

Technical Program Day 2 - 26 October

Time	PID	Title
10:45 AM - 12:25 PM	Session 16, RT2-4	Co-Chairs: Marina Mendes Perdigao (Polytech Institute of Coimbra, Portugal) & Andrea Floris (University of Cagliari, Italy)
	2023001962	Embedded controller optimization for efficient electric motor drive Hiba Houmsi, Paolo Massioni, Romain Delpoux, Lyon, Univ Lyon, INSA Lyon, Université Claude Bernard Lyon CNRS, Ampère, France; Federico Bribiesca-Argomedo, Univ Lyon, Ampère INSA Lyon, France
	2023002002	On-Line Diagnosis of Supply Voltage Stabilizing Capacitors in Automotive Electronic Systems Marvin Rübartsch, Michael Gerten, Stephan Frei, On-board Systems Lab, TU Dortmund University, Germany
	2023002255	Constant Common-Mode Voltage Modulation Analysis and Implementation for a Dual Three-Phase Machine Maitane Carrasco, Power Electronics, Ikerlan Technology Research Centre, Spain
	2023002236	A Modified Deadbeat Predictive Flux Control for Reducing Torque Ripple at Low Modulation Ratio Zixuan Liu, Xiaoyan Huang, Bo Liu, Wentao Geng, Zhuo Chen, Jiawen Zhang, College of Electrical Engineering, Zhejiang University, China; Qian Chen, Polytechnic Institute of Electrical Engineering, Zhejiang University, China
	Session 17, RT2-5	Chair: Paolo Guglielmi (Politecnico di Torino, Italy)
	2023001977	Comprehensive Drive of PM Synchronous Machines Under Unpredictable Dynamics Rishil Kirankumar Lakhe, Mohamad Alzayed, Electronics, Carleton University, Canada; Hicham Chaoui, Electronics, Carleton University, Canada; Texas Tech University, United States
	2023002242	Degradation validation approach for robust oil jet motor cooling designs in an automotive powertrain Stephan Schlimpert, Branimir Mrak, Bart Peremans, Bram Robberechts, Peter Theunissen, Roeland Switten, Core Lab MotionS, Flanders Make, Belgium; Richard Brenda, Michael Gahagan, Driveline, Lubrizol Ltd, United Kingdom; Steven Vanhee, Brugge, Dana Belgium NV, Belgium
	2023002101	Online Rate-Parameter Identification of Single-Pulse-Operated Switched Reluctance Generator Anupam Verma, Gopalaratnam Narayanan, Electrical Engineering, Indian Institute of Science, India
	2023002099	Design of Prefilter-based Current Controllers Attaining Maximum Bandwidth with Optimized Overshoot and Settling Time Sergei Kolesnik, Alon Kuperman, ECE, Ben-Gurion University of The Negev, Israel; Hasan Komurcugil, Computer Engineering, Eastern Mediterranean University, Turkey
	Session 18, RT5-2	Co-Chairs: Rochdi Trigui (Gustave Eiffel University, France) & Paulo Pereirinha (INESC Coimbra, Portugal)
	2023002404	Eco-Driving for Inland River Transport: The Potential of Speed Optimization Louis Hyenne, Benoît Nottellet, Research and developement, Segula Technologies, France; Fabian Amoros, Research and development, Segula Technologies, France; IRENav, Ecole Navale, France; Walter Lhomme, L2EP, Université de Lille, France; Jean-Frédéric Charpentier, IRENav, Ecole Navale, France; Jean-Yves Billard, IRENav, Ecole Navale, France
	2023002047	Optimising Electric Bus Fleet Charging Using a Simulation-based Energy Consumption Model Jônatas Augusto Manzolli, INESC Coimbra, University of Coimbra, Portugal; Wooseok Do, Department of Transportation Engineering, Keimyung University, South Korea; Luis Miranda-Moreno, Department of Civil Engineering, McGill University, Canada; João Pedro Trovão, Department of Electrical and Computer Engineering, University of Sherbrooke, Canada; Carlos Henggeler Antunes, Department of Electrical and Computer Engineering, University of Coimbra, Portugal
2023001957	A Generic Ready Reckoner Tool for Cross-Sector Analysis of the Feasibility of Electrification of Different Modes of Transport Alex Band, Mehmet Cagin Kirca, Andrew McGordon, Energy Innovation Centre, Warwick Manufacturing Group, United Kingdom	

