EVER2019 Final Program

Wednesday May 8, 2019

14H00 - 16H30: Registration

Opening
16H30 - 17H00, Room Auric 2-3

Chairs: Raoul Viora, President of Monaco Sustainable Development Association (Monaco)
Ahmed Masmoudi, Chairman of the Program and Publication Committees and Head of the Laboratory on Renewable Energies and Electric Vehicles (Tunisia)

First Plenary Session
17H00 - 18H00, Room Auric 2-3

Chairs: Elena A. Lomonova (The Netherlands) and Michael Schier (Germany)

EVER19-PS1 Overview of Hybrid Excited PM Machines for Electric Vehicles
Zi Qiang Zhu
University of Sheffield, UK

18H00: Welcome Reception Hosted by the Government of Monaco
**Thursday May 9, 2019**

**Second Plenary Session**

*9H00 - 10H00, Room Auric 2-3*

Chairs: Ilhem Slama-Belkhodja (Tunisia) and Rosario Miceli (Italy)

**EVER19-PS2** *Power Electronics - the Key Technology for Renewable Energy System Integration*

Frede Blaabjerg

Aalborg University, Denmark

**10H00 - 10H30: Coffee Break**

**RE1: Lecture Session on Grid Integration of Renewables**

*10H30 - 12H30, Room Auric 2-3*

Chairs: Frede Blaabjerg (Denmark) and Alberto Doria (Italy)

**EVER19-02** *Power Grid Simulation Considering Electric Vehicles and Renewable Energy Sources*

Avilash Cramer, Ian Miller, Neal Eichenberg, Juan De Jesus, and Luca Daniel

Massachusetts Institute of Technology, USA

Michela Longo

Politecnico di Milano, Italy

**EVER19-06** *Analysis of Optimization Strategies for Grid-Side Converter Control during Grid Faults Using DSRF Control*

Katharina Gunther, Florian Bendrat, and Constantinos Sourkounis

Ruhr University Bochum, Germany

**EVER19-35** *Wave Loading and Wind Energy of a Spar Buoy Floating Wind Turbine*

Thomas P. Mazarakos

National Technical University of Athens, Greece

Spyridon A. Mavrakos and Takvor H. Soukisian

Hellenic Centre for Marine Research, Greece

**EVER19-37** *Control of a Double Fed Induction Generator Based Wind Energy Conversion System Equipped with a Modular Multilevel Matrix Converter*

Carlos Melendez, Matias Diaz, Felix Rojas, and Roberto Cardenas

University of Santiago, Chile

Mauricio Espinoza

University of Costa Rica, Costa Rica
Aurélien Babarit, Jean-Christophe Gilloteaux, Edwin Body, and Jean-François Hetet
Centrale Nantes, France

EVER19-81 Optimal Energy Management of Wind Hybrid System Considering Planned Load and Wind Generation Reduction
Sondes Skander-Mustapha and Ilhem Slama-Belkhodja
Université de Tunis El Manar, Tunisia

**EV1: Lecture Session on the Design, Modeling, and Analysis of Electric Machines Intended to Sustainable Applications (Part 1)**

10H30 - 12H30, Room Apollinaire

**Chairs:** Armin Dietz (Germany) and Antonino Oscar Di Tommaso (Italy)

EVER19-03 Demagnetisation Current Due to Short Circuit Effect on an Inset Permanent Magnet Motor
Mikael Alatalo and Torbjörn Thiringer
Chalmers University of Technology, Sweden

EVER19-53 Drive Cycles Study of Electrical Machine with Recycled Rare Earth Permanent Magnets on Mild Hybrid Electrical Vehicle Platform
Ziwei Li, Haitham Lahiani, Maxime Reynouard, and Jean-Marc Dubus
Valeo, France

EVER19-56 Per Unit Approach Based Assessment of Torque Production Capability of PMSMs Operating in the Field Weakening Region
Michal Gierczynski and Lech Grzesiak
Warsaw University of Technology, Poland

EVER19-99 Reduction of Open-Circuit DC Winding Induced Voltage in Hybrid-Excited Switched-Flux Permanent Magnet Machine
X.Y. Sun and Z.Q. Zhu
University of Sheffield, UK

