IEEE Joint International Conference

Aegean Conference on Electrical Machines and Power Electronics
&
Optimization of Electrical & Electronics Equipment Conference.
.

Istanbul, Turkey, 1-2 September 2023

ACEMP-OPTIM 2023 Program.

Conference Record # 57845

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INTRODUCTION

Aegean Conference on Electrical Machines and Power Electronics (ACEMP) and Optimization of Electrical & Electronic Equipment Conference (OPTIM) are two conferences held since early 1990's. Organizing committees of OPTIM and ACEMP conferences decided in 2014 to organize these conferences jointly in the future, thus increasing the quality, participation, international recognition and reputation of both conferences.

The first joint event was held in Side in 2015. This was followed by a successful event in Brasov Romania, in 2017. Later meetings are held in 2019, Türkiye and 2021 conference is held in Romania. The 2023 joint conference is planned to take place in early September 2023 in Istanbul, Türkiye.

In the true tradition of ACEMP and OPTIM, once again the meeting will include presentations by well-known scientists in the electrical machines and power electronics subject areas.

We are looking forward to your participation to make this conference a memorable occasion.

LANGUAGE
The working language of the conference is English.

Technical Tracks

T1: Power Systems and Electromagnetics. Electric Circuits and Networks, Electromagnetic Field, Electromagnetic Materials, Components and Applications, EMC/EMI, Power Systems, Power Quality, Electrical Apparatus, Transmission, High Voltage, Electric Arc, Plasma, Utility Applications, Safety and Reliability in Power Engineering.
Track chairs: Murat Göl (TR), Mihai Cernat (RO)

T2: Electrical Machines, Industrial Drives and Control. AC/DC Motor Drives, Motion and Drive Control, Sensorless Control, Electric Propulsion, Automotive Applications, Electrical Machines Design and Modelling, Thermal, Noise and Vibrations Issues, Electric Generators and their Control, Testing and Diagnostics.
Track chairs: Ion Boldea (RO), Dan Ionel (USA),

T3: Power Electronics and Power Conversion. Power Electronics Modelling, Simulation, Design, Control, DC/DC Conversion, AC/AC Converters, Rectifiers, Inverters, PWM Systems, Converters for Electric and Hybrid Electric Vehicles, Power Electronic Devices and Systems, Semiconductors, UPS, Active and Hybrid Filtering, Power Line Conditioning, DSP and Microcontrollers for Power Electronics and Control.
Track chairs: Dorin Petreus (RO), Dorin Neacsu (RO/USA), Sedat Sunter (TR)

T4: Renewable Electric Energy Conversion. Processing and Storage. Wind Energy, Photovoltaics, Hydro/Micro-hydro Power, Battery Technologies, Fuel Cells & Hydrogen Storage, other Energy Storage Technologies, Distributed Generation Systems. Smart Grids, Intelligent Environment, Building Management.
Track chairs: Remus Teodorescu (DK), Ioan Serban (RO), İlhami Çolak (TR)

T5: Applied Electronics, Mechatronics, Control and Automation. Computer Vision, Image Processing, Signal Processing, Modelling, Simulation, Artificial Intelligence, Mechatronics, Robotics, Human-Machine Interface Technology, Automation, Smart Sensors, Control Systems, Embedded Systems.
Track chairs: Silvia Cirstea (UK), Jin Zhang (UK), Umer Khan (TR)

T6: Electrical Engineering Education and Emerging Technologies. Novel Educational Tools, Methods and Materials, Distance Learning, Information and Communication Technologies in Laboratories, University-Industry Collaboration, New Holistic Systems Modelling.
Track chairs: Elena Helerea (RO), Cristina Luca (UK), Zuhal Erden (TR)

Special Sessions. Industry news & others (subject to proposals received).
Track chairs: Bülent Şarlıoğlu (USA), Cristina Luca (UK), Elena Helerea (RO), H. Bülent Ertan (TR)