2023002095 Assessing the Potential Consumption and Cost Benefits of Next-Generation Technologies for Medium- and Heavy-Duty Vehicles: A Vehicle-Level Perspective
Charbel Mansour, Ehsan Islam, Ram Vijayagopal, Sylvain Pagerit, Aymeric Rousseau, Vehicle and Mobility Systems Department, Argonne National Laboratory, United States

Session 19, SS9-1 Co-Chairs: Ricardo de Castro (UC Merced, USA) & Jonathan Brembeck (German Aerospace Center, Germany)

2023002225 IEEE VTS Motor Vehicles Challenge 2024 - Energy and Powertrain Losses Management of an e-Racing Vehicle
Ke Li, PEMC group, University of Nottingham, United Kingdom; Thanh Vo-Duy, School of Electrical and Electronic Engineering, Hanoi University of Science and Technology, Vietnam

2023002005 Motor Vehicle Challenge 2023: The Winning Multi-physical Energy Management Algorithm
Daniele Michieletto, Matteo Beligoj, Ludovico Ortombina, Elia Scolaro, Giuseppe Galati, Industrial Engineering, University of Padova, Italy

2023002086 Efficient optimization-based control of a fuel cell hybrid electric vehicle with torque vectoring
Dominik Köppel, Alexis Benaitier, Christoph Hametner, CDL for Innovative Control and Monitoring of Automotive Powertrains, TU Wien Institut für Mechanik und Mechatronik E325, Austria; Lukas Kügerl, Institute of Mechanics and Mechatronics, TU Wien Institut für Mechanik und Mechatronik E325, Austria

2023002058 Energy management algorithm for a multi-motor electric vehicle with hybrid storage
Davide del Giudice, Luigi Piegari, Rafael Souza Baquero, DEIB, Politecnico di Milano, Italy

2023002330 Dual-MPC as Next Generation Energy Management Algorithm for Multi-Energy-Source Vehicles
Felix Krabbes, Rick Voßwinkel, Institute of Automotive Engineering, Westsächsische Hochschule Zwickau, Germany

Session 20, SS3 Co-Chairs: Daniel Hissel (University of Franche-Comté) & Nadia Yousfi-Steiner (University Bourgogne Franche-Comté, France)

2023001945 Robustness Evaluation of Energy Management Strategies for Hydrogen-based Railway Vehicles
Josu Olmos, Andoni Saez-de-Ibarra, Haizea Gaztañaga, Energy Storage and Management, Ikerlan Technology Research Centre (Basque Research and Technology Alliance), Spain; Txomin Nieva, Dimas Lopez, Product Development, CAF Power and Automation, Spain; Iosu Aizpuru, Electronics and Computing, Faculty of Engineering, Mondragon Unibertsitatea, Spain

2023001994 A new adaptive lead-lag control scheme for high current PEM hydrogen electrolyzers
Abdelrahman M. Elhawash, Rui Esteves Araújo, FEUP & INESC TEC, Campus of the FEUP, Portugal; João Peças Lopes, FIEEE, FEUP & INESC TEC, Campus of FEUP, Porto, Portugal

2023002305 A Rule-Based Energy Management Algorithm for a Fuel Cell/Battery All-Wheel Drive Vehicle
Mario Porru, Alessandro Serpi, Department of Electrical and Electronic Engineering, University of Cagliari, Italy

2023002060 Minimizing the Operating cost of a Hybrid Multi-Stack Fuel Cell Vehicle based on a Predictive Hierarchical Strategy
Mohammadreza Moghadari, Electrical and Computer Engineering, UQTR, Canada; Mohsen Kandidayeni, Electrical and Computer Engineering, Université de Sherbrooke, Canada; Loïc Boulon, Electrical and Computer Engineering, UQTR, Canada; Hicham Chaoui, Dept. of Electronics, Carleton University, Canada

2023002238 Optimal powertrain sizing of hydrogen fuel cell electric coach for lifetime carbon footprint, total costs and fuel consumption minimization
Shantanu Pardhi, Mohamed El Baghdadi, Omar Hegazy, ETEC, Vrije Universiteit Brussel (VUB), Belgium