EVER19-100 Analysis of Open-Circuit DC Winding Induced Voltage in Partitioned-Stator Hybrid-Excited Switched-Flux Machine
X.Y. Sun and Z.Q. Zhu
University of Sheffield, UK

EVER19-122 Torque Optimization of Synchronous Reluctance Motor for Electric Powertrain Application
Qibin Chen and Yang Tang
e-Traction, The Netherlands
Elena A. Lomonova
Eindhoven University of Technology, The Netherlands
**EV2: Lecture Session on the Design and Operation Analysis of Electric and Hybrid Vehicles (Part 1)**

10H30 - 12H30, Room Auric 1

**Chairs:** Fabrizio Marignetti (Italy) and Markus Lienkamp (Germany)

**EVER19-08 Electrification of Agricultural Machinery: a Feasibility Evaluation**

Diego Troncon, Luigi Alberti, and Silverio Bolognani
University of Padua, Italy
Federica Bettella and Alberto Gatto
Carraro Spa, Italy

**EVER19-24 Analysis of Optimal Charging Points Location and Storage Capacity for Hybrid and Full Electric Buses**

Josu Olmos, Jon Ander Lopez, and Haizea Gaztanaga
IK4-IKERLAN Technology Research Centre, Spain
Victor Isaac Herrera
Escuela Superior Politécnica de Chimborazo, Ecuador

**EVER19-27 Reliability Evaluation of non-Repairable Propulsion Systems of Hybrid-Electric Helicopter with Different Level of Hybridization**

Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany
Wenbin Zeng
Jilin University, China

**EVER19-103 Efficiency Comparison between Series Hybrid Bike and Traditional Bike**

Edgar Tournon and Bertrand Barbedette
ESTACA’LAB, France
Pascal Venet and Ali Sari
Ecole Centrale de Lyon, France
Adrien Lelievre
STEE, France
Judicaël Aubry
University of Rennes 1, France

**EVER19-98 An ECMS-based Approach for Energy Management of a HEV Equipped with an Electrical Variable Transmission**

Majid Vafaeipour, Mohamed El Baghdadi, Joeri Van Mierlo, and Omar Hegazy
Vrije Universiteit Brussel, Belgium
Florian Verbelen and Peter Sergeant
Ghent University, Belgium
**EVER19-105 Zero Emission Super-Yacht**

Edward Eastlack  
Braemar Technical Services Inc., USA

Sven Klingenberg  
Skysails Yacht GmbH, Germany

Anders Lidqvist and Par Olsson  
MAN Energy Solutions, Sweden

Egon Faiss  
NED SHIP GROUP, Switzerland

Michael Witt  
MAN Energy Solutions, Denmark

Richard Sauter  
Sauter Carbon Offset Design, Indonesia

Steve Szymanski  
Nel Hydrogen, USA

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**12H30 - 14H00: Lunch**

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**RE2: Lecture Session on the Integration of Power Electronic Converters in Renewable Energy Systems**  
**14H00 - 16H00, Room Auric 2-3**

Chairs: Ilhem Belkodja-Slama (Tunisia) and Aurélien Babarit (France)

**EVER19-14 Multi-Source Power System Based on PV-Batteries and Diesel Generator for Micro-Grid Applications**

M.M.G. Lawan, M.B. Camara, J. Raharjaona, and B. Dakyo  
University of Le Havre, France

**EVER19-30 A Fast-Transient Current Control Strategy for Three-Phase Four-Wire Modular Multilevel Inverter in Grid-tied Battery Energy Storage System**

Taha Lahlou, Shyam Ramakrishnan, Markus Herzog, Igor Bolvashenkov, and Hans-Georg Herzog  
Technical University of Munich, Germany

**EVER19-34 Performance Evaluation of Model Predictive Control for Neutral-Point-Clamped Voltage Source Converter with LCL Filter**

Johnny Chhor, Felix Woltjen, and Constantinos Sourkounis  
Ruhr University Bochum, Germany

**EVER19-40 Control of Three-Phase Power Electronic Converter with Power Controllers in Stationary Frame**

Sebastian Wodyk and Grzegorz Iwanski  
Warsaw University of Technology, Poland

**EVER19-104 Control and Design of an IPOS DC-DC Converter Applied to High Voltage DC Transmission in a Wave Energy Converter**