08:30-18:30 hrs	Registration		
09:00-10:15 hrs	FORMAL OPENING　　　　　　　　　**Chair persons**: H. Bülent Ertan, Mihai Cernat Address of Welcome by the Conference Chairmen PLENARY SESSION I **From Backstage to Center Stage: Auxiliary Automotive Drives** Annette Muetze, Shahim Asgari, Graz University of Technology, Austria **Medium-voltage drive topology design & control – "Essential engineering part in more electrified heavy industry"** Yongsug Suh, Jeonbuk National University, Jeonju, Korea		
10:15-10:30 hrs	Coffee break 1		
10:40-12:20 hrs	**1A**: Renewable Electric Energy Conversion, Processing and Storage, Electric Vehicles 1	**1B**: Electrical m/c's, Industrial Drives and Control: PM and Synchronous reluctance motors	
Chair	Serhiy Bozhko, Marwa Hassan	Ameur-Fethi Aimer, Remzi Inan	
12:20-13:30 hrs	Lunch		
13:40-14:40 hrs	PLENARY SESSION II　　　　　　　**Chair persons:** Tomy Sebastian, Ivan Yatchev **Vector Magnetic Hysteresis Loop and Magnetic Characteristic Analysis of Electrical Machines** Masato Enokizono, Oita University, Japan Daisuke Wakabayashi, Nippon Bunri University, Japan **Power density improvement in traction inverters** Burak Özpineci, Oakridge National Lab, USA		
14:40-15:00 hrs	Coffee break 2		
15:00-17:00	**2A**: Electrical Machines, Industrial Drives and Control: design 1	**2B**: Applied Electronics, Mechatronics, Control and Automation	
Chair	Jens Friebe, Emine Bostancı Özkan	Bibhya Sharma, Kaylash Chaudhary	
17:00-18:20 hrs	**3A**: Electrical Machines, Industrial Drives and Control: design 2	**3B**: Electrical　　　　Motors & Diagnosis	**3C**: Renewable Electric Energy Conversion, Processing and Storage, Electric Vehicles 2
Chair	Samir Moulahoum, Vahid Teymoori	Javier Samanes, Selin Ö. Özkılıç	Roberto Petrella, Mostefa Koulali
18:20-20:30 hrs	Welcome Cocktail		

08:30-09:00 hrs	Registration	
09:00-10:00 hrs	PLENARY SESSION III **Chair persons:** Mehdi Bagheri, Burak Özpineci **Optimized and smart onboard electric power systems: The technology towards net-zero aviation** Serhiy Bozhko, Sharmila Sumsurooah University of Nottingham, UK **Role of Machines, Electronics and Control on the Advancement in Automotive Systems** Tomy Sebastian, Halla Mechatronics, Michigan USA	
10:00-10:20 hrs	Coffee break 3	
10:30-12:30 hrs	**4A**: Power Electronics and Power Conversion 2	**4B**: Electrical Machines, Industrial Drives and Control: drives
Chair	Kaspars Kroičs, M. Timur Aydemir	Farzad Tahami, Burak Özpineci
12:30-14:00 hrs	Lunch	
14:00-15:20 hrs	**5A**: Power Systems and Electromagnetics	**5B**: Power Electronics and Power Conversion 1
Chair	Samir Moulahoum, Bülent Şarlıoğlu	Dorin O. Neacsu, Javier Samanes
15:20-15:40 hrs	Coffee break 4	
15:40-17:20 hrs	**6A**: Electrical Machines, Industrial Drives and Control: Thermal Issues	**6B**: Special session
Chair	Yongsug Suh, Mohammad R. Yazdani	Ehsan Jamshidpour, Lale Ergene
17:20-17:40	**Closing Ceremony**	
18:00-22:30	**Gala Dinner**	

Chair Persons: H. Bülent Ertan, Mihai Cernat

From Backstage to Center Stage: Auxiliary Automotive Drives

Annette Muetze, Shahim Asgari,
Graz University of Technology, Austria

Medium-voltage drive topology design & control – "Essential engineering part in more electrified heavy industry