LUNCH: 12:25 PM - 13:45 PM

PM - 03:25 PM

Session 21, RT1-4 Co-Chairs: Ronan German (University of Lille, France) & Cesar Diaz-Londono (Politecnico di Milano, Italy)

2023002039 Feasibility Analysis of a More Sustainable Urban E-Vehicle: Combining Compressed Air Storage with Supercapacitor

- Elena Moscatelli, Industrial Engineering, University of Bologna, Italy; Alessandro Soldati, Matteo Dalboni, Carlo Concari, Engineering and Architecture, University of Parma, Italy
- 2023002029 **Round-Trip Energy Efficiency and Energy-Efficiency Fade Estimation for Battery Passport**
- Camiel Beckers, Erik Hoedemaekers, Powertrains Department, TNO, Netherlands; Arda Dagkılıç, VDL Enabling Transport Solutions, Netherlands; Henk Jan Bergveld, NXP Semiconductors, Netherlands; Department of Electrical Engineering, Eindhoven University Technology, Netherlands
- 2023002348 **Societal impacts of batteries in transportation frameworks**
- Clotilde Robert, FEMTO-ST, Université de Franche-Comté, France; Electrical, GAUSSIN OGROUPE, France; Alexandre Ravey, FEMTO-ST, UTBM, France; Raphaël Perey, Electrical, GAUSSIN GROUPE, France; Daniel Hissel, FEMTO-ST, Université de Franche-Comté, France
- 2023002088 **Investigating the relationship between battery safety and coolant conductivity at external short circuits**
- Jiacheng He, Theodoros Kalogiannis, ETEC, Vrije Universiteit Brussel, Belgium; Sander Clerick, Parviz Gohari Derakhshandeh, Guy Buytaert, Arteco, Arteco, Belgium; Maitane Berecibar, ETEC, Vrije Universiteit Brussel, Belgium
- 2023002281 **Evaluation of Dual-Chemistry Battery Storage System for Electric Vehicles Charging Stations**
- Edoardo Ferri, Silvia Colnago, Simone Barcellona, Luigi Piegari, DEIB, Politecnico di Milano, Italy

**Session 22,
RT3-2**

Chair: Clément Mayet (University of Lille, France)

- 2023002064 **Control Method of Urban Rail Energy Storage System Based on Real-time Correction of Train Timetable and Train Power Following**
- Luqing Jiang, Fei Lin, Zhongping Yang, Kaiqi Sun, Jiaying Ren, Lu Li, School of Electrical Engineering, Beijing Jiaotong University, China
- 2023002078 **Regenerative Energy Feedback and Energy Storage Collaborative System for Urban Rail Transit**
- Jiaying Ren, Fei Lin, Zhongping Yang, School of Electrical Engineering, Beijing Jiaotong University, China
- 2023002050 **K-Means Clustering Based Urban Rail Train Operation Condition Identification Method**
- Yan Li, Zhongping Yang, Fei Lin, Luqing Jiang, Kaiqi Sun, School of Electrical Engineering, Beijing Jiaotong University, China
- 2023002181 **An Integrated Platform for the Simulation of Multimodal Trains on Discontinuously Electrified Railway Lines**
- Luca Pugi, Massimo Delogu, Luca Dicarlo, Dept. of Industrial Engineering, University of Florence, Italy; Hamed Jafari Kaleybar, Morris Brenna, Dept. of Energetics, Politecnico di Milano, Italy
- 2023002004 **A Reactive Power Optimization Method for AC Metro Power Supply System Based on Particle Swarm Optimization Algorithm**
- Feng Ding, Haiqi Zhou, Sheng Lin, School of Electrical Engineering, Southwest Jiaotong University, China

**Session 23,
RT4-2**

Co-Chairs: Walter Lhomme (University of Lille, France) & Souso Kelouwani (University of Quebec at Trois-Rivières, Canada)