J.S. Artal-Sevil, J.A. Domínguez-Navarro, D. Martínez, and C. Bernal-Ruíz  
University of Zaragoza, Spain
EVER19-115 Control strategy for Modular Multilevel Converter Applied to Active Power Injection and Reactive Power Compensation: Integration in PV Microgrids
J.S. Artal-Sevil, J.A. Domínguez-Navarro, and I. Sanz-Gorrachategui
University of Zaragoza, Spain
A. Coronado-Mendoza
University of Guadalajara, Mexico

**EV3: Lecture Session on Multi-Physics Modeling and Characterization of BEV Powertrain Components**

14H00 - 16H00, Room Apollinaire

Chairs: Elena A. Lomonova (The Netherlands) and Zi Qiang Zhu (UK)

EVER19-07 A Time-efficient Test Rig for Thermal Characterisation of Electric Machines and Manufacturing Process Development
Yufeng Guo, Juliette Soulard, and David Greenwood
University of Warwick, UK

EVER19-18 Multi-fidelity Electro-thermal Optimization of Multiport Converter employing SiC MOSFET and Indirect Liquid Cooling
Dai-Duong Tran, Sajib Chakraborty, Arthur Van Melckebeke, Ngoc-Tan Vu, Mohamed El Baghdadi, and Omar Hegazy
Vrije Universiteit Brussel, Belgium

EVER19-25 Calculation of Thermal Transient Behavior of a 9-Phase Permanent Magnet Synchronous Motor for Flight Traction Applications
Igor Bolvashenkov, Jörg Kammermann, Kostiantyn Udovichenko, Laurenz Tippe, and Hans-Georg Herzog
Technical University of Munich, Germany

EVER19-80 Heat Transfer Coefficients in a Coupled 3-D Model of a Liquid-Cooled IPM Traction Motor Compared with Measurements
Sonja Tidblad Lundmark, Emma Arfa Grunditz, and Torbjörn Thiringens
Chalmers University of Technology, Sweden
Andreas Andreasson, Anders Bergqvist, Raik Orbay, and Erik Jansson
Volvo Cars Corporation, Sweden

EVER19-91 Finite Element versus Experimental Thermo-Mechanical Behaviour of Prismatic Li-Ion Cell
Francesco Mocera, Elena Vergori, and Aurelio Somà
Politecnico di Torino, Italy

EVER19-116 Design of a Six-Phase Fault-Tolerant Electric Motor for an Aircraft Fuel Pump
Flyur R. Ismagilov, Viacheslav Ye. Vavilov, Ruslan D. Karimov, and Valentina V. Ayguzina
Ufa State Aviation Technical University, Russia
Jörg Kammermann, Igor Bolvashenkov, and Hans-Georg Herzog
Technical University of Munich, Germany
**EV4: Lecture Session on Batteries (Part 1)**

14H00 - 16H00, Room Auric 1

**Chairs:** Jostein Bogen (Norway) and Par Olsson (Sweden)

**EVER19-09** Accelerated Aging Characterization of Lithium-Ion Cells: Limitation of Arrhenius Dependency  
Tanja Gewald, Dirk Lehmkuhl, Alexander Hahn, and Markus Lienkamp  
Technical University of Munich, Germany

**EVER19-17** Investigating Stationary Storage Applications and their Impact on Battery Aging  
Jakob Kraenzl and Tam T. Nguyen  
BMW Group, Germany  
Andreas Jossen  
Technical University of Munich, Germany

**EVER19-20** Bus-to-Route and Route-to-Bus Approaches in Hybrid Electric Buses Fleet for Battery Lifetime Extension  
Jon Ander Lopez-Ibarra, Aitor Milo, and Haizea Gaztanaga  
IK4-IKERLAN Technology Research Centre, Spain  
Victor Isaac Herrera  
Escuela Superior Politécnica de Chimborazo, Ecuador  
Haritza Camblong  
University of the Basque Country, Spain  
ESTIA Research, France

