Session T01: Three-Phase and Three-Level AC-DC Converters
Location: Room 214A
March 6, 2018 8:30 - 12:00
Session Chairs: Haoyu Wang, ShanghaiTech University
Ruoyu Hou, GaN Systems Inc.

High Power Three-Level Rectifier Comprising SiC MOSFET and Si Diode Hybrid Power Stage
Xiaolong Yue, Aalborg University, Denmark
Xiongfei Wang, Aalborg University, Denmark
Frede Blaabjerg, Aalborg University, Denmark
Dushan Boroyevich, Virginia Polytechnic Institute and State University, United States
Rolando Burgos, Virginia Polytechnic Institute and State University, United States
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A Novel Soft Switching ZVS, Sinusoidal Input Boundary Current Mode Control of 6-Switch Three Phase 2-Level Boost Rectifier for Active and Active + Reactive Power Generation
Nidhi Haryani, Virginia Polytechnic Institute and State University, United States
Bingyao Sun, Virginia Polytechnic Institute and State University, United States
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Critical-Mode-Based Soft-Switching Modulation for Three-Phase Rectifiers
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Zhengyang Liu, Virginia Polytechnic Institute and State University, United States
Fred C. Lee, Virginia Polytechnic Institute and State University, United States
Qiang Li, Virginia Polytechnic Institute and State University, United States
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An Adaptive Selection of Intermediate Bus Voltage to Optimize Efficiency in a Universal Input Three-Phase Power Factor Correction Circuit
Hamidreza Hafezinasab, University of British Columbia, Canada
Wilson Eberle, University of British Columbia, Canada
Deepak Gautam, Delta-Q Technologies Corp., Canada
Chris Botting, Delta-Q Technologies Corp., Canada

Analysis of One Phase Loss Operation of Three-Phase Isolated Buck Matrix-Type Rectifier with a Boost Switch
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Dewei Xu, Ryerson University, Canada
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Yiwei Lin, Delta Electronics, Inc., Taiwan
Chun-Liang Liu, Delta Electronics, Inc., Taiwan

Session T02: Hybrid DC-DC Converters
Location: Room 214B
March 6, 2018 8:30 - 12:00
Session Chairs: Cahit Gezgin, Infineon Technologies
Pradeep Shenoy, Texas Instruments, Inc.

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Location: Room 214C
March 6, 2018 8:30 - 12:00
Session Chairs: Tiefu Zhao, University of North Carolina at Charlotte
Praveen Jain, Queen's University

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Lanhua Zhang, Texas Instruments, Inc., United States

Session T04: Faults in Electric Machines And Drives
Location: Room 214D
March 6, 2018 8:30 - 12:00
Session Chairs: Joshua Hawke, Naval Surface Warfare Center
Siavash Pakdelian, University of Massachusetts at Lowell

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March 6, 2018 8:30 - 12:00
Session Chairs: Jin Wang, Ohio State University
Sara Ahmed, University of Texas at San Antonio

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Analytic Model for Power MOSFET Turn-Off Switching Loss under the Effect of Significant Current Diversion at Fast Switching Events
Bai Nguyen, IBM T. J. Watson Research Center and Washington State University, United States
Xin Zhang, IBM T.J. Watson Research Center, United States
Andrew Ferencz, IBM T.J. Watson Research Center, United States
Todd Takken, IBM T.J. Watson Research Center, United States
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Paul Coteus, IBM T.J. Watson Research Center, United States

Session T06: Control of DC-DC Converters
Location: Room 217B
March 6, 2018 8:30 - 12:00
Session Chairs: Jaber Abu Qahouq, University of Alabama
Martin Ordonez, University of British Columbia

Low-Frequency Ripple-Shaping Controller for Operation of Non-Inverting Buck-Boost Converters Near Step-Up Step-Down Boundary
Yuqing Zhang, University of Toronto, Canada
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Giacomo Calabrese, Texas Instruments, Inc., Germany
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A Single Mode Load Tracking Voltage Mode Controller with Near Minimum Deviation Transient Response
Tom Moiannou, University of Toronto, Canada
Yanhu Liu, University of Toronto, Canada
Aleksandar Prodić, University of Toronto, Canada
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Near Time Optimal Recovery in a Digitally Current Mode Controlled Buck Converter Driving a CPL
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A Digital Robust Control Scheme for Dual Half-Bridge DC-DC Converters
Maxime Tissières, University of Applied Science of Western Switzerland, Switzerland
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**Session Chairs:** Afridi Khurram, University of Colorado Boulder
Hadi Marlek, Utah State University