- 2023002300 **A Fast Multi-Objective Trip Management Strategy for Electric Vehicles**
- Luis Alfredo Wulf Ribelles, Automotive Research and Advanced Engineering, Stellantis, France; PRISME Laboratory, Univ. Orléans, France; Guillaume Colin, PRISME Laboratory, Univ. Orléans, France; Antoine Simon, Automotive Research and Advanced Engineering, Stellantis, France; Dominique Nelson-Gruel, PRISME Laboratory, Univ. Orléans, France; Vivek Jairazbhoy, Automotive Research and Advanced Engineering, Stellantis, United States; Yann Chamaillard, PRISME Laboratory, Univ. Orléans, France
- 2023001987 **Energy-aware Time-optimal Routing of Battery Electric Trolley Trucks**
- Finn Vehlhaber, Mauro Salazar, Mechanical Engineering, Eindhoven University of Technology, Netherlands
- 2023002232 **Learning-Based Frameworks for Minimizing Pollutant Emissions in Hybrid Electric Vehicles for Dynamic Driving Conditions**
- Ganesh Sundaram, Tobias Gehra, Mirjan Heubaum, Jonas Ulmen, Daniel Gorges, Michael Günthner, Institute of Vehicle Propulsion Systems, RPTU Kaiserslautern-Landau, Germany

2023002250 Torque Distribution Prediction for Dual-Motor Electric Vehicle Using Ensemble Learning Algorithms

Marouane Adnane, Ahmed Khoumsi, e-TESC Lab., University of Sherbrooke, Canada; Chi T. P. Nguyen, e-TESC Lab., University of Sherbrooke, Canada; Engineering School, Thai Nguyen University, Vietnam; Joao Pedro F. Trovao, e-TESC Lab., University of Sherbrooke, Canada; INESC Coimbra, IPC- ISEC, Canada

2023002090 A systemic approach for hybrid energy management strategy based on a deep neural network

Driss Laraqui, Bruno Jeanneret, Rochdi Trigui, Sylvain Gillet, AME, Université Gustave Eiffel, France

Session 24, SS9-2 Co-Chairs: Ricardo de Castro (UC Merced, USA) & Jakub Tobolar (German Aerospace Center, Germany)

2023002077 Design of a rule-based energy management system for a 3-motor vehicle with a battery and a fuel cell: IEEE Motor Vehicle Challenge 2023

Mariagrazia Tristano, Dept. of Engineering and Maths, Sheffield Hallam University, United Kingdom; Basilio Lenzo, Department of Industrial Engineering, Università di Padova, Italy

2023001948 Torque Allocation and Energy Management Strategy for a Multi-Motor Electric Vehicle

Simone Barcellona, Marzio Barresi, Silvia Colnago, DEIB, Politecnico di Milano, Italy

2023002171 A General-Purpose Control Strategy for Multi-Motor EV Equipped with Fuel Cell and Battery

Riccardo Scalabrin, Holguer Noriega, Samuele Grillo, Department of Electronics, Information and Bioengineering, Politecnico di Milano, Italy

2023002269 A Pseudo-Optimal Control Strategy to Solve the 2023 IEEE VTS Motor Vehicles Challenge

Iman Ebrahimi, Ricardo de Castro, Mechanical Engineering, University of California, Merced, United States

Session 25, RT2-6 Co-Chairs: Alessandro Serpi (University of Cagliari, Italy) & Ke Li (University of Nottingham, UK)

2023002287 A 48V/360A Power Module-Based Paralleled-GaN Devices for Low-Voltage and High-Current Traction Inverter Applications

TRAN TUAN, Kritika Deepak, Olcay Bay, Duong Trab, Mohamed EL BAGHDADI, Omar Hegazy, ETEC, Vrije Universiteit Brussel, Belgium

2023001985 Multi-domain Simulation of Integrated Power Electronics Modules for EMC and EMI Analysis

Giovanni Minardi, Giuseppe Greco, Giovanni Vinci, Andrea Cusumano, STMicroelectronics S.r.l., STMicroelectronics S.r.l., Italy; Santi Agatino Rizzo, Gino Sorbello, Nunzio Salerno, DIEI, University of Catania, Italy

2023002290 Technical Assessment of Thermal Management Techniques for GaN Power Transistors: Heat Spreaders

Omar Hegazy, Gamze Egin Martin, ETEC & MPOBI-EPOWERS, VUB, Belgium; Mohamed El Baghdadi, ETEC& MOBI-EPOWERS, VUB, Belgium; Olcay Bay, ETEC Dept., & MOBI-EPOWERS Research Group, Vrije Universiteit Brussel (VUB), Belgium