Yongsug Suh, Jeonbuk
National University, Jeonju, Korea

1A: Renewable Electric Energy Conversion, Processing and Storage, Electric Vehicles 1, FRIDAY 10:40 - 12:20

Chair Persons: Serhiy Bozhko, Marwa Hassan

A Wavelet-Based Droop Control of Reactive Power Sharing and Frequency Regulation in Islanded Microgrids
Mohammad Mardaneh, Ramin Sahebi, Ehsan Jamshidpour, Jamshid Aghaei, Elaheh Taherian-Fard, Taher Niknam
Shiraz University of Technology, Iran

Triple Three-Phase Diode Rectifier-Connected Wound Rotor Non-Overlap-Winding Synchronous Generator for DC Grid Wind Turbine Systems
Lucky Dube, Karen Garner, Maarten Kamper
Stellenbosch University, South Africa

Using Clustering To Reduce Models Required For Medium Term Load Forecasting
Ameera Arif, Ahmad Nadeem, Naveed Arshad
Lahore University of Management Sciences, Lahore, Punjab, Pakistan

Predicting Thermal Behavior of Lithium-ion Batteries for Electric Car Applications
Bernardo J. Azuaje-Berbeci, H. Bülent Ertan,
Atılım University, Ankara, Turkey

Hybrid Renewable Energy Grid with Hydrogen Storage: A Case Study in Ras Ghareb, Egypt
Marwa Hassan, Eman Beshr
Arab Academy for Science and Technology, Cairo, Egypt

1B: Electrical Machines, Industrial Drives and Control: PM and Synchronous reluctance motors
FRIDAY 10:40 – 12:20

Chair persons: Ameur-Fethi Aimer, Remzi Inan

Axially laminated anisotropic (ALA) rotor reluctance synchronous motor (RSM): comprehensive experiments characterization
Liviu Danut Vitan, Lucian Tutelea, Adrian Daniel Martin, Nicolae Muntean,
Politehnica University of Timisoara, Romania
Ion Boldea, Romanian Academy, Timisoara Branch, Romania

Performance Comparison of 5-MW Normal and Dual Three-Phase PM Vernier Motors for Ship Propulsion
Nima Arish, Maarten Kamper, Rong-Jie Wang,
Stellenbosch University, South Africa

Active Flux based control of ALA Rotor SynRel with MTPA, Maximum Power Factor and Maximum Torque per Flux
Sorin-Cristian Agarlita, Andy-Sorin Isfanuti, ,
Corporate R&D, DIWRW ZF Group,
Timisoara, Romania
Ion Boldea, Romanian Academy,
Timisoara Branch, Romania

Modal Analysis of a 7.5 kW Synchronous Reluctance Motor
Yakup Yilmaz, Nezih Gokhan Ozcelik, Lale Ergene,
Istanbul Technical University, Turkey

Torque Ripple Improvement of Interior Permanent Magnet Motors by Magnet Asymmetry Considering Wide Speed Range of Operation
Kutluhan Çavuşoğlu, Erkan Meşe
Ege University, Izmir, Turkey

Chair persons: Tomy Sebastian, Ivan Yatchev

Vector Magnetic Hysteresis Loop and Magnetic Characteristic Analysis of Electrical Machines

Masato Enokizono, Daisuke Wakabayashi, Oita University, Nippon Bunri University, Japan

Power density improvement in traction inverters

Burak Özpineci, Oakridge National Lab, USA

2A: Electrical Machines, Industrial Drives and Control: design 1
FRIDAY 15:00 – 17:00

Chair Persons: Jens Friebe, Emine Bostancı Özkan

Design of a high-speed 100, 000 rpm 8kW permanent magnet synchronous machine
Michal Staňo, Michal Kovacik, Pavol Rafajdus, Ronald Bastovansky, Bohumil Skala, Martin Skalicky,
University of Žilina, Slovak Republic

Design of Interior Permanent Magnet Synchronous Motor with Pseudo-Concentrated Winding
Farzad Tahami, Ghasem Rezazadeh, Mehdi Alemi-Rostami, Hamid Reza Akbari Resketi,
Sharif University of Technology, Iran

