

EVER2017 Final Program

Tuesday April 11, 2017

10H00-15H00: Registration

Opening and First Plenary Session

15H00 - 16H00, Room Bosio

Chairs: Raoul Viora (Monaco), Ahmed Masmoudi (Tunisia), and Wlodzimierz Koczara (Poland)

EVER17-PS1 *Future Trends of Power Electronic Converters*

Elena A. Lomonova

Eindhoven University of Technology, The Netherlands

EV1: Special Lecture Session on New Progress in Air Conditioning and Thermal Management Systems for Electric Vehicles (Part 1)

16H00 - 18H00, Room Bosio

Chairs: Gilbert M. Rios (France) and Stefano Lazzari (Italy)

EVER17-163 *Financing Electro-Mobility Thanks to H2020*

Gilbert A. Rios

University of Montpellier, France

EVER17-164 *Battery Concept to Minimize the Climate-Related Reduction of Electric Vehicles Driving Range*

Gero Mimberg and Christoph Massonet

ika RWTH Aachen University, Germany

EVER17-165 *Reducing the Energy Consumption for Comfort and Thermal Conditioning in EVs*

Alois Steiner and Alexander Mladek

Virtual Vehicle Research Center, Austria

EVER17-166 *Real Time Energy Efficiency Optimization in Connected Electrical Vehicles*

Juan Rico, Daniel Calvo, Juan Sancho, Miguel Rodriguez, Martin Wagner, Andrea Rossi, and Miguel Mateo

Atos Research and Innovation, Spain

EVER17-167 *New Climate-Control Units for More Energy-Efficient Electric Vehicles: the Innovative Three-Fluids Combined Membrane Contactor*

Carlo Isetti and Enrico Nannei

Innovative Technologies for Environmental Control and Sustainable Development, Italy

Stefano Lazzari and Saeed Hariri

University of Genoa, Italy

Oleg Iliev and Torben Prill

Fraunhofer-ITWM, Germany

EVER17-168 *How to Design a Proper Membrane for a Membrane Contactor-Based Air Conditioning System*

Marta Bojarska, Clemens Alexowsky, and Mathias Ulbricht

University of Duisbur-Essen, Germany

Stefano Lazzari and Aldo Bottino

University of Genoa, Italy

Claudia Cattaneo and Gustavo Capanelli

Innovative Technologies for Environmental Control and Sustainable Development, Italy

Soccorso Gaeta

GVS Filter Technology, Italy

18H30: Welcome Reception Hosted by the Government of Monaco



Wednesday April 12, 2017

Second Plenary Session

9H00 - 10H00, Room Bosio

Chairs: Mariacristina Roscia (Italy), Michael Schier (Germany), and Rosario Miceli (Italy)

EVER17-PS2 *Battery Management in Stationary and Mobile Applications*

David A. Stone
University of Sheffield, UK

10H00 - 10H30: Coffee Break

EV2: Special Lecture Session on New Progress in Air Conditioning and Thermal Management Systems for Electric Vehicles (Part 2)

10H30 - 12H50, Room Bosio

Chairs: Gilbert M. Rios (France) and Stefano Lazzari (Italy)

EVER17-169 *Low Energy Heating System Based on Joule Effect: JOSPEL Project*

Vanessa Gutiérrez Aragonés and Begoña Galindo Galiana
AIMPLAS Plastic Technology Centre, Spain

Carlos Bandrés Diéguez and Miguel de Dios Álvarez
CTAG Automotive Technology Centre of Galicia, Spain

Damián Calabuig and Alejandro Cabanes
Durplastic, Spain

EVER17-170 *New Climate-Control Units for More Energy-Efficient Electric Vehicles: System Architecture*

Carlo Isetti and Enrico Nannei
Innovative Technologies for Environmental Control and Sustainable Development, Italy

Stefano Lazzari
University of Genoa, Italy

Bernardo Cerrai and Sergio Nari
Marine Refrigeration and Air Conditioning Systems, Italy

EVER17-171 *Insulating Sandwich Housing Structures for the Thermal Management of Battery Packs*

Felix Weidmann
Fraunhofer Institute for Structural Durability and System Reliability, Germany