2023002001 Voltage Stability Metric for Automated Evaluation of Automotive Power Supply Systems

Michael Gerten, Marvin Rübartsch, Stephan Frei, On-board Systems Lab, TU Dortmund University, Germany

2023002155 Development of PWM Module to Apply High-Performance RSPWM Control Method of Dual Inverter

Eun-Su Jun, Dong Hwi Lim, Nam Eok Heo, Electrification Platform Team2, Hyundai Autoever, South Korea

COFFEE BREAK: 03:25 PM - 04:00 PM

00 PM - 06:00 PM

Session 26, RT8-1 Co-Chairs: Michele Vignati (Politecnico di Milano, Italy) & Cedric De Cauwer (Vrije Universiteit Brussel, Belgium)

2023001944 Analysis of communication delays in roadside detection systems for cooperative AEB implementation

Daniele Vignarca, Stefano Arrigoni, Michele Vignati, Edoardo Sabbioni, Mechanical Engineering Department, Politecnico di Milano, Italy

- 2023002218 **On the Employment of Imaging Sensors for Cooperative V2V Beam Alignment**
Giovanni Ciaramitaro, Mattia Brambilla, DEIB, Politecnico di Milano, Italy; Monica Nicoli, DIG, Politecnico di Milano, Italy
- 2023001970 **On the development of a diagnostic system for Condition Based Maintenance of passenger trains**
Federico Zanelli, Francesco Castelli-Dezza, Marco Mauri, Nicola Debattisti, Department of Mechanical Engineering, Politecnico di Milano, Italy; Luca Labbadia, Research&Development, Trenitalia S.p.A., Italy; Irino Mazzucco, Research & Development, Sitav S.p.A., Italy
- 2023002061 **GPS Accuracy of the Latest C-V2X Units for V2X Applications**
Zachary Choffin, William Riley, Department of Electrical and Computer Engineering, The University of Alabama, United States; Alexander Hainen, Department of Civil, Construction and Environmental Engineering, The University of Alabama, United States; Bharat Balasubramanian, Joshua Bittle, Department of Mechanical Engineering, The University of Alabama, United States; Han-Shin Jo, Department of Automotive Engineering, Hanyang University, South Korea; Nathan Jeong, Department of Electrical and Computer Engineering, The University of Alabama, United States
- 2023001997 **Proactive Eco-driving Control of an Autonomous Electric Vehicle in Presence of Signalized Intersections and Preceding Vehicles**
Simin Hesami, Majid Vafaiepour, Cedric De Cauwer, Evy Rombaut, Lieselot Vanhaverbeke, Thierry Coosemans, MOBI Research Center, Vrije Universiteit Brussel, Belgium
- 2023002094 **Virtual Partner for supporting energy efficient driving in public transport buses**
Mathias Herget, Raphael Kress, Lukas Böhning, Ulf Schwalbe, Department of Electrical Engineering and Information Technology, University of Applied Sciences Fulda, Germany
- Session 27, Co-Chairs: Ali Sari (University of Lyon, France) & Theodoros Kalogiannis (Vrije Universiteit Brussel, RT1-5 Belgium)**
- 2023002038 **Model-based Optimization of a Series-hybrid High-performance Vehicle Powertrain with Hybrid Energy Storage System**
Elena Moscatelli, Industrial Engineering, University of Bologna, Italy; Alessandro Soldati, Matteo Dalboni, Carlo Concari, Engineering and Architecture, University of Parma, Italy
- 2023002117 **Lithium ion Battery Aging Prediction with Electrochemical Models: P2D vs SPMe**
Clara Rojas, Laura Oca, Josu Yeregui, Unai Iraola, Iker Lopetegi, Electronics and Computer Science Department, Mondragon Unibertsitatea, Spain; Eduardo Miguel, Electrical Energy Storage, Ikerlan Technology Research Centre, Spain; Gregory Plett, Michael Trimboli, Electrical and Computer Engineering, University of Colorado, Colorado Springs, United States
- 2023002268 **Virtual Temperature Sensor in Battery Thermal Management System Using LSTM-DNN**
Safieh Bamati, Hicham Chaoui, Department of Electronics, Carleton University, Canada; Hamid Gualous, LUSAC Laboratory, Université de Caen Normandie, France
- 2023002089 **Modeling and experimental evaluations of liquid coolants for battery thermal management**
Theodoros Kalogiannis, Jiacheng He, Maitane Berecibar, Joeri Van Mierlo, ETEC, VUB, Belgium; Luciane Sopchenski Santos, Annick Hubin, Herman Terry, MACH, VUB, Belgium; Sander Clerick, Parviz Gohari Derakhshandeh, Guy Buytaert, ARTECO, ARTECO, Belgium
- 2023002316 **Comparative study between Unscented Kalman Filter and Multi-Layer Perceptron applied in an electric vehicle simulation with pack parameters generated from the database**
Kawe Monteiro de Souza, Dept. Postgraduate Degree in Electrical Engineering, State University of Londrina (UEL), Brazil; José Rodolfo Galvão, DAELE, UTFPR, Brazil; Jorge Augusto Pessatto Mondadori, Paulo Broniera Junior, Laboratory LAPSEE-PIM, Senai Institute of Information and Communication Technology (ISTIC), Brazil; Fernanda Cristina Corrêa, DAELE, Graduate Program in Electrical Engineering (PPGEE) Federal University of Technology (UTFPR), Brazil; Maria Bernadete de Moraes França, Dept. Postgraduate Degree in Electrical Engineering, State University of Londrina (UEL), Brazil
- Session 28, Co-Chairs: Namwook Kim (Hanyang University, South Korea) & Emmanuel Vinot (Gustave Eiffel RT5-3 University, France)**
- 2023002052 **Investigation on the Effect of PAC2002 Tire Force Modelling on High-Power AWD Electric Vehicle Longitudinal Performance**