**EVER19-21** Battery Aging Conscious Intelligent Energy Management Strategy for Hybrid Electric Buses  
Jon Ander Lopez-Ibarra, Mattin Lucu, Norea Goitia, and Haizea Gaztanaga  
IK4-IKERLAN Technology Research Centre, Spain  
Victor Isaac Herrera  
Escuela Superior Politécnica de Chimborazo, Ecuador  
Haritza Camblong  
University of the Basque Country, Spain  
ESTIA Research, France

**EVER19-82** Incremental Capacity Analysis for Electric Vehicle Battery State-of-Health Estimation  
Erik Schaltz and Daniel-Ioan Stroe  
Aalborg University, Denmark  
Kjeld Nørregaard and Lasse Stenhøj Kofod  
Danish Technological Institute, Denmark  
Andreas Christensen  
LiTHIUM BALANCE A/S, Denmark

**EVER19-86** Calendar Aging Lifetime Model for NMC-based Lithium-Ion Batteries Based on EIS Measurements  
Alejandro Gismero, Daniel-Ioan Stroe, and Erik Schaltz  
Aalborg University, Denmark
RE3: Lecture Session on Renewable Energies Harvesting, Storage, and Grid Integration

16H30 - 18H30, Room Auric 2-3

Chairs: Michela Longo (Italy) and Thomas Hackman (Finland)

EVER19-33 Operation and Control Strategies for Wind Energy Conversion Systems: Review and Simulation Study
Johnny Chhor, Andre Matschke, Vile Kipke, and Constantinos Sourkounis
Ruhr University Bochum, Germany

EVER19-47 Concept for a Scalable Cybernetic Energy Management System and its Environmental Coupling for a Battery Storage System
Andreas W. Ebentheuer, Markus Herzog, and Hans-Georg Herzog
Technical University of Munich, Germany

EVER19-73 Modelling and Optimal Sizing of Photovoltaic Water Pumping Systems – Sensitivity Analysis
Simon Meunier, Loïc Quéval, Arouna Darga, Philippe Dessante, and Claude Marchand
Sorbonne University, France
Matthias Heinrich
DargaTech SARL, Burkina Faso
Judith A. Cherni and Elvire A. de la Fresnaye
Imperial College London, UK
Lionel Vido
University of Cergy-Pontoise, France
Bernard Multon
University of Rennes, France
Peter K. Kitanidis
Stanford University, USA

EVER19-55 Response of a Piezoelectric Harvester to Impacts Generated by Rain-Drops
Alberto Doria, Giulio Fanti, and Federico Moro
Università degli Studi di Padova, Italy

EVER19-106 A Novel and Simple PV Generator Test Procedure for EN50530 Standard Static MPPT Efficiency
Manelle Hasnaoui and Ilhem Slama-Belkhodja
Université de Tunis El Manar, Tunisia
Afef Bennani-Ben Abdelghani and Houda Ben Attia Sethom
Université de Carthage, Tunisia

EVER19-108 Aquavoltaic System for Harvesting Salt and Electricity at the Salt Farm Floor
Bongsuk Kim and Seungmin Lee
Korea Electric Power Research Institute, Republic of Korea
Gunho Kim, Jongsung Park, and Cheolhyun Lim
Green Energy Institute, Republic of Korea
EV5: Lecture Session on the Design, Modeling, and Analysis of Electric Machines Intended to Sustainable Applications (Part 2)
16H30 - 18H30, Room Apollinaire

Chairs: Zi Qiang Zhu (UK) and Ian Mc Bride (Germany)

EVER19-28 Fault Tolerance Assessment of Multi-Motor Electrical Drives with Multi-Phase Traction Motors Based on LZ-Transform
Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany
Ilia Frenkel
Shamoon College of Engineering, Israel

EVER19-29 Operational Availability and Performance Analysis of the Multi-Drive Multi-Motor Electric Propulsion System of an Icebreaker Gas Tanker for Arctic
Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany
Ilia Frenkel
Shamoon College of Engineering, Israel

EVER19-43 Advanced Control Method for Traction Electric Drives with Multiphase Induction Motors: Design and Potential
Andrey V. Brazhnikov and Dalerdzhon A. Sharipov
Siberian Federal University, Russia
Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany

EVER19-109 Electric Machine Design Tool for Permanent Magnet Synchronous Machines
Svenja Kalt, Jonathan Erhard, Benedikt Danquah, and Markus Lienkamp
Technical University of Munich, Germany