EVER17-172 *Efficient Cabin and Powertrain Preconditioning for EVs with a Water-to-Water Heat Pump System*

Andres Caldevilla, Markus Özbek, Werner Hünemörder, Tibor Györög, and Edouard Hougard
DENSO Automotive Deutschland GmbH, Germany

Marius Pinte
PiNTeam GmbH, Germany

EVER17-173 *Isothermal Calorimeter Heat Measurements of a 20Ah Lithium Iron Phosphate Battery Cell*

Lluis Millet, Maximilian Bruch, Peter Raab, Stephan Lux, Dr. Matthias Vetter
Fraunhofer-Institut für Solare Energiesysteme ISE, Germany

EVER17-174 *From Cell to System: Battery System Design*

Maximilian Bruch
Fraunhofer-Institut für Solare Energiesysteme ISE, Germany

EVER17-175 *A Pilot System for the Characterization of Hydrophobic Membrane Contactor Modules to Be Used in Air Handling Processes*

Antonio Comite and Aldo Bottino
University of Genoa, Italy

Claudia Cattaneo, Federica Boero, Gustavo Capannelli, Osvaldo Conio, Carlo Isetti, and Enrico Nannei
Innovative Technologies for Environmental Control and Sustainable Development, Italy

EV3: Lecture Session on the Design, Optimization and Modeling of Electric Machines Dedicated to Sustainable Applications

10H30 - 12H30, Room Poulenc 1

Chairs: Elena A. Lomonova (The Netherlands) and Simon Olaf (Germany)

EVER17-050 *Sensitivity Analysis for Induction Machine Manufacturing Tolerances: Modeling of Electrical Parameters Deviation*

Hussein Khreis, Andrea Deflorio, Miguel Ruiz De Larramendi, and Wei-Lung Lee
Robert Bosch GmbH, Germany
Benedikt Schmuelling
University of Wuppertal, Germany

EVER17-084 *The Brushless Doubly Fed Induction Machine as Generator for Small Hydro Power - Machine Design and Experimental Verification*

Philipp Löhdefink and Armin Dietz
Technische Hochschule, Germany
Andreas Möckel
Technische Universität Ilmenau, Germany

EVER17-087 *Methodical Approach for Designing Electric Propulsion Systems Containing Two Motors*

Michael Schier, Markus Hubner, and Nina Kevlishvili
German Aerospace Center, Germany
Armin Dietz and Sebastian Hörlin
University of applied sciences Nuremberg, Germany

EVER17-088 *Gear Ratio Optimization of a Full Magnetic Indirect Drive Chain for Wind Turbine Applications*

Melaine Desvaux, Bernard Multon, and Hamid Ben Ahmed
SATIE, France
Stéphane Sire
University Bretagne Occidentale, France
Aurélie Fasquelle and Daniel Laloy
Jeumont Electric, France

EVER17-110 *Determination of Differential Leakage Factors in Electrical Machines with Non-Symmetrical Full and Dead-coil Windings*

Antonino Oscar Di Tommaso, Fabio Genduso, Rosario Miceli, and Giuseppe Ricco Galluzzo
University of Palermo, Italy

EVER17-128 *A Numerical Design Platform for Induction Motor Efficiency Enhancement under Cost and Performance Optimization Constraints*

M. Mezzarobba and A. Tassarolo
University of Trieste, Italy

F. Luise
Nidec ASI, Italy

M. De Martin
SCAME, Italy

**RE1: Special Lecture Session on HVDC Converters and Systems:
Modeling, Control, and Stability Analysis**

10H30 - 12H30, Room Scotto

Chairs: Wlodzimierz Koczara (Poland) and Gilbert Bergna-Diaz (Norway)

EVER17-117 *Port-Hamiltonian Modelling of Modular Multilevel Converters with Fixed Equilibrium Point*

Gilbert Bergna-Diaz, Santiago Sanchez, and Elisabetta Tedeschi
Norwegian University of Science and Technology, Norway

EVER17-119 *Tuning of Control Loops for Grid-Connected Modular Multilevel Converters under a Simplified Port Representation for Large System Studies*

Santiago Sanchez, Gilbert Bergna, and Elisabetta Tedeschi
Norwegian University of Science and Technology, Norway