- Marco Veliz Castro, Reza Nasiri-Zarandi, Narayan Kar, Electrical and Computer Engineering, University of Windsor, Canada; Bruce Minaker, Mechanical, Automotive, and Materials Engineering, University of Windsor, Canada
- 2023001982 **Experimental calibration and validation of an average-speed fuel consumption model based on synthetic driving-cycles**
Stefano Radrizzani, Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano, Italy; Max Schrader, Joshua A. Bittle, Department of Mechanical Engineering, The University of Alabama, United States
- 2023002258 **Resource-Saving Modeling of an Electronic Fuse in Vehicular Power Systems**
Martin Baumann, Ali Shoar Abouzari, Christoph Mayer, Research and Development, BMW AG, Germany; Shashank Singh Shekhawat, Research and Development, Technische Universität München, Germany; Leo Tassilo Peters, Hans-Georg Herzog, Energy Conversion Technology, Technische Universität München, Germany
- 2023002075 **Stochastic modeling of mission stops and variable cargo weight for heavy-duty trucks**
Luigi Romano, Fredrik Bruzelius, Mechanics and Maritime Sciences, Chalmers University of Technology, Sweden; Carl Emvin, Rickard Andersson, Volvo, Volvo AB, Sweden; Pär Johannesson, Mechanical research and innovation, RISE Research Institute of Sweden, Sweden; Bengt Jacobson, Mechanics and Maritime Sciences, Chalmers University of Technology, Sweden
- 2023002280 **Advanced Digital Twin Framework for Electric Truck**
Duong Tran, ETEC, MOBI, VUB, Belgium; Leo Xenakis, R&D, AVL Graz, Austria; Shantanu Pardhi, ETEC, MOBI, VUB, Belgium; Iban Vicente Makazaga, R&D, TECNALIA, Spain; Michael Glensvig, R&D, AVL Graz, Austria; Hans-Michael Koegeler, R&D, AVL Graz, Austria; Róbinson Medina, Powertrains, TNO, Netherlands; Steven Wilkins, Powertrains, TNO, Netherlands; Omar Hegazy, ETEC, MOBI, VUB, Belgium
- 2023002679 **Effect of Rider Position on the Energy Consumption of an Electric Motorcycle**
Mehmet Cagin Kirca, Andrew McGordon, WMG, University of Warwick, United Kingdom

Session 29, Co-Chairs: Mauro Salazar (Eindhoven University of Technology, Netherlands) & Giancarlo Storti RT4-3 Gajani (Politecnico di Milano, Italy)