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Ben Shaffer, Miami University, United States
Hassan A. Hassan, Miami University, United States
Mark J. Scott, Miami University, United States
Saad Ul Hasan, Macquarie University, Australia
Graham E. Town, Macquarie University, Australia
Yam Siwakoti, University of Technology Sydney, Australia

A Novel Control System for Solar Tile Micro-Inverters

Nicholas Falconar, University of Calgary, Canada
Dawood Shekari Beyragh, University of Calgary, Canada
Majid Pahlevani, University of Calgary, Canada

GaN based Transformer-Less Microinverter with Coupled Inductor Interleaved Boost and Half Bridge Voltage Swing Inverter

Jinia Roy, Arizona State University, United States
Raja Ayyanar, Arizona State University, United States

A Low-Cost Single-Stage PV Inverter

Yuxiang Shi, ABB, United States
Zhiguo Pan, ABB, United States
Rostan Rodrigues, ABB, United States
Chun Wei, ABB, United States

Design and Implementation of a 100 kW SiC Filterless PV Inverter with 5 kW/kg Power Density and 99.2% CEC Efficiency

Yanjun Shi, Florida State University, United States
Lu Wang, Florida State University, United States
Ren Xie, Florida State University, United States
Hui Li, Florida State University, United States

Comparative Study of a 100kW PV WBG Inverter using 1200V SiC MOSFET and JFET Cascode Devices

Sandro Martin, Florida State University, United States
Thierry Kayiranga, Florida State University, United States
Yanjun Shi, Florida State University, United States
Hui Li, Florida State University, United States

Session T08: SMP Audio and Battery

Location: Room 217D
March 6, 2018 8:30 - 12:00
Session Chairs: Johan Strydom, Texas Instruments, Inc.
Ed Massey, Methode Electronics

Multilevel Tracking Power Supply for Switch-Mode Audio Power Amplifiers

Niels E. Iversen, Technical University of Denmark, Denmark
Vladan Lazarevic, Universidad Politécnica de Madrid, Spain
Miroslav Vasic, Universidad Politécnica de Madrid, Spain
Arnold Knott, Technical University of Denmark, Denmark
Michael A.E. Andersen, Technical University of Denmark, Denmark
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Session Chairs: Jason Neely, Sandia National Laboratories
                Veda Galigekere, Oak Ridge National Laboratory

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Session T10: Power Electronics for Utility Interface - Power Quality & Harmonics
Location: Room 214B
March 7, 2018 8:30 - 10:10
Session Chairs: Davide Giacomini, Infineon Technologies
                Alireza Bakhshai, Queen's University

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Juan C. Vasquez, Aalborg University, Denmark
Chun-Lien Su, National Kaohsiung Marine University, Taiwan

Session T11: Control of Inverters and Drives II
Location: Room 214C
March 7, 2018 8:30 - 10:10
Session Chairs: Bulent Sarlioglu, University of Wisconsin at Madison
Omer Onar, Oak Ridge National Laboratory

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Joe O’Brien, Tyndall National Institute, Ireland
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Yanwen Lai, University of Florida, United States
Shuo Wang, University of Florida, United States

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Location: Room 217A
March 7, 2018 8:30 - 10:10
Session Chairs: Lei Wang, Dell EMC
Jim Marinos, Payton Planar Magnetics

Common Mode Filter for EMI Mitigation in Active Phase Converter

Anil K. Adapa, Indian Institute of Science, India
Vinod John, Indian Institute of Science, India

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Yiming Li, University of Florida, United States
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Shuo Wang, University of Florida, United States
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Yilin Sha, Xi'an Jiaotong University, China
Wenjie Chen, Xi'an Jiaotong University, China
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Changsheng Pei, Huawei Technologies Co. Ltd., China
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Magnetic Paste as Feedstock for Additive Manufacturing of Power Magnetics

Chao Ding, Virginia Polytechnic Institute and State University, United States
Lanbing Liu, Virginia Polytechnic Institute and State University, United States
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Zezheng Dong, Zhejiang University, China
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Location: Room 217B
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               Reza Sharifi, Texas Instruments, Inc.