EVER17-133 *Modified Vienna (Warsaw) Rectifier under Fault Condition*

Tomasz Balkowiec and Wlodzimierz Koczara
Warsaw University of Technology, Poland

EVER17-152 *Avoiding AC/DC Grid Interaction in MMC Based MTDC Systems*

Atsede Gualu Endegnanew, Gilbert Bergna-Diaz, and Kjetil Uhlen
Norwegian University of Science and Technology, Norway

EVER17-153 *Integral Control of a Multi-Terminal HVDC-VSC Transmission System*

Marta Haro-Larrode, Íñigo Vidaurrezaga-Temez, Salvador Ceballos-Recio, and Maider Santos-Mugica
Tecnalia Research and Innovation, Spain

Pablo Eguía-López

The University of the Basque Country, Spain

EVER17-154 *Design Considerations of Medium-Frequency Power Transformers in HVDC Applications*

M. A. Bahmani
Chalmers University of Technology, Sweden

12H30 - 14H00: Lunch

**EV4: Lecture Session on Energy Refueling and Management Strategies
Dedicated to Electric Vehicles**

14H00 - 16H00, Room Bosio

Chairs: Fabrizio Marignetti (Italy) and Armin Dietz (Germany)

EVER17-016 *Charging Strategies of Electric Vehicles*

T. Tran-Quoc, H. Clémot, and V.L. Nguyen
National Institute of Solar Energy, France

EVER17-017 *Placement of EV Charging Stations Integrated with PV Generation and Battery Storage*

Bei Zhang, Qin Yan, and Mladen Kezunovic
Texas A&M University, USA

EVER17-022 *Optimization of Energy Consumption by Using an Intelligent Assistance System for an Electric Vehicle*

Matthias Fritsch and Xiaobo Liu-Henke
Ostfalia University of Applied Sciences, Germany

EVER17-028 *EV Charging Scheduling for Cost and Greenhouse Gases Emissions Minimization*

Rentao Wu, G. Tsagarakis, A. J. Collin, and A. E. Kiprakis
University of Edinburgh, UK

EVER17-046 *A Comparative Study and Analysis of Different Models for Photovoltaic (PV) Array Using in Solar Car*

Nafaa Jeddi and Lilia El Amraoui
University of Carthage, Tunisia
Fernando Tadeo Rico
University of Valladolid, Spain

EVER17-100 *Electric Vehicles Energy Management Using Lithium-Batteries and Ultracapacitors*

Ismail Oukkacha, Mamadou Baïlo Camara, and Brayima Dakyo
University of Le Havre, France

**REV1: Lecture Session on Control Strategies Dedicated to Drives and
Generators Integrated in Sustainable Applications**

14H00 - 16H00, Room Poulenc 1

Chairs: Antonino Oscar Di Tommaso (Italy) and Lionel Vido (France)

EVER17-030 *Direct Torque Control for Autonomous Doubly Fed Induction Machine based DC Generator*

Pawel Maciejewski and Grzegorz Iwanski
Warsaw University of Technology, Poland

EVER17-042 *Fuzzy Logic Control of Electric Vehicles: Design and Analysis Concepts*

Jemma J. Makrygiorgou and Antonio T. Alexandridis
University of Patras, Greece

EVER17-092 *Sensorless Control of a PMSM for Dynamic Control Performance Evaluation*

Piyush Kumar
Free University of Bozen-Bolzano, Italy
Luigi Alberti
University of Padova, Italy

EVER17-114 *Flux Observer Model for Sensorless Control of PM BLDC Motor with a Damper Cage*

Peng Li
China Electronic Technology Group, China
Wei Sun and Jianxin Shen
Zhejiang University, China

EVER17-127 *PLL Type Estimator Applied in PMSM Sensorless Control for Speed and Position*

Vasilios C. Ilioudis
Alexander Technological Educational Institution of Thessaloniki, Greece

EVER17-162 *Comparative Investigation of Bus-Clamping PTC Strategies for IM Drives*

Wiem Zouari and Bassem El Badsy
University of Sfax, Tunisia

***EV5: Lecture Session on Electric Vehicle Fleet Development in Europe
14H20 - 16H00, Room Scotta***

Chairs: Stefan Schiffer (Germany) and Quoc Tuan Tran (France)