- 2023002056 **Thermomechanical model predictive cascade control for blended braking of an IWM vehicle**
Mattia Belloni, Luca Braccacia, Michele Vignati, Davide Tarsitano, Department of Mechanical Engineering, Politecnico di Milano, Italy
- 2023002012 **Nonlinear Predictive Torque Vectoring with Brake Blending for Electric Road Vehicles**
Marko Švec, Bruno Vilic Belina, Šandor Ileš, Jadranko Matuško, Department of Electrical Drives, Machines and Automation, University of Zagreb Faculty of Electrical Engineering and Computing, Croatia
- 2023002105 **Adaptive Energy Management System based on Pontryagin's Minimum Principle for Battery/Supercapacitor Electric Vehicle Considering Topographic Information**
Ashruti Upadhyaya, Chitralkha Mahanta, Electronics and Electrical Engineering, Indian Institute of Technology, Guwahati, India
- 2023002069 **Optimal Power Synergy For Pure Electric Vehicles Using on-board LiC:A genetic Algorithm Approach**
Ahmed E. Sharkawy, Mostafa Sh. Asfoor, Mostafa I. Yacoub, Ahmed M. Ali, Automotive Engineering Department, Military Technical College, Egypt
- 2023002070 **Minimal capacity loss of electric vehicle battery under combined driving cycles**
Mohammed I. Tawfik, Ahmed M. Ali, Mostafa Sh. Asfoor, Automotive Engineering Department, Military Technical College, Egypt; Ahmed Abdel-Rahim, Civil & Environmental Engineering Dept., University of Idaho Moscow, Egypt
- 2023002084 **A Deep Concurrent Learning-based Robust and Optimal Energy Management Strategy for Hybrid Energy Storage Systems in Plug-in Hybrid Electric Vehicles**
Nilanjan Mukherjee, Centre of Excellence in Artificial Intelligence, IIT KHARAGPUR, India

Session 30, Co-Chairs: Trung Duong (ABB Corporate Research Center) & Ji-Young Lee (University of Science and Technology, South Korea) SS1

- 2023002308 **The Common-Mode Voltage Reduction Method for Two-Stage Power Conversion System**

Hyeong-Jin Kim, Air Mobility Electric-motor & Drive Research Team, Korea Electrotechnology Research Institute, South Korea; Yung-Deug Son, Department of Mechanical Facility Control Engineering, Korea University of Technology and Education, South Korea; Jae-Beom Kang, Ji-Young Lee, Energy and Power Conversion Engineering Department, University of Science and Technology, South Korea; Jang-Mok Kim, Department of Electrical and Electronics Engineering, Pusan National University, South Korea

2023002169 Harmonic Analysis of Laboratory-Based Power System Utilizing Passive Filter for High-Speed Railway Traction Applications

Vu-Khanh Tran, Energy and Power Conversion Engineering, University of Science and Technology, South Korea; Jae-Gil Lee, Sarbajit Paul, Pil-Wan Han, Yon-Do Chun, Electric Machine and Drive System Research Center, Korea Electrotechnology Research Institute, South Korea; Xuan-Truong Luong, Energy and Power Conversion Engineering, University of Science and Technology, South Korea; Jung-Hwan Chang, Mechatronics System Research Laboratory, Electrical Engineering Department, Dong-A University, South Korea

2023002310 Influence of Outer Diameter to Stack Length Ratio on the Output Performance of Brushless Permanent Magnet Motor

TUNG NGUYEN, Ji-Young Lee, Ji-Heon Lee, Jae-Beom Kang, Hyeong-Jin Kim, Air Mobility Electric-machine & Drive Research Team, Korea Electrotechnology Research Institute, South Korea

2023001990 Thermal analysis of air-cooled motor for UAV using Numerical and Experimental methods

Jae-Beom Kang, Ji-Young Lee, Tung Nguyen, Energy and Power Conversion Engineering, University of Science and Technology, South Korea; Ji-Heon Lee, Hyeong-Jin Kim, Air Mobility Electric-motor & Drive Research Team, Korea Electrotechnology Research Institute, South Korea

2023002247 Review of Linear Electromagnetic Actuators for Distribution Grid Control and Protection Apparatus

Trung Duong, Arda Tueysuez, Christoph Budde, Distribution Solution, ABB Corporate Research Center, Germany

END OF DAY 2: 06:00 PM