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Minsung Kim, Pohang University of Science and Technology, South Korea

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Zoya Popović, University of Colorado Boulder, United States
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Hybrid Commutation Method with Current Direction Estimation for Three-Phase-to-Single-Phase Matrix Converter
Shunsuke Takuma, Nagaoka University of Technology, Japan
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A Direct Multi-Cells-to-Multi-Cells Equalizer based on LC Matrix Converter for Series-Connected Battery Strings
Naxin Cui, Shandong University, China
Yunlong Shang, Shandong University, China
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A Novel Hybrid Energy Storage System using the Multi-Source Inverter
Lea Dorn-Gomba, McMaster University, Canada
Ephrem Chemali, McMaster University, Canada
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Session T16: New Technology
Location: Room 217D
March 7, 2018 8:30 - 10:10
Session Chairs: Indumini Ranmuthu, Texas Instruments, Inc.
Jeff Nilles, Texas Instruments, Inc.

Hybrid Active Power Filter with GaN Power Stage for 5kW Single Phase Inverter
Ruben Otero-De-Leon, ABB, United States
Liming Liu, ABB, United States
Sandee Bala, ABB, United States
Giovanni Manchia, ABB S.p.A., Italy

High Frequency Electroporation for Biomedical Applications using GaN Gate Injection Transistors
Hector Sarnago, Universidad de Zaragoza, Spain
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Mahmoud Shousha, Würth Elektronik eiSos GmbH & Co. KG, Germany
Dragan Dinulovic, Würth Elektronik eiSos GmbH & Co. KG, Germany
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Location: Room 214B
March 7, 2018 14:00 - 17:30
Session Chairs: Luke Jenkins, IBM
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Session Chairs: Tim McDonald, *Infineon Technologies*
               Xin Zhang, *IBM*

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Session T21: Power Converter Modeling & Control
Location: Room 217A
March 7, 2018 14:00 - 17:30
Session Chairs: Sara Ahmed, University of Texas at San Antonio
Liming Liu, ABB

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Dapeng Lu, Aalborg University, Denmark
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Modeling Resonant Converters in a Rotating, Polar Coordinate
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First Order Design by Optimization Method: Application to an Interleaved Buck
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Shiladri Chakraborty, Indian Institute of Technology Kharagpur, India
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Location: Room 217B
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Session Chairs: Jaber Abu Qahouq, University of Alabama
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Location: Room 217C
March 7, 2018 14:00 - 17:30
Session Chairs: Afridi Khurram, University of Colorado Boulder
Michael de Rooij, Efficient Power Conversion Corporation

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Location: Room 217D
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Location: Room 214A
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Location: Room 214B
March 8, 2018 8:30 - 11:20
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Location: Room 214C
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Session Chairs:  Liming Liu, ABB
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**Location:** Room 214D  
**Date:** March 8, 2018 8:30 - 11:20  
**Session Chairs:** Martin Ordonez, *University of British Columbia*  
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Session Chairs: Raghav Khanna, University of Toledo
Sheldon Williamson, University of Ontario Institute of Technology

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Location: Room 217B
March 8, 2018 8:30 - 11:20
Session Chairs: Katherine Kim, Ulsan National Institute of Science and Technology
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Location: Room 217C
March 8, 2018 8:30 - 11:20
Session Chairs: Serkan Dusmez, Texas Instruments, Inc.
Yongheng Yang, Aalborg University

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Session Chairs: Mike Seeman, ETA power
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Session Chairs: Xin Zhang, IBM
Robert Pilawa, University of California, Berkeley

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Leon M. Tolbert, University of Tennessee, United States
Daniel J. Costinett, University of Tennessee, United States
Fred Wang, University of Tennessee, United States
Benjamin J. Blalock, University of Tennessee, United States

A High-Voltage-Gain DC-DC Converter for Powering a Multi-Mode Monopropellant-Electrospray Propulsion System in Satellites

Bhanu Prashant Baddipadiga, Missouri University of Science and Technology, United States
Scott Strathman, Missouri University of Science and Technology, United States
Mehdi Ferdowsi, Missouri University of Science and Technology, United States
Jonathan W. Kimball, Missouri University of Science and Technology, United States

A Nonisolated Three-Level Bidirectional DC-DC Converter

Jianfei Chen, Chongqing University, China
Caisheng Wang, Wayne State University, United States
Jian Li, Chongqing University, China
Chenguang Jiang, Wayne State University, United States
Chen Duan, Wayne State University, United States