EVER17-025 *An Evaluation of the Car-free City Potential for the City of Munich Regarding Mobility Data*

Johannes Betz, Sophia Prottung, and Markus Lienkamp
Technical University of Munich, Germany

EVER17-027 *Ecological Light Duty Vehicles – An Experience Based Product Development Process Based on Two Different Vehicle Concepts in a Resource Limited Environment*

Sophie Steinmaßl, Martin Šoltés, Markus Lienkamp, and Veit Senner
Technical University of Munich, Germany

EVER17-074 *Advancing Energy Efficient Early-Stage Vehicle Design through Inclusion of End-of-Life Phase in the Life Cycle Energy Optimisation Methodology*

Merle-Hendrikje Jank, Ciaran J. O'Reilly, and Peter Goransson
KTH Royal Institute of Technology, Sweden
Rupert J. Baumgartner and Josef-Peter Schoggl
University of Graz, Austria

EVER17-077 *The Diffusion of Electric Vehicles in Italy as a Means to Tackle Main Environmental Issues*

Simone Franzò, Federico Frattini, Vito Manfredi Latilla, Federica Foadelli, and Michela Longo
Politecnico di Milano, Italy

EVER17-079 *The Strategies for the Diffusion of EVs: Focus on Norway and Italy*

Morris Brenna, Michela Longo, and Dario Zaninelli
Politecnico di Milano, Italy
Fabio Viola, Rosario Miceli, and Pietro Romano
University of Palermo, Italy

16H00 - 16H30: Coffee Break

**RE2: Special Lecture Session on Offshore and Marine Renewable Energy:
Conversion and Transmission**

16H30 - 18H30, Room Bosio

Chairs: Sara Armstrong (Ireland) and David A. Stone (UK)

EVER17-155 *Offshore Renewable Energy Systems: Solutions for Reduction in Operational Costs*

Romano Capocci, Gerard Dooly, and Daniel Toal
University of Limerick, Ireland

EVER17-156 *A Wave-to-Wire Chain Modeling and Command for a Direct Drive Wave Energy Converter*

Hélène Clémot and Florian Dupriez-Robin
CEA-Tech Pays de la Loire, France
Aurélien Babarit
Ecole Centrale de Nantes, France
Tuan Quoc Tran
National Institute of Solar Energy, France

EVER17-157 *An Assessment of Structure-Based Sensors in the Condition Monitoring of Tidal Stream Turbines*

Roger I. Grosvenor, Paul W. Prickett, and Jianhao He
Cardiff University, UK

EVER17-158 *Applying Hardware-in-the-Loop Capabilities to an Ocean Renewable Energy Device Emulator*

James F. Kelly and Ross Christie
University College Cork, Ireland

EVER17-159 *Energy Storage Solutions for Offshore Wave and Tidal Energy Prototypes*

Dónal B. Murray and Paul Gallagher
University College Cork, Ireland
Ben Duffy
Secure Power Systems Limited, Ireland
Vincent McCormack
GKinetic Energy Limited, Ireland

EVER17-160 *Experimental Investigation on Mooring Loads and Motions of a TLP Floating Turbine*

Thomas P. Mazarakos
National Technical University of Athens, Greece
Spyridon A. Mavrakos
Hellenic Centre for Marine Research, Greece

EV6: Lecture Session on the Design and Analysis of Different Topologies of Linear Permanent Magnet Synchronous Machines

16H30 - 18H10, Room Poulenc 1

Chairs: Michel Hecquet (France) and Lilia El Amraoui (Tunisia)

EVER17-032 *Thrust Ripple and Inductances Characteristics of a Hybrid-Excited Flux-Switching Linear Machine*

Zhiqiang Zeng, Qinfen Lu, Xiaoyan Huang, and Youtong Fang
Zhejiang University, China

EVER17-161 *Investigation of the Eccentricity Effect on Quasi-Halbach Magnetized PM T-LSM Features*

Mohamed Wael Zouaghi, Imen Abdennadher, and Ahmed Masmoudi
University of Sfax, Tunisia

EVER17-150 *Investigation of the Effects of the Mover Magnetic Circuit Geometry of IPM T-LSMs on their No-Load Features*

