control of Electrical Drives

Wednesday, 25 September 2019, 10:00 – 11:20

Room B

Chairs: Pavel Mindl, Czech Technical University in Prague, Czech Republic
Pavel Vorel, Brno University of Technology, Czech Republic

L2.2-1 ----- Paper ID: 70 -----

Successive Linearization Based Predictive Vehicle Torque Vectoring

Bojan Spahija; Marko Švec; Sandor Iles; Jadranko Matusko, University of Zagreb, Croatia

L2.2-2 ----- Paper ID: 74 -----

Control Architecture of a Remotely Controlled Vehicle in Extreme CBRNE Conditions

Ana Šelek; Demijan Jurić; Anđela Čirjak; Filip Marić; Marija Seder; Ivan Marković; Ivan Petrović, University of Zagreb, Croatia

L2.2-3 ----- Paper ID: 85 -----

Speed Sensorless Control of PMSM with Unscented Kalman Filter and Initial Rotor Alignment

Karol Kyslan; Viktor Šlapák; Viktor Petro; Adrián Marcinek; František Ďurovský, Technical University of Košice, Slovakia

L2.2-4 ----- Paper ID: 43 -----

Low Speed Operation of Sensorless Estimators for Induction Machines using Extended, Unscented and Cubature Kalman Filter Techniques

Krisztián Horváth, Széchenyi István University, Hungary; Dénes Fodor, University of Pannonia Veszprem, Hungary

Plenary Lecture P3

Wednesday, 25 September 2019, 11:30 – 12:00

Room A

Chairs: Mariusz Stępień, Silesian University of Technology, Poland
Felix Himmelstoss, UAS Technikum Wien, Austria

P3 -----

Electric Vehicles – Key to Energy Transition

Pavol Bauer, Delft University of Technology, The Netherlands

Poster Sessions D3

Thursday, 26 September 2019, 8:30 – 10:00

Room C

D3.1: Faults and Optimisation of Electrical Machines

D3.1-1 ----- Paper ID: 49 -----

Induction Motor Optimised Supply Voltage and Frequency Control

Pavel Mindl; Zdeněk Čeřovský; Pavel Mňuk, Czech Technical University in Prague, Czech Republic

D3.1-2 ----- Paper ID: 42 -----

Brushless DC Motor Controller Optimization Using Simulated Annealing

Maad Shatnawi, Higher Colleges of Technology, Abu Dhabi, United Arab Emirates; Ehab Bayoumi, Electronics Research Institute, Giza, Egypt

D3.1-3 ----- Paper ID: 41 -----

Identification of Induction Motor Parameters Considering Sensitivity Analysis of Measured Quantities

Pavel Vorel; Marek Toman; Radoslav Cipin; Petr Prochazka, Brno University of Technology, Czech Republic

D3.1-4 ----- Paper ID: 11 -----

Comparison of Two Types of Cooling of Axial Flux Permanent Magnet Machines by CFD Simulation

Lukas Veg, University of West Bohemia, Pilsen, Czech Republic

Session D3.2: Power Electronics

D3.2-1 ----- Paper ID: 35 -----

Educational Purpose Switch Mode Supplies

Martin Folprecht, Dalibor Červinka, Brno University of Technology, Czech Republic

D3.2-2 ----- Paper ID: 33 -----

Comparison of Thermal Properties of the Magnetic Components of Interleaved DC/DC Converters

Michal Frivaldsky; Slavomir Kascak; Michal Prazenica; Miroslav Pavelek; Miriam Jarabicova, University of Zilina, Slovakia

D3.2-3 ----- Paper ID: 44 -----

Analysis of Power Transistor Switching Process

Petr Prochazka; Ivo Pazdera; Jan Miklas; Radoslav Cipin, Brno University of Technology, Czech Republic

D3.2-4 ----- Paper ID: 23 -----

GaN Transistors Cooling Options Comparison

Pavel Skarolek; Jiri Lettl, Czech Technical University in Prague, Czech Republic

D3.2-5 ----- Paper ID: 38 -----

Alternative Methods of Synchronous Space-Vector PWM for Transport-Oriented Converters and Drives

Valentin Oleschuk, Institute of Power Engineering of Moldova; Marek Pástor, Technical University of Košice, Slovakia

D3.2-6 ----- Paper ID: 31 -----

Hardware Concept of a New BLDC Motor Controller Based on BCD Technology

Jan Knobloch; Jiří Ctibor; Pavel Vorel, Brno University of Technology, Czech Republic

D3.2-7 ----- Paper ID: 2 -----

Output Voltage Control of Soft-Switching DC-DC Converter

Marek Pástor, Jaroslava Žilková, Peter Girovský, Technical University of Košice, Slovakia