A Phase-Shift-Based Synchronous Rectification Scheme for Bi-Directional High-Step-Down CLLC Resonant Converters

Yucheng Gao, Tsinghua University, China
Kai Sun, Tsinghua University, China
Xiang Lin, Tsinghua University, China
Zhiqiang Guo, Tsinghua University, China

Session T34: Power Electronics for Utility Interface - Control
Location: Room 214B
March 8, 2018 14:00 - 17:30
Session Chairs: Yongheng Yang, Aalborg University
Majid Pahlevani, University of Calgary

Single-Loop Control of Buck Power-Pulsation Buffer for AC-DC Converter System

Yuri Panov, Delta Products Corporation, United States
Milan M. Jovanović, Delta Products Corporation, United States
Brian T. Irving, Delta Products Corporation, United States

A Hardware Decoupling Method for Series-Resonance-Based Isolated Three-Port DC/DC Converters

Panbao Wang, Harbin Institute of Technology, China
Wei Wang, Harbin Institute of Technology, China
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Laura Ramirez-Elizondo, Technische Universiteit Delft, The Netherlands
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Shehab Ahmed, Texas A&M University at Qatar, Qatar

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Fan Zhang, Ohio State University, United States
Muneer Al Sabbagh, Ohio State University, United States
Will Perdikakis, Ohio State University, United States
Gengyao Li, Ohio State University, United States
Xi Ye, Ohio State University, United States
Risha Na, Ohio State University, United States
Julia Zhang, Ohio State University, United States
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Samantha Coday, University of Illinois at Urbana-Champaign, United States
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Session T36: Opportunities and Challenges of SiC & Si Devices
Location: Room 214D
March 8, 2018 14:00 - 17:30
Session Chairs: Douglas Hopkins, North Carolina State University
Jean-Luc Schanen, Grenoble Institute of Technology

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Soumik Sen, University of Texas at Austin, United States
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Frede Blaabjerg, Aalborg University, Denmark

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Session T37: Magnetics Modeling Design & Applications
Location: Room 217A
March 8, 2018 14:00 - 17:30
Session Chairs: Rolando Burgos, Virginia Polytechnic Institute and State University
Sandeep Bala, ABB

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Steven Campbell, Oak Ridge National Laboratory, United States
Fred Wang, University of Tennessee and Oak Ridge National Laboratory, United States
Madhu Chinthavali, Oak Ridge National Laboratory, United States
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Jorge García, Universidad de Oviedo, Spain
Ramy Georgious, Universidad de Oviedo, Spain

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Florian Krismer, Eidgenössische Technische Hochschule Zürich, Switzerland
Johann W. Kolar, Eidgenössische Technische Hochschule Zürich, Switzerland

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Madasamy P. Thevar, Nanyang Technological University, Singapore
Shuyu Cao, Nanyang Technological University, Singapore
Vaisambhayana B. Sriram, Nanyang Technological University, Singapore
Anshuman Tripathi, Nanyang Technological University, Singapore
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Huai Wang, Aalborg University, Denmark
Frede Blaabjerg, Aalborg University, Denmark
Session T38: Control Application
Location: Room 217B
March 8, 2018 14:00 - 17:30
Session Chairs: Seungdeog Choi, University of Akron
Shamim Choudhury, Texas Instrument, Inc.

Efficiency Improvement of Three Port High Frequency Transformer Isolated Triple Active Bridge Converter
Ritwik Chattopadhyay, North Carolina State University, United States
Ghanshyamsinh Gohil, University of Texas at Dallas, United States
Sayan Acharya, North Carolina State University, United States
Viju Nair, North Carolina State University, United States
Subhashish Bhattacharya, North Carolina State University, United States

Coordinated Control Strategy between Large-Scale Photovoltaic Power Stations and VSC-HVDC without Communication
Yan Wang, Shandong University, China
Tianqu Hao, Shandong University, China
Feng Gao, Shandong University, China

Research on Different Balance Control Strategies for a Power Electronic Traction Transformer
Jingxi Yang, Beijing Jiaotong University, China
Jianqiang Liu, Beijing Jiaotong University, China
Jiepin Zhang, Beijing Jiaotong University, China
Nan Zhao, Beijing Jiaotong University, China
Trillion Q. Zheng, Beijing Jiaotong University, China