EVER19-117 Feasibility Study of Multi-Phase Machine Winding Reconfiguration for Fully Electric Vehicles
B. Daniels, J. Gurung, H. Huismann, and E. A. Lomonova
Eindhoven University of Technology, The Netherlands

EVER19-120 Differential Leakage Factor in Electrical Machines Equipped with Asymmetrical Multiphase Windings: a General Investigation
M. Caruso, A. O. Di Tommaso, L. Giangrasso and R. Miceli
University of Palermo, Italy
F. Marignetti
University of Cassino and South Lazio, Italy
R. Rizzo
University of Naples Federico II, Italy
**EV6: Lecture Session on Batteries (Part 2)**

16H30 - 18H30, Room Auric 1

**Chairs:** Pascal Venet (France) and Edward Schwarz (USA)

**EVER19-15 A Holistic Approach for Simulation and Evaluation of Electrical and Thermal Loads in Lithium-Ion Battery Systems**
Christoph Reiter, Leo Wildfeuer, Nikolaos Wassiliadis, Thilo Krah, Johannes Dirnecker, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-31 Experimental Characterization of Li-Ion Battery Resistance at the Cell, Module and Pack Level**
Leo Wildfeuer, Nikolaos Wassiliadis, Christoph Reiter, Michael Baumann, and Markus Lienkamp
Technical University of Munich, Germany
TWAICE Technologies GmbH, Germany

**EVER19-32 Design of Thermal Management Systems for Battery Electric Vehicles**
Christoph Reiter, Nikolaos Wassiliadis, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-50 State of Charge Balancing during Fault Tolerant Operation of Battery Storage Systems Based on Cascaded H-Bridge Multilevel Inverter**
Markus Herzog, Andreas W. Ebentheuer, and Hans-Georg Herzog
Technical University of Munich, Germany

**EVER19-65 Working Towards Greener Golf Carts – A Study on the Second Life of Lead-Acid Batteries**
Jérémie Dulout
SOVECTRON SAS, France
Luiz Fernando Lavado Villa
University of Toulouse, France

**EVER19-83 Partial Charging Method for Lithium-Ion Battery State-of-Health Estimation**
Erik Schaltz and Daniel Ioan Stroe
Aalborg University, Denmark
Kjeld Nørgaard and Bjarne Johnsen
Danish Technological Institute, Denmark
Andreas Christensen
LiTHIUM BALANCE A/S, Denmark
20H30: Conference Official Dinner (Novotel Monte Carlo Hotel)
Friday May 10, 2019

Third Plenary Session
9H00 - 10H00, Room Auric 2-3

Chairs: Constantinos Sourkounis (Germany) and Antonino Oscar Di Tommaso (Italy)

EVER18-PS3 Advances in the Study of Current Source Inverters
Fabrizio Marignetti
University of Cassino and South Lazio, Italy

10H00 - 10H30: Coffee Break

RE4: Lecture Session on Microgrids and Grid Integration of EVs with Emphasis on Wireless Charging Infrastructures
10H30 - 12H30, Room Auric 2-3

Chairs: Fabrizio Marignetti (Italy) and Erik Schaltz (Denmark)

EVER19-64 Control Signaling in Wireless Power Transfer for Electric Vehicles through Ultra-Wideband
Myrel Alsayegh, Benedikt Schmuelling, and Markus Clemens
University of Wuppertal, Germany

EVER19-77 Operational, Economic and Environmental Benefits of Smart Inverter Volt/VAr Functions in a PV Saturated Distribution System
Mingyue Wei, Aristides Kiprakis, and Rentao Wu
University of Edinburgh, UK

EVER19-84 An Optimized Charging Infrastructure for Wireless Power Transfer Systems from an Economic View
Amelie Burkert, Kevin Lambertz, and Benedikt Schmuelling
University of Wuppertal, Germany
Sebastian Jeschke and Joerg Baerenfaenger
EMC Test NRW GmbH, Germany

EVER19-88 Evaluation of Stray Fields for Inductive Power Transfer in Electric Vehicle Charging Applications
Daniel Pehrman and Yujing Liu
Chalmers University of Technology, Sweden