D3.2-8 ----- Paper ID: 83 -----

Soft-Switching DC-DC Converter with SiC Full-Bridge Rectifier

Marek Pástor; Jaroslav Dudrik; Andrea Vitkovská, Technical University of Košice, Slovakia

D3.2-9 ----- Paper ID: 14 -----

Comparison of Predictive Direct Power Control Methods for Grid-Connected Converter in B4 Configuration

Viktor Valouch, Czech Technical University, Prague, Czech Republic; Petr Šimek, Czech Academy of Sciences, Czech Republic

D3.2-10 ----- Paper ID: 79 -----

Reduction of Main-Grid Dependence in Future DC Micro-Grids Using Electric Springs

Hari Charan, VIT; Saravanan Balasubramanian, VIT, Sanjeevikumar Padmanaban, Aalborg University, Esbjerg, Denmark; Viliam Fedák, Technical University of Košice, Slovakia; Arunkumar Gopal, VIT - Vellore Institute of Technology, Tamil Nadu, India

Session L3.1: Design of Electrical Machines

Thursday, 26 September 2019, 10:00 – 11:20

Room A

Chairs: Czeslaw T. Kowalski, Wroclaw University of Science and Technology, Poland
Zbigniew Kaczmarczyk, Silesian University of Technology, Poland

L3.1-1 ----- Paper ID: 29 -----

Automated Preliminary Design of Induction Machines Aided by Artificial Neural Networks

Christian Alteheld; Raimund Gottkehas Kamp, Hochschule Düsseldorf, Germany

L3.1-2 ----- Paper ID: 60 -----

Comparison of Ant Colony and Differential Evolution Optimization Methods Applied to a Design of Synchronous Reluctance Machine

Mario Klanac; Damir Zarko; Stjepan Stipetic, University of Zagreb, Croatia

L3.1-3 ----- Paper ID: 37 -----

Influence of Machine Geometry to the PMSM Mathematical Model

Jan Laksar; Karel Hruska; Lukas Veg, University of West Bohemia, Pilsen, Czech Republic

L3.1-4 ----- Paper ID: 68 -----

Current Vector Control Techniques of Five-Phase Synchronous Reluctance Motor Drive Systems

Sara Ismaeel; Said Allam; Essam Eddin Rashad, Tanta University, Al Gharbiyah Governorate, Egypt

Session L3.2: Control of Power Converters

Thursday, 26 September 2019, 10:00 – 11:20

Room B

Chairs: Michal Frivaldský, University of Zilina, Slovakia
Sanjeevikumar Padmanaban, Aalborg University, Denmark

L3.2-1 ----- Paper ID: 67 -----

Harmonic Analysis of Line Current of Industrial VSI-Fed Adjustable-Speed Drives

Filip Hleb; Martina Kutija, University of Zagreb, Croatia

L3.2-2 ----- Paper ID: 66 -----

Synchronous Adjustment of Modular Converter Based on Diode-Clamped Inverters with Multi-Zone PWM

Valentin Oleschuk, Institute of Power Engineering of Moldova, Marek Pástor, Technical University of Košice, Slovakia

L3.2-3 ----- Paper ID: 51 -----

Cross-Period Single Phase Shift Control Technique for High Power and Low Frequency Dual Active Bridge Converters

Szabolcs Veréb; András Futó; Zoltán Sútó; Attila Blögh; István Varjasi, Budapest University of Technology and Economics, Hungary

L3.2-4 ----- Paper ID: 13 -----

Cascaded Delayed Signal Cancellation Based Pre-Filtering Technique to Improve Frequency Locked Loop for Grid Synchronization

Petr Šimek; Viktor Valouch, Czech Academy of Sciences, Czech Republic

Plenary Lectures P4, P5

Thursday, 26 September 2019, 11:30 – 12:30

Room A

Chairs: Teresa Orłowska-Kowalska, Wrocław University of Science and Technology, Poland
Karol Kyslan, Technical University of Košice, Slovakia

P4 -----

Fault Tolerant Control of Induction Motor

Mateusz Dybkowski, Wrocław University of Science and Technology, Poland

P5 -----

Energy Harvesting from Vibrations as Autonomous Source of Energy for Sensing and Monitoring

Zdeněk Hadaš, Brno University of Technology, Czech Republic

Closing Session

Thursday, 26 September 2019, 11:30 – 12:30

Room A

Evaluation of the EDPE 2019 conference.

Announcements of the conferences: PEMC 2020 (Gliwice), **PEDG 2020** (Dubrovnik), **EDPE 2021** (HR).

Saying Good-bye.

Viliam Fedák, Technical University of Košice, Slovakia, Mariusz Stępień, Silesian University of Technology, Poland, Željko Jakopović, University of Zagreb, Croatia, Jadranko Matuško, University of Zagreb, Croatia