Amal Soussi, Imen Abdennadher, and Ahmed Masmoudi
University of Sfax, Tunisia

EVER17-176 *3D FEA-Based Design of an Iron Assisted Quasi-Halbach Segmented PM T-LSM*

Mohamed Wael Zouaghi, Imen Abdennadher, and Ahmed Masmoudi
University of Sfax, Tunisia

EVER17-178 *Semi-Analytical Analysis of Rotating and Linear Flux-Switching PM Machines Including Skewing*

S.R. Aleksandrov, L. Wang, D.T.E.H. van Casteren, J.J.H. Paulides, and E.A. Lomonova
Eindhoven University of Technology, The Netherlands

EV7: Lecture Session on Supercapacitors and Batteries Modeling and Characterization with Emphasis on the Aging Effect

16H30 - 18H30, Room Scotto

Chairs: Dario Zaninelli (Italy) and Markus Hubner (Germany)

EVER17-001 *Multi-physical Characterization of Supercapacitors*

Kosseila Bellache; Mamadou Bailo Camara, and Brayima Dakyo
University of Le Havre, France

EVER17-012 *A Techno-Economic Analysis of End of Life Value Chains for Lithium-Ion Batteries from Electric Vehicles*

Stephan Rohr, Stephan Wagner, Michael Baumann, Stefan Müller, and Markus Lienkamp
Technical University of Munich, Germany

EVER17-015 *Verification Oriented Development of a Scalable Battery Management System for Lithium-Ion Batteries*

Xiaobo Liu-Henke, Sören Scherler, Sven Jacobitz
Ostfalia University of Applied Sciences, Germany

EVER17-018 *Effect of a Flexible Battery Module Bracing on Cell Aging*

Fabian Ebert and Markus Lienkamp
Technical University of Munich, Germany
Gerhard SEXTL
Fraunhofer Institute for Silicate, Germany

EVER17-021 *Reduction of Aging-Effects by Supporting a Conventional Battery Pack with Ultracapacitors*

Christian Angerer, Sebastian Krapf, Nikolaos Wassiliadis, and Markus Lienkamp
Technical University of Munich, Germany

EVER17-045 *Impact of Battery Ageing on E-Mobility Energy Efficiency*

Eduardo Redondo-Iglesias, Pascal Venet, and Serge Pelissier
University of Lyon, France

21H30: Conference Official Dinner (Novotel Monte Carlo Hotel)



Thursday April 13, 2017

Third Plenary Session

9H00 - 10H00, Room Bosio

Chairs: Lilia El Amraoui (Tunisia), Elena A. Lomonova (The Netherlands), and Fabrizio Marignetti (Italy)

EVER17-PS3 *Research on Linear Machine and its Applications*

Professor Qinfen Lu
Zhejiang University, China

10H00 - 10H30: Coffee Break

EV8: Lecture Session on the Design and Analysis of Different Topologies of Rotating Permanent Magnet Synchronous Machines

10H30 - 12H30, Room Bosio

Chairs: Alberto Tassarolo (Italy) and Elena A. Lomonova (The Netherlands)

EVER17-102 *Comparison between a Double Excitation Synchronous Machine and a Permanent Magnet Synchronous Machine According to Various Constant Power Speed Ranges*

K. Hoang, M. Gabsi, and L. Vido
SATIE, France

F. Gillon
Ecole Centrale de Lille, France

EVER17-109 *A New Hybrid Method for the Fast Computation of Airgap Flux and Magnetic Forces in IPMSM*

Emile Devillers and Michel Hecquet
University of Lille, France

Jean Le Besnerais
Eomys Engineering, France

EVER17-113 *Finite-Element Performance Comparison of IPMSMs with Unsymmetrical Double-layer Windings*

M. Caruso, A. O. Di Tommaso, R. Miceli, and F. Viola
University of Palermo, Italy

L. Ferraris
Politecnico di Torino, Italy

EVER17-147 *A Simple Method for Optimal Control of PMSM with Loss Minimization Including Copper Loss and Iron Loss*