EVER19-101 Economic Dispatch of Microgrid Based on Multi-Agent System
Xiaosheng Wang and Lingbo Li
Huazhong University of Science & Technology, China
Juan M. Lujano-Rojas, J. S. Artal-Sevil, José M. Yusta, and José A. Domínguez-Navarro
University of Zaragoza, Spain
Investigation in the Modeling Complexity of Parallel and Grid-Connected Inverters from Similar to Different LCL Filters Parameters
Manef Bourogaoui and Azeddine Houari
Université de Tunis El Manar, Tunisia
Houda Ben Attia Sethom
Université de Carthage Tunis, Tunisia
Mohamed Machmoum
Université de Nantes, France

EV7: Lecture Session on the Design and Operation Analysis of Electric and Hybrid Vehicles (Part 2)
10H30 - 12H30, Room Auric 1

Chairs: Igor Bolvashenkov (Germany) and Armin Dietz (Germany)

EVER19-11 Route Specific Driver Characterization for Data-Based Range Prediction of Battery Electric Vehicles
Christoph Simonis and Roman Sennefelder
IAV GmbH, Germany

EVER19-58 Effect of System Parameters on Load Levelling Strategy for a Plugin Parallel Hybrid Two-Wheeler
K. N. Kavitha, Andrew McGordon, Antony Allen, and D. Q. Truong
Warwick University, UK

EVER19-63 Comparison of drive train topologies for electric vehicles with regard to regenerative braking
Philipp Spichartz and Constantinos Sourkounis
Ruhr University Bochum, Germany

EVER19-69 A Longitudinal Simulation Model for a Fuel Cell Hybrid Vehicle: Experimental Parameterization and Validation with a Production Car
Werner Schmid, Leo Wildfeuer, Julian Kreibich, Robin Buechli, Marius Schuller, and Markus Lienkamp
Technical University of Munich, Germany

EVER19-71 Application-Based Design of Electric Machines for New Vehicle Concepts in Developing Countries
Svenja Kalt, Matthias Brönner, and Markus Lienkamp
Technical University of Munich, Germany

EVER19-75 Connected-Autonomous Electric Vehicles based on DC-Bus Stabilisation Using Hybrid Storage System
T. C. Lin, S. A. Amamra, and J. Marco
Warwick Manufacturing Group, UK
12H30 - 14H00: Lunch

REV: Poster Session on Technologies and Approaches Involved in Ecological Vehicles and Renewable Energies

14H00 - 15H30, Conference Center Hall

Chairs: Michael Schier (Germany) and Fabio Viola (Italy)

**EVER19-01** Influence of Medium Temperature on the Efficiency of Wet Rotor Pumps
Evangelos Kravaritis and Constantinos Sourkounis
Ruhr University of Bochum, Germany

**EVER19-05** Empiric Weight Model for the Early Phase of Vehicle Architecture Design
Matthias Felgenhauer, Lorenzo Nicoletti, Ferdinand Schockenhoff, Christian Angerer, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-16** Modular, Open Source Simulation Approach: Application to Design and Analyze Electric Vehicles
Benedikt Danquah, Alexander Koch, Tony Weiß, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-19** Agent-based Simulation of a Car-sharing System with Hydrogen-powered Vehicles
Manfred Klöppel, Werner Schmid, and Markus Lienkamp
Technical University Munich, Germany

**EVER19-41** Modified Voltage Oriented Control of Brushless Doubly Fed Induction Generator Based Drivetrain under Grid Imbalance Conditions
Gennadiy Dauksha and Grzegorz Iwanski
Warsaw University of Technology, Poland

**EVER19-42** Techno-Economical Implementation of Holistic Electromobility Solutions in Commercial Companies
Adam Waclaw, Johannes Betz, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-57** How to Share What We Used to Own
Artur Grisanti Mausbach, Daniel Quinlan, and Samuel Johnson
Royal College of Art, UK
Luke Harmer
Loughborough University, UK