State-of-Health Indication Method for Li-Ion Batteries
Zhiyong Xia, University of Alabama, United States
Jaber A. Abu Qahouq, University of Alabama, United States

Virtual Resistor based Active Damping of LC Filter in Standalone Voltage Source Inverter
Anil K. Adapa, Indian Institute of Science, India
Vinod John, Indian Institute of Science, India

Analysis and Control of a Transformerless Series Injector based on Paralleled H-Bridge Converters for Measuring Impedance of Three-Phase AC Power Systems
Zeng Liu, Xi’an Jiaotong University, China
Igor Cvetkovic, Virginia Polytechnic Institute and State University, United States
Zhiyu Shen, General Electric Global Research Center, United States
Dushan Boroyevich, Virginia Polytechnic Institute and State University, United States
Rolando Burgos, Virginia Polytechnic Institute and State University, United States
Jinjun Liu, Xi’an Jiaotong University, China

Improved Zero-Crossing Distortion of a Boundary-Conduction-Mode Boost Converter with Digital Average-Current-Mode Control
Robert T. Ryan, University College Cork, Ireland
John G. Hayes, University College Cork, Ireland
Richard J. Morrison, Excelsys Technologies, Ireland
Diarmuid N. Hogan, Excelsys Technologies, Ireland
Online Condition Monitoring based Dead-Time Compensation for High Frequency SiC Voltage Source Inverter

Jacob Dyer, University of Tennessee, United States
Zheyu Zhang, University of Tennessee, United States
Fred Wang, University of Tennessee, United States
Daniel Costinett, University of Tennessee, United States
Leon M. Tolbert, University of Tennessee, United States
Benjamin J. Blalock, University of Tennessee, United States

A 150V Monolithic Synchronous Gate Driver with Built-in ZVS Detection for Half-Bridge Converters

Lin Cong, University of Texas at Dallas, United States
Hoi Lee, University of Texas at Dallas, United States

Session T39: Renewable Energy Converter Topologies
Location: Room 217C
March 8, 2018 14:00 - 17:30
Session Chairs: Jin Wang, Ohio State University
Akshay Rathore, Concordia University

High Voltage Gain Dual Active Bridge Converter with an Extended Operation Range for Renewable Energy Systems

Zhe Zhang, Technical University of Denmark, Denmark
Kevin Tomas-Manez, Technical University of Denmark, Denmark
Yudi Xiao, Technical University of Denmark, Denmark
Michael A.E. Andersen, Technical University of Denmark, Denmark

Power Plateau and Anti-Power Phenomenon of Dual Active Bridge Converter with Phase-Shift Modulation

Yudi Xiao, Fuzhou University and Danmarks Tekniske Universitet, China
Zhe Zhang, Technical University of Denmark, Denmark
Xingkui Mao, Fuzhou University, China
Kevin Tomas Manez, Technical University of Denmark, Denmark
Michael A.E. Andersen, Technical University of Denmark, Denmark

Hybrid Resonant Half-Bridge DC/DC Converter with Wide Input Voltage Range

Bumyun Kim, Pohang University of Science and Technology, South Korea
Sooa Kim, Pohang University of Science and Technology, South Korea
Dong-Young Huh, LG Innotek Co., Ltd., South Korea
Jung-Hwan Choi, LG Innotek Co., Ltd., South Korea
Minsung Kim, Pohang University of Science and Technology, South Korea

Sensorless Phase Shift Control for Phase Shifted DC-DC Converters for Eliminating DC Transients from Transformer Winding Currents

Ritwik Chattopadhyay, North Carolina State University, United States
Utkarsh Raheja, North Carolina State University, United States
Ghanshyammsinh Gohil, University of Texas at Dallas, United States
Viju Nair, North Carolina State University, United States
Subhashish Bhattacharya, North Carolina State University, United States
System-Level Lifetime-Oriented Power Sharing Control of Paralleled DC/DC Converters ..... 1890
Saeed Peyghami, Aalborg University, Denmark
Pooya Davari, Aalborg University, Denmark
Frede Blaabjerg, Aalborg University, Denmark

Capacitor Current Compensation Scheme for Flyback based Photovoltaic AC Module ..... 1896
Oscar Andrés Montes, Pohang University of Science and Technology, South Korea
Sungho Son, Pohang University of Science and Technology, South Korea
Jong-Woo Kim, Virginia Polytechnic Institute and State University, United States
Minsung Kim, Pohang University of Science and Technology, South Korea