Lionel Vido and Sandrine Le Ballois
University of Cergy-Pontoise, Italy

EVER17-140 *Optimal Design of a Novel Axial Flux Magnetically Geared PM Machine*

M. F.H. Khatab, Z.Q. Zhu, H. Y. Li, and Y. Liu
University of Sheffield, UK

EVER17-141 *A Novel Axial Flux Magnetically Geared Machine for Power Split Application*

Z.Q. Zhu, M. F.H. Khatab, H. Y. Li, and Y. Liu
University of Sheffield, UK

RE3: Lecture Session on Variable Speed Conversion of Wind and Hydro Energies and their Interfacing to the Grid

10H30 - 12H30, Room Poulenc 1

Chairs: Mariacristina Roscia (Italy) and Wlodzimierz Koczara (Poland)

EVER17-076 *Enhancement of Low-Voltage Ride through Capability of an Offshore Wind Turbine*

Merzak Aimene, Alireza Payman, and Brayima Dakyo
University of Le Havre, France

EVER17-112 *Design Issues for Wind Farms Grid Tied Inverter*

M. Caruso, A.O. Di Tommaso, F. Genduso, and R. Miceli
University of Palermo, Italy

M. Roscia
University of Bergamo, Italy

EVER17-123 *Canal Lock Variable Speed Hydropower Turbine Energy Conversion System*

Jian Zhang, Abdelmounaïm Tounzi, Phillipe Delarue, and Francis Piriou
University of Lille, France

Vlasios Leontidis, Antoine Dazin, and Guy Caignaert
ENSAM, France

Antoine Libaux
EDF Hydro-Engineering Centre, France

EVER17-124 *Voltage Sag and Swell Mitigation Using D-STATCOM in Renewable Energy Based Distributed Generation Systems*

Faris Hamoud, Mamadou Lamine Doumbia, and Ahmed Cheriti
Université du Québec à Trois-Rivières, Canada

EVER17-134 *Performance Comparison of Variable Speed PMSG-Based Wind Energy Conversion System Control Algorithms*

Boubacar Housseini, Aime Francis Okou, and Rachid Beguenane
Royal Military College of Canada, Canada

EVER17-135 *Island Operation of the Adjustable Speed Generation System*

Wlodzimierz Koczara, Artur Krasnodebski, and Tomasz Balkowiec
Warsaw University of Technology, Poland

EV9: Special Lecture Session on Advances in Charging Infrastructure Systems for Vehicles: V2G and G2V

10H30 - 12H30, Room Scotto

Chairs: Omar Hegazy (Belgium) and Maarten Messagie (Belgium)

EVER17-143 *Application of V2G Communication for Wireless Interoperable Power Transfer*

Olaf Simon

SEW-EURODRIVE GmbH & Co KG, Germany

Dimitri Shkadarevich

CarMedialab GmbH, Germany

EVER17-146 *Design and Modeling of V2G Inductive Charging System for Light-Duty Electric Vehicles*

Yassine Benomar, Mohamed El Baghdadi, Omar Hegazy, Yang Yang, Maarten Messagie, and

Joeri Van Mierlo

Vrije Universiteit Brussel, Belgium

EVER17-093 *Nonlinear Adaptive Control of On-grid/Off-grid Wind Energy Battery-Storage System*

Boubacar Housseini, Aime Francis Okou, and Rachid Beguenane

Royal Military College of Canada, Canada

EVER17-137 *Stability of Battery Energy Storage System Operating with Diesel Generator in a Stand-Alone Microgrid*

Jonmin Jo and Hanju Cha

Chungnam National University, Korea

EVER17-145 *Total Cost of Ownership of Electric Vehicles Incorporating Vehicle-to-Grid Technology*

Dries Schreurs, Quentin De Clerck, Maarten Messagie, Lieselot Vanhaverbeke, and Joeri Van Mierlo

Vrije Universiteit Brussel, Belgium

EVER17-144 *Modeling and Control of Interleaved DC/DC Boost Converters via Energy Factor Approach*

Egi Nazeraj, Omar Hegazy, and Joeri Van Mierlo

Vrije Universiteit Brussel, Belgium

12H30 - 14H00: Lunch

REV2: Poster Session on Miscellaneous

14H00 - 15H30, Session Rooms Hall

Chairs: David A. Stone (UK) and Antonino Oscar Di Tommaso (Italy)