Equivalent Circuit Based Design Approach of Axial-Flux Induction Generator for Wind Turbines
Batı Eren Ergun, Güven Onur, Mehmet Onur Gülbahçe, Derya Ahmet Kocabaş,
Istanbul Technical University, Turkey

Studying the Performance of Quasi-Zero Stiffness Magnetic Constant Force Mechanism
Jonathan Bird, Gozde Sivka,
Portland State University, United States

Torque Ripple Reduction of Yokeless and Segmented Armature (YASA) Motors by Novel Asymmetric Armature
Gokhan Cakal, Bulent Sarlioglu,
University of Wisconsin-Madison, United States

Design and Semi-Analytical Optimization of a Brushless Wound Rotor Synchronous Motor for a Battery Electric Vehicle
Ege Demir, Alper Tap, Lale Ergene,
Istanbul Technical University, Turkey

2B: Applied Electronics, Mechatronics, Control and Automation
FRIDAY 15:00 - 17:00

Chair persons: Bibhya Sharma, Kaylash Chaudhary

Infrared Detection Technologies in Smart Agriculture: A Review
Gulsah DEMIRHAN AYDIN, Selcuk Ozer,
METU MEMS CENTER, Turkey

Reinforcement Learning at the Forefront of Robot Path Planning
Kaylash Chaudhary, Bibhya Sharma, Alvin Prasad
The University of the South Pacific, Fiji

Stabilizing Controllers for Tunnel Merging Maneuvers of a Multi Agent System
Sandeep Kumar, Kritika Lal, Navineel Reddy, Ronald Lifigao, Bibhya Sharma,
The University of the South Pacific, Fiji

Controller Design of an Autonomous Quadcopter for Enhanced Aerial Surveillance and Situational Awareness
Bibhya Sharma, Sandeep Kumar, Ravinesh Chand,
The University of the South Pacific, Fiji

Internet of Things System for Solar Resource Monitoring
Vlad Voicu, Dorin Petreus,
Radu Etz Technical University of Cluj-Napoca, Romania

Voice processing for police hotlines
Bassel nasr, Maroun Chamoun,
Saint joseph university,
Jean marc Steyeart,
École Polytechnique de France, France

3A: Electrical Machines, Industrial Drives and Control: design 2
FRIDAY 17:00 – 18:20

Chair persons: Samir Moulahoum, Vahid Teymoori

Design of Permanent Magnet Synchronous Motor for Hybrid Sled-Type Forest Cableway
Marius Alexandru Dranca, Mihai Chirca, Razvan Inte, Sorin Cosman, Claudiu Oprea,
Technical University of Cluj-Napoca, Romania

Alternative Design of High Torque Density Two phase Brushless Direct Current Motor
Saeed Abareshi, Jawad Faiz, Mehrage Ghods
University of Tehran, Iran

3-phase 8-pole Dual Axial Gap type High-Torque High-speed Induction Motor
Masato Enokizono, Daisuke Wakabayashi, Mohachiro Oka, Naoya Soda, Mitsuru Takai,
Tsuyoshi Kajiya, Kozo Okamoto, Kay Hameyer, Martin Nell
Oita University, Nippon Bunri University, Ibraki University, Nippon Kinzoku Co. Ltd.,
Tokuden Co., Ltd., RWTH Aachen University, Institute of Electrical Machines
Aachen, Japan & Germany

**Rotor Resistance Estimation of Induction Motors with A Novel Innovation-Based
Adaptive Extended Kalman Filter for Self-Tuning Remzi**
R. İnan,
Isparta University of Applied Sciences, Turkey
H. Bülent Ertan,
Atılım University, Ankara, Turkey

3B: Electrical Motors & Diagnosis
FRIDAY 17:00 – 18:20

Chair persons: Javier Samanes, Selin Ö. Özkılıç

Improvement of Induction Motor Diagnosis using the Kaiser Window Function
Mohammed-El-Amine Khodja, Ameur Fethi AIMER, Ahmed Hamida BOUDINAR,
National School of Built and Ground Works Engineering, Algeria