**EVER19-59** Investigation of the Influence of Direct and Indirect Current Control Methods on the Dynamic Properties of a State Space Speed Control
Philip Krajinski, Florian Bendrat, and Constantinos Sourkounis
Ruhr University Bochum, Germany
**EVER19-62**  Concept of Interlinking Mobility Services for Urban Transport towards Intermodal Mobility Including Private and Shared Electromobility
Daniel Breuer, Philipp Spichartz, and Constantinos Sourkounis
Ruhr University Bochum, Germany

**EVER19-74**  A Quasi-Steady-State Lap Time Simulation for Electrified Race Cars
Alexander Heilmeier, Maximilian Geisslinger, and Johannes Betz
Technical University of Munich, Germany

**EVER19-121**  Forecasting the Diffusion of Hydrogen EV Refuelling Infrastructures in Italy
F. Viola, G. Ala, N. Campagna, V. Castiglia, G. Schettino, D. Zaninelli, and R. Miceli
University of Palermo, Italy

**15H30 - 16H00: Coffee Break**

**EV8: Lecture Session on Automotive Thermal Management and Air-Conditioning and Auxiliary Systems**

**16H00 - 18H00, Auric 1**

Chairs: Sonja Tidblad Lundmark (Sweden) and Jeremy Dulout (France)

**EVER19-60**  Efficient Simulation of Thermal Management Systems for BEV
Christoph Reiter, Johannes Dirnecker, and Markus Lienkamp
Technical University of Munich, Germany

**EVER19-13**  Optimization of a Thermal Management System for Battery Electric Vehicles
Manuel Scholl, Katharina Minnerup, Christoph Reiter, Benno Bernhardt, Elena Weisbrodt, and Sebastian Newiger
Technical University of Munich, Germany

**EVER19-51**  Investigation of a Multi Stage Vapour-Injection Cycle to Improve Air-Conditioning System Performance of Electric Buses
Aditya Pathak, Matthias Binder, Aybike Ongel
TUMCREATE LTD, Singapore
Heong Wah Ng
Nanyang Technological University, Singapore

**EVER19-72**  An Evaluation of Autoencoder and Sparse Filter as Automated Feature Extraction Process for Automotive Damper Defect Diagnosis
Thomas Zehelein, Philip Werk, and Markus Lienkamp
Technical University of Munich, Germany
EVER19-118  Thermo-management and Cabin Climatization in Electric Vehicles Using a Hydrogen Based A/C-Unit
German Aerospace Center, Germany

EVER19-123  Fault-Tolerant Controller and Failure Analysis of Automotive Electromagnetic Suspension Systems
Eindhoven University of Technology, The Netherlands

EVER19-45  Holistic Analysis of Potential Stator Designs using Parameter Permutation
Svenja Kalt, Jonathan Erhard, and Markus Lienkamp
University of Munich Munich, Germany

EVER19-94  Dummy Slots Effect on the Torque Ripple and Electromagnetic Forces for Small Permanent Magnet Brushed DC Motors
Mohamed Ali B. hamed, Thierry Tollance, Michel Hecquet, Frederic Gillon, and Abdelmounaim Tounzi
Ecole Centrale de Lille, France

EVER19-113  Geometric Optimization of Variable Flux Reluctance Machines for Full Electric Vehicles
M.M.J. Zuurbier, C.A. Fahdzyana, T. Hofman, J. Bao, and E.A. Lomonova
Eindhoven University of Technology, The Netherlands

EVER19-119  Experimental Comparison of Efficiency Enhancement Algorithms for Three-Phase Induction Motors
A. Bruno, M. Caruso, A. O. Di Tommaso, C. Nevoloso, and R. Miceli
University of Palermo Italy

EVER19-124  Analytical Based Enhancement of the Torque Production Capability of Flux Switching PM Machines
Anis Abdelkefi and Imen Abdennadher
University of Sfax, Tunisia

EVER19-125  Comparison of the No-Load Features of IPM and Consequent Pole Tubular-Linear PM Synchronous Machines
Amal Souissi, Imen Abdennadher, and Ahmed Masmoudi
University of Sfax, Tunisia

EV9: Lecture Session on the Design, Modeling, and Analysis of Electric Machines Intended to Sustainable Applications (Part 3)
16H00 - 18H00, Auric 2-3

Chairs: Zi Qiang Zhu (UK) and Houda Ben Attia Sethom (Tunisia)
See you in EVER2020