EVER17-010 *Efficiency Determination of Active Battery Switching Technology on Roller Dynamometer*

Philip Wacker, Joern Adermann, Benedikt Danquah, and Markus Lienkamp

Technical University of Munich, Germany

EVER17-049 *Electric Power Generation with Piezoelectricity for Cargo Ships*

Fernando Cunha Pimentel Ulhôa, Pedro Américo Almeida Magalhães Júnior, Rafael Augusto de Souza Floriano, and Vítor Nogueira Coutinho
Pontifícia Universidade Católica de Minas Gerais, Brazil

EVER17-051 *Sensor Minimal Cell Monitoring with Integrated Direct active Cell Balancing*

Philip Dost and Constantinos Sourkounis
Ruhr-University Bochum, Germany

EVER17-090 *An Intelligent Control Structure for Highly Dynamic Driving of a Spherical Electrical Drive*

Xiaobo Liu-Henke, Marian Göllner, and Haoqi Tao
Ostfalia University of Applied Sciences, Germany

EVER17-105 *Smartphone Application to Evaluate the Individual Possibilities for the Application of Electric Vehicles*

Philip Dost, Christoph Degner, and Constantinos Sourkounis
Ruhr-University Bochum, Germany

EVER17-118 *Fault Isolation in DC networks Supplying Electric Vehicles*

Morris Brenna, Dario Zaninelli, and Enrico Tironi
Politecnico di Milano, Italy

George C. Lazaroiu
University Politehnica of Bucharest, Romania

Mariacristina Roscia
Universita di Bergamo, Italy

EVER17-120 *A Review of Thermal Management and Safety for Lithium Ion Battery Cells*

Seyed Saeed Madani, Maciej Jozef Swierczynski, and Søren Knudsen Kær
Aalborg University, Denmark

EVER17-121 *The Discharge Behavior of Lithium-Ion Batteries using the Dual-Potential Multi-Scale Multi-Dimensional (MSMD) Battery Model*

Seyed Saeed Madani, Maciej Jozef Swierczynski, and Søren Knudsen Kær
Aalborg University, Denmark

EVER17-131 *Power Factor Improvement using Adaptive Fuzzy Logic Control Based D-STATCOM*

Faris Hamoud, Mamadou Lamine Doumbia, Ahmed Chériti, Hakim Teiar
Université du Québec à Trois-Rivières, Canada

EVER17-151 *Simulation of a Single-Phase Five-Level Cascaded H-Bridge Inverter with Multicarrier SPWM B-Spline Based Modulation Technique*

G. Schettino, V. Castiglia, F. Genduso, P. Livreri, R. Miceli, P. Romano, and F. Viola
University of Palermo, Italy

EVER17-180 *New Approach for Harmonic Mitigation in Single-Phase Five-Level CHBML with Fundamental Frequency Switching*

G. Schettino, V. Castiglia, P. Livreri, R. Miceli, and F. Viola
University of Palermo, Italy

R. Rizzo

University of Naples Federico II, Italy

15H30 - 16H00: Coffee Break

EV10: Lecture Session on Electric and Hybrid Propulsion Systems

16H00 - 18H00, Room Bosio

Chairs: Frank Rinderknecht (Germany) and Rosario Miceli (Italy)

EVER17-005 *Integrated Model for Battery Electric Vehicles with Energy Harvesting Active Suspension System*

T.H. Pham, J. Jacob, and S. Wilkins

TNO Powertrains, The Netherlands

C. Lauwerys and M. Dhaens

Tenneco automotive Europe, Belgium

EVER17-019 *Multi-Objective Optimization of a Long-Haul Truck Hybrid Operational Strategy And a Predictive Powertrain Control System*

M. Fries

Institute of Automotive Technology, Germany

M. Kruttschnitt and M. Lienkamp

Technical University of Munich, Germany

EVER17-089 *Comparison of Electric Vehicles with Single Drive and Four Wheel Drive System Concerning Regenerative Braking*

Philipp Spichartz, Tim Bokker, and Constantinos Sourkounis

Ruhr-University Bochum, Germany

EVER17-104 *Design and Experiments of a Test Equipment for Hybrid and Electric Vehicle Drivetrains*