Induction motor bearing faults diagnosis based on Auto-Regressive spectral analysis
Ameur Fethi Aimer, Ahmed Hamida Boudinar, Mohammed-El-Amine Khodja, Azeddine
Bendiabdellah,
LDEE Laboratory (USTO-Oran), University of Saida, Algeria

**Online Estimation of the Parameters and Diagnosis of Faults in an Air-cooled Chiller using
Synchronous Reluctance motor drive**
Dhirendran Kumar, Siwan Narayan, Pietro Catrini, Maurizio Cirrincione, Antonio
Piacentino, Adriano Fagiolini,
UNIPA, Italy

Considerations on the Winding Configuration of Hairpin Winding in Traction Applications
Ali Bakbak, Manisa Celal Bayar University,
Erkan Meşe, Ege University,
Ozan Delimazı, Burak Solak, Gamze Odabaş, Abdullah Polat,
WAT Motor Company, Turkey

3C: Renewable Electric Energy Conversion, Processing and Storage, Electric Vehicles 2
FRIDAY 17:00 – 18:20

Chair persons: Roberto Petrella, Mostefa Koulali

Utility-Scale PV-Powered Motor-Generator System with Model-Based MPPT Control
Ridhaa Brown, Maarten Kamper,
Dillan Ockhuis University of Stellenbosch, South Africa

Magnetic Coil Parameters Optimization for Dynamic Wireless Charging of Electric Vehicles using Particle Swarm Optimization (PSO) Algorithm
adilkhan kapanov, Ali Almaganbet, Seyedsaeid Heidariyazdi, Mehdi Bagheri,
Nazarbayev University, Kazakhstan

Effects of Maximum Speed on Output Characteristics of IPMSMs in EV Applications: A Comparative Study
Parisa Rezapour, Yusuf Basri Yilmaz, Emine Bostancı Özkan,
Middle East Technical University, Turkey

Case Study for a Grid-Connected PV System Optimal Design
Ahmed Abdelfatah, Sama Elkholy, Youssef H. El Gohary, Habibur Rehman, Mostafa F. Shaaban,
American University of Sharjah, Sharjah, United Arab Emirates

Chair persons: Mehdi Bagheri, Burak Özpineci

Optimized and smart onboard electric power systems: the technology towards net-zero aviation
Serhiy Bozhko, Sharmila Sumsurooah
University of Nottingham, UK

Role of Machines, Electronics and Control on the Advancement in Automotive Systems
Tomy Sebastian,
Halla Mechatronics, Michigan USA

4A: Power Electronics and Power Conversion 2
SATURDAY 10:30 – 12:30

Chair persons: Kaspars Kroičs, M. Timur Aydemir

Dual-Phase Shift Control of a Multilevel Dual Active Bridge Converter
Nassim Zemirline, Nadir Kabeche, Samir Moulahoum,
Yahia Fares University of Medea Algeria

Online RLS Impedance Estimation - Based Adaptive Control of Virtual Synchronous Generators in Grid Forming Inverters
Sohail Ali, Sheikh Azid, Shyamal Chand, Maurizio Cirrincione,
The University of the South Pacific, Fiji

Switching loss comparison between a tapped- and conventional boost converter
Mahmoud Saeidi, Xiao Yu, Pierre Küster, Christian Noeding, Jens Friebe, Peter Zacharias,
Universität Kassel, Germany

A Single-Switch Step-Up Dual-Output DC-DC Converter Based on Luo and Cuk Topology
Mohammad Rouhollah Yazdani, Fereshteh Ghasemi,
Isfahan (Khorasgan) Branch, Islamic Azad University, Iran

Fault Detection in Cascaded H-Bridge Inverters using Spectrogram Analysis and Convolutional Neural Network
Amuela Rokocakau' Pericle Zanchetta, Lucia Fronsini, Giulia Tresca,
The University of Pavia.
Maurizio Cirrincione, Rahul Kumar, The University of the South Pacific.
Giansalvo Cirrincione,
University of Picardie Jules.