Analysis of Switched Supercapacitor Circuit for Varying Energy Harvesting Source Conditions ...................................................................................................................... 1902
David Newell, National University of Ireland Galway, Ireland
Maeve Duffy, National University of Ireland Galway, Ireland

Bumpless Transfer of Non-Inverting Buck Boost Converter among Multiple Working Modes ........................................................................................................................... 1909
Jianjun Ma, Shanghai Jiao Tong University, China
Miao Zhu, Shanghai Jiao Tong University, China
Xiuyi Li, Shanghai Jiao Tong University, China
Xu Cai, Shanghai Jiao Tong University, China

Current-Fed Isolated LCC-T Resonant Converter with ZVS and Improved Transformer Utilization ............................................................................................................... 1915
Venkata R. Vakacharla, Concordia University, Canada
Akshay Kumar Rathore, Concordia University, Canada
Rajesh Kumar, Malviya National Institute of Technology, India

Session T40: Industrial Applications
Location: Room 217D
March 8, 2018 14:00 - 17:30
Session Chairs: Jim Moss, Texas Instruments, Inc.
Lanhua Zhang, Texas Instruments, Inc.

IC for Online EIS in Automotive Batteries and Hybrid Architecture for High-Current Perturbation in Low-Impedance Cells ....................................................................................... 1922
Z. Gong, University of Toronto, Canada
Z. Liu, University of Toronto, Canada
Y. Wang, University of Toronto, Canada
K. Gupta, University of Toronto, Canada
C. da Silva, University of Toronto, Canada
T. Liu, Datang NXP Semiconductor, China
Z.H. Zheng, Datang NXP Semiconductors, China
W.P. Zhang, Datang NXP Semiconductors, China
J.P.M. van Lammeren, NXP Semiconductors, The Netherlands
H.J. Bergveld, NXP Semiconductors, The Netherlands
C.H. Amon, University of Toronto, Canada
O. Trescases, University of Toronto, Canada
An Online Battery Impedance Spectrum Measurement Method with Increased Frequency Resolution
Zhiyong Xia, University of Alabama, United States
Jaber A. Abu Qahouq, University of Alabama, United States

Design and Implementation of a Distributed Control Structure for Modular Multilevel Matrix Converter
Jian Liu, Zhejiang University, China
Wenxi Yao, Zhejiang University, China
Zhengyu Lu, Zhejiang University, China
Jiankai Ma, Newcastle University, United Kingdom

A Non-Isolated Asynchronous Low Power High Voltage Boost Converter for Discontinuous Conduction Mode and Portable Applications
Frank Vanselow, Fraunhofer EMFT, Germany
Bernadette Kinzel, Fraunhofer EMFT, Germany
Linus Maurer, Universität der Bundeswehr, Germany
Erkan Isa, Fraunhofer EMFT, Germany

A Novel Bidirectional Three-Phase AC-DC/DC-AC Converter for PMSM Virtual Machine System with Common DC Bus
Arvind H. Kadam, University of Ontario Institute of Technology, Canada
Rishi Menon, University of Ontario Institute of Technology, Canada
Sheldon S. Williamson, University of Ontario Institute of Technology, Canada

A Series-AC-Link ISOP AC-AC Converter with Two Power Cells
Ehsan Afshari, Northeastern University, United States
Mahshid Amirabadi, Northeastern University, United States

Analysis and Design Method for Parallel Quasi Resonant Inverter in Induction Heating Applications
Isaac Nam, GE Appliances, a Haier Company, United States

SiC Solid State Circuit Breaker with an Adjustable Current-Time Tripping Profile
Yanjun Feng, Illinois Institute of Technology, United States
Yuanfeng Zhou, Illinois Institute of Technology, United States
Z. John Shen, Illinois Institute of Technology, United States

Design of a High Power MEMS Relay with Zero Voltage Switching and Isolated Power and Signal Transfer
Yan Zhang, Queen's University and Xi'an Jiaotong University, Canada
Wenbo Liu, Queen's University, Canada
Lei Kou, Queen's University, Canada
Yan-Fei Liu, Queen's University, Canada
Chris Keimel, Menlo Micro, Inc., United States
Session D01: AC-DC Converters
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Davide Giacomini, Infineon Technologies
John Lam, York University