Fabrizio Marignetti, Damiano D'Aguanno, and Giuseppe Volpe

University of Cassino and Southern Lazio, Italy

EVER17-125 *Improving Longitudinal Dynamics of Conventional Vehicles in Comparison to Electrified Vehicles to Meet Customer Behavior*

Stephan Schiffer, Andreas Kain, and Philipp Wilde

BMW Group, Germany

Maximilian Helbing and Bernard Baeker

Technische Universität Dresden, Germany

EVER17-132 *Influence of the Final Drive Ratio on the Consumption of Passenger Cars under Real Driving Conditions*

Stephan Schiffer, Andreas Kain, and Philipp Wilde

BMW Group, Germany

Jad Haber, Maximilian Helbing and Bernard Baeker

Technische Universität Dresden, Germany

EV11: Lecture Session on the Design, Analysis, Manufacturing, and Testing of AC Machines

16H00 - 18H00, Room Poulinc 1

Chairs: Qinfen Lu (China) and Alberto Tassarolo (Italy)

EVER17-111 *Fast Procedure for the Calculation of Maximum Slot Filling Factors in Electrical Machines*
Antonino Oscar Di Tommaso, Fabio Genduso, Rosario Miceli, and Claudio Nevoloso
University of Palermo, Italy

EVER17-117 *Design, Manufacturing and Testing of a Cogging-Torque-Free Permanent-Magnet Wind Generator*

Fabio Luise
NIDEC-ASI, Italy
Alberto Tassarolo
University of Trieste, Italy

EVER17-142 *Design Optimization of a 12/8 Switched Reluctance Motor for Electric and Hybrid Vehicles*
Olivier Argiolas, Egi Nazeraj, Omar Hegazy, and Joeri Van Mierlo

Vrije Universiteit Brussel, Belgium
Johan De Backer and Ali Mohammadi
Toyota Motor Europe, Belgium

EVER17-115 *Analysis Method of Dynamic Torque-frequency Characteristic of Hybrid Stepping Motors*
Peng Li and Hua Lu

Research Institute of China, China
Jianxin Shen
Zhejiang University, China

EVER17-177 *Field Weakening Capability of 12-Stator-Slot/10-Rotor-Pole Variable Flux Reluctance Machines*

Jing Bao, Bart L.J. Gysen, Konstantin Boynov, Samuil Alexandrov, and Elena A. Lomonova
Eindhoven University of Technology, The Netherlands

EVER17-179 *Separation of Volume and Surface Forces and Torques in a DC Excited Flux Switching Machine*

M. Curti, J.J.H. Paulides, and E.A. Lomonova
Eindhoven University of Technology, The Netherlands

EV12: Lecture Session on Innovative Automotive Technologies

16H00 - 18H00, Room Scotta

Chairs: Fabio Viola (Italy) and Igor Bolvashenkov (Germany)

EVER17-007 *Reliability Assessment of a Fault Tolerant Propulsion System for an Electrical Helicopter*
Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany

EVER17-008 *The Choice of an Optimal Structure and Parameters of Energy Storage for an Electrical Helicopter Traction Drive*

Igor Bolvashenkov, Jörg Kammermann, and Hans-Georg Herzog
Technical University of Munich, Germany

Ilia Frenkel
Shamoon College of Engineering, Israel

EVER17-041 *Study of a Hardware-In-the-Loop Bench for Hybrid Electric Working Vehicles Simulation*

Francesco Mocera and Aurelio Somà
Politecnico di Torino, Italy

EVER17-072 *Kers System Adaptation for a Formula Student Vehicle*

Débora Maria de Oliveira Borges, Rafael Augusto de Souza Floriano, Rodrigo de Souza Reis Pimenta, Rogério Jorge Amorim, and Vítor Nogueira Coutinho
Pontifícia Universidade Católica de Minas Gerais, Brazil

EVER17-091 *Influence of the Drive Train Topology and the Center of Mass on the Regenerative Braking in Electric Vehicles*

Philipp Spichartz and Constantinos Sourkounis
Ruhr-University Bochum, Germany

EVER17-149 *Ideal Regenerative Braking Torque in Collaboration with Hydraulic Brake System*

Jonathan Nadeau, Philippe Micheau and Maxime Boisvert
University of Sherbrooke, Canada