4B: Electrical Machines, Industrial Drives and Control: drives
SATURDAY 10:30 – 12:30

Chair persons: Farzad Tahami, Burak Özpineci

Enhanced Fast Terminal Sliding Mode Observer for Wide-Speed Sensorless Control of PM Vernier Ship Propulsion Machine Drives
Vahid Teymoori, Hossein Dastres, Maarten Kamper, Rong-Jie Wang, Nima Arish,
Stellenbosch University, South Africa

Variable Speed Control of a Wound Rotor Synchronous Motor with the MTPA Technique
Mehmet Mert Güldan, Kadir Akgül, Alper Tap, Lale Ergene,
Istanbul Technical University, Turkey

Integrated Battery Modular Multilevel Converter based Drive for Electrically Excited and Hybrid Excited Synchronous Machines
Riccardo Breda, Giacomo Andrioli, Sandro Calligaro, Roberto Petrella,
University of Udine, Italy

Impact of inverter faults on the performances of SPWM and SVPWM control techniques
Noureddine HORRI, Ahmed Hamida BOUDINAR,
University of Sciences and Technology of Oran, Algeria
Ameur Fethi AIMER,
University Dr. Tahar Moulay of Saida, Saida, Algeria
Mohammed El-Amine KHODJA,
National School of Built and Ground

Induction Machine V/f Control with Stator Flux and Slip Frequency Compensation for Maximum Power Factor, with Experiments
Ana-Adela Popa,
University Politehnica Timisoara
Andy-Sorin Isfanuti,
Corporate R&D, DIWRW ZF Group
Lucian Tutelea,
University Politehnica Timisoara & Romanian Academy Timisoara Branch
Ion Boldea,
Romanian Academy Timisoara Branch, , Romania

Filter Form of State Observer for Industrial Motion Control Systems
Çağatay Dursun,
Akım Metal San. Ve Tic. A.Ş.
Selin Ozcira Ozkilic,
Yıldız Technical University, Turkey

5A: Power Systems and Electromagnetics
SATURDAY 14:00 – 15:20

Chair persons: Samir Moulahoum, Bülent Şarlıoğlu

Day-Ahead Cost Optimization of an Islanded Microgrid: A Practical Approach
Nicolae Alexandru Sarbu, Dorin Petreus, Toma Patarau, Eniko Szilagyi,
Technical University of Cluj-Napoca, Romania

A Droop-based Control Scheme for the Regulation of Voltage and Frequency in a Standalone Microgrid
Shu Godwill Ndeh, Divine Khan Ngwashi, Wirnkar Basil Nsanyuy, Emmanuel Tanyi,
Kiprono Letting,
University of Buea, Cameroon

Experimental Investigation on Electromagnetic Coupling Between Two Sensors Working on Different Operating Frequencies
Agus Dwi Prasetyo, Harfan Hian Ryanu, Muhammad Ammar Wibisono, Achmad Munir
Institut Teknologi Bandung, Indonesia

Stochastic Dynamic Programming Based Optimal Energy Management for an Islanded Microgrid
Eniko Szilagyi, Dorin Petreus, Toma Patarau, Nicolae Alexandru Sarbu,
Technical University of Cluj-Napoca, Romania

Addressing corona-effect for power network in South Africa using image classification and Machine Learning
Boitumelo Phetla, Sibonelo Motepe, Ali Hasan,
University of Johannesburg, South Africa

Performance Evaluation of A Sticker-Type UHF Antenna for Wearable EMI Sensor Application
Achmad Munir,
Institut Teknologi Bandung, Bandung, Indonesia
Zulfi, Agus-Dwi Prasetyo,
Institut Teknologi Bandung,
Telkom University, Bandung, Indonesi
Rheyuniarto-Sahlendar Asthan,
Institut Teknologi Bandung, ITERA, Lampung Bandung, Bandung, Indonesia