Wideband Small-Signal Input dq Admittance Modeling of Six-Pulse Diode Rectifiers 1981
Chushan Li, Zhejiang University, China
Jintao Lei, Zhejiang University, China
Qingxin Guan, Huazhong University of Science and Technology, China
Yu Zhang, Huazhong University of Science and Technology, China
Shuai Wang, Ryerson University, Canada
David Xu, Ryerson University, Canada

Implementation and Performance Evaluation of 100-kHz, Soft-Switched Bidirectional PFC/Inverter with Silicon MOSFETs 1989
Brian T. Irving, Delta Products Corporation, United States
Yungtaek Jang, Delta Products Corporation, United States
Milan M. Jovanović, Delta Products Corporation, United States

Duty Compensated Reduced Harmonic Control for a Single-Phase H-Bridge PFC Converter 1996
Arun Sankar U, University of Maryland, College Park, United States
Ayan Mallik, University of Maryland, College Park, United States
Alireza Khaligh, University of Maryland, College Park, United States

A Mathematical Guideline for Designing an AC-DC LLC Converter with PFC 2001
Yajie Qiu, Queen's University and GaN Systems Inc., Canada
Wenbo Liu, Queen's University, Canada
Yan-Fei Liu, Queen's University, Canada
Paresh C. Sen, Queen's University, Canada

Optimum Harmonics Injection to Minimize Bus Capacitance of CRM Boost PFC Converters Meeting EN61000-3-2 Class D Limits 2009
Zhehui Guo, Nanjing University of Aeronautics and Astronautics, China
Xiaoyong Ren, Nanjing University of Aeronautics and Astronautics, China
Yu Wu, Nanjing University of Aeronautics and Astronautics, China
Lei Bai, Nanjing University of Aeronautics and Astronautics, China
Zhiliang Zhang, Nanjing University of Aeronautics and Astronautics, China
Qianhong Chen, Nanjing University of Aeronautics and Astronautics, China

Three-Phase Single-Stage Three-Level AC/DC Converter with a Wide Output Voltage Control Range 2015
Eun-Soo Kim, Jeonju University, South Korea
Yechang Heo, Jeonju University, South Korea
Takongmo Marius, Jeonju University, South Korea
Jicheol Lee, Jeonju University, South Korea
Performance Evaluation of a Single-Phase Three-Port Boost-Rectifier-Based PFC Converter with Stacked/Sigma Configuration for Higher Voltage Step-up Application 2021
Hongfei Wu, Nanjing University of Aeronautics and Astronautics, China
Meng Han, Nanjing University of Aeronautics and Astronautics, China
Yihang Jia, Nanjing University of Aeronautics and Astronautics, China
Yan Xing, Nanjing University of Aeronautics and Astronautics, China

A High Frequency Power Factor Correction Converter with Soft Switching 2027
Alex J. Hanson, Massachusetts Institute of Technology, United States
David J. Perreault, Massachusetts Institute of Technology, United States

A Single-Phase Single-Stage AC-DC Stacked Flyback Converter with Active Clamp ZVS 2035
Yuntong Li, Western University, Canada
Gerry Moschopoulos, Western University, Canada

A Simple ZVT Auxiliary Circuit for Full-Bridge based Bridgeless Single-Phase PFC with Hybrid PWM Modulation Scheme 2042
Ziwei Yu, Arizona State University, United States
Yinglai Xia, Texas Instruments, Inc., United States
Raja Ayyanar, Arizona State University, United States

Optimized Hybrid PWM Scheme for Mitigating Zero-Crossing Distortion in Totem-Pole Bridgeless PFC 2048
John Wing-to Fan, City University of Hong Kong, Hong Kong
Ryan Shun-cheug Yeung, City University of Hong Kong, Hong Kong
Henry Shu-Hung Chung, City University of Hong Kong, Hong Kong

Primary-Side Feedback Control IC Design for Flyback Converter with Energy Saving Burst Mode 2054
Chun-Yu Huang, National Cheng Kung University, Taiwan
Tsorng-Juu Liang, National Cheng Kung University, Taiwan
Kai-Hui Chen, National Cheng Kung University, Taiwan
Cheng-Yuan Li, National Cheng Kung University, Taiwan

Single Phase Universal Input PFC Converter Operating at HF 2062
Juan A. Santiago-Gonzalez, Massachusetts Institute of Technology, United States
David M. Otten, Massachusetts Institute of Technology, United States
Seungbum Lim, Massachusetts Institute of Technology, United States
Khurram K. Afridi, University of Colorado Boulder, United States
David J. Perreault, Massachusetts Institute of Technology, United States

Line Power Extension Method for Capacitor Reduction for AC-DC Application 2070
Yang Chen, Queen's University, Canada
Hongliang Wang, Queen's University, Canada
Yan-Fei Liu, Queen's University, Canada
Sucheng Liu, Anhui University of Technology, China
Improved Analysis, Design and Control for Interleaved Dual-Phase ZVS GaN-Based Totem-Pole PFC Rectifier with Coupled Inductor ................................................................. 2077
Qingyun Huang, University of Texas at Austin, United States
Qingxuan Ma, University of Texas at Austin, United States
Ruiyang Yu, University of Texas at Austin, United States
Tianxiang Chen, University of Texas at Austin, United States
Alex Q. Huang, University of Texas at Austin, United States
Zhuoran Liu, Chinese Academy of Sciences, China

Third Harmonic Compensation in Bridgeless Current Sensorless PFC .................................. 2084
Felipe Lopez, Universidad de Cantabria, Spain
Francisco J. Azcondo, Universidad de Cantabria, Spain
Luca Corradini, Università di Padova, Italy
Paula Lamo, Universidad de Cantabria, Spain
Alberto Pigazo, Universidad de Cantabria, Spain

Session D02: Miscellaneous Topics in DC-DC Converters I
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Chenhao Nan, Google Inc.
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Session D04: Power Electronics for Utility Interface I
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Majid Pahlevani, University of Calgary
Ali Khajehoddin, University of Alberta

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Fabiano Salvadori, Universidade Federal do Paraíba, Brazil
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Yuanbin He, Hangzhou Dianzi University, China
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Zeng Liu, Xi'an Jiaotong University, China
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Session D05: Power Electronics for Utility Interface II
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Alireza Bakhshai, Queen's University
Xiong Li, Texas Instrument, Inc.

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Session D06: Controls & Diagnostics of Inverters & Drives
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Ali Bazzi, University of Connecticut
Rakib Islam, Nexteer Automotive

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Session D07: Inverter Topologies
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Ali Khajehoddin, University of Alberta
Mahshid Amirabadi, Northeastern University

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An EMI-Less Full-Bridge Inverter for High Speed SiC Switching Devices
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Location: Hemisphere Ballroom C1 & C2
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Session Chairs: Edward Herbert, Power Sources Manufacturers Association
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March 8, 2018 11:30 - 14:00
Session Chairs: Hui Li, Florida State University
Rostan Rodrigues, ABB

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Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Dong Cao, North Dakota State University
Christina Dimarino, Virginia Polytechnic Institute and State University

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Session D11: Power Module Packaging, Thermal & Application
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: John Vigars, Allegro Microsystems
Yuxiang Shi, ABB

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Location: Hemisphere Ballroom C1 & C2  
March 8, 2018 11:30 - 14:00  
Session Chairs: Marco Meola, Integrated Device Technology  
Yu Du, ABB

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Session D13: Modeling and Simulation of Power Converters
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Babak Parkhideh, University of North Carolina at Charlotte
Hui Li, Florida State University

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Xuanlyu Wu, Northwestern Polytechnical University, China
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State-Space Modelling and Design of a 10MHz 180W Class E DC/DC Converter using WBG Devices
Samer Aldhaher, Imperial College London, United Kingdom
Paul D. Mitcheson, Imperial College London, United Kingdom

An Improved Robust Adaptive Parameter Identifier for DC-DC Converters using H-Infinity Design
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Jason Poon, University of California, Berkeley, United States
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Ethan Hotchkiss, University of Connecticut, United States
Ali Bazzi, University of Connecticut, United States

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Novel Hardware-in-the-Loop Simulation (HILS) Technology for Virtual Testing of a Power Supply
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Hiroshi Nakao, Fujitsu Laboratories Ltd., Japan
Yoshiyasu Nakashima, Fujitsu Laboratories Ltd., Japan

Performance Analysis of Synchronization Algorithms for Grid-Connected Power Converters under Sub and Inter-Harmonics Distortion
Jean M.L. Fonseca, Universidade Federal