5B: Power Electronics and Power Conversion 1
SATURDAY 14:00 – 15:20

Chair persons: Dorin O. Neacsu, Javier Samanes

Analysis of 1200V 7kW SiC-IGBT and Cascaded GaN-IGBT Hybrid Switches
Omer Faruk Goksu, Mehmet Onur Gulbahce, Serkan Dusmez
Fatih Sultan Mehmet Vakif University, Turkey

Advanced control of eleven level modular converter connected to the power grid via HVDC transmission line
Mostefa Koulali, Karim Negadi, Abderrahmane Berkani,
University of Tiaret, Algeria
Ameur Fethi Aimer,
University of Saida, Algeria
Fabrizio Marignetti,
Università degli Studi di Cassino, Cassino, Italy
H. Bülent Ertan,
Atılım University, Ankara, Turkey

A Soft-Switched Wide-Ratio Bidirectional Hybrid Switched-Inductor Converter using Auxiliary Resonant Commutated Poles
Dan-Cornel Hulea, Mihăiţă-Constantin Gireadă, Octavian Cornea, Nicolae Muntean,
Politehnica University Timisoara, Romania

Design of A State Space based Unified Controller for Multi-Phase Point-of-Load Converters with Phase Dropping
Dorin Neacsu,
Technical University of Iasi, Romania

Dual-Stage Control Strategy for a Three-Level Neutral Point Clamped Converter with Selective Harmonic Mitigation PWM
Leyre Rosado, Javier Samanes, Eugenio Gubia, Jesus Lopez,
Public University of Navarre, Spain
Margarita Norambuena, Pablo Lezana, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile

6A: Electrical Machines, Industrial Drives and Control: Thermal Issues
SATURDAY 15:40 – 17:20

Chair persons: Yongsug Suh, Mohammad Rouhollah Yazdani

Simplified lumped parameter thermal modelling of low power salient-pole synchronous generators
Saeed Sedigh, Jawad Faiz,
University of Tehran, Iran

Comparision of Planar Ferrite Cores in High Frequency GaN DC-DC Converter Application based on Performance Factor and Thermal Imaging
Kaspars Kroics, Kristiāns Gaspersons, Agris Treimanis,
Riga Technical University, Latvia

EV Traction System's Battery Thermal Analysis using Fuzzy Logic and PI Controller
Shoaib Ahmed, Ahmad Rizwan, Faris AtaAllah, Habibur Rahman, Shayok Mukhopadhyay,
Rached Dhaouadi,
American University of Sharjah, Sharjah, UAE

Numerical Analysis of the Influence of External Losses on the Heating of a High Power Fuse
Ivan Hadzhiev, Ivan Bayrev
Technical University of Sofia, Plovdiv Branch, Plovdiv, Bulgari
Dian Malamov,
University of Plovdiv Paisii Hilendarski, Plovdiv, Bulgaria
Iosko Balabozov, Ivan Yatchev,
Technical University of Sofia, Bulgaria

6B Special session second day
SATURDAY 15:40-17:20

Chair persons: Ehsan Jamshidpour, Lale Tükenmez Ergene

State-of-the-art power electronics and machines for electric vehicles
Bulent Sarlioglu, Professor, FIEEE, FNAE,
University of Wisconsin-Madison, USA

Impact of cosmic radiation on the design of power electronics in automotive and aircraft applications.
Jens Friebe,
University of Kassel, Germany

Optimal control of Electrically Excited and Hybrid Excited Synchronous Machines: Extended Maximum Torque per Ampere and Flux Weakening Control with Inherent Copper Loss Minimization
Roberto Petrella, Power Electronic Converters,
Electrical Machines and Drives Laboratory (PEMD Lab), University of Udine, Italy

A Comparative Perfomance Analysis Between the Buck and Boost Differential Single-Phase Inverters With Active Power Decoupling
Ronald Musona, Ioan Serban,
Transylvania, University of Brasov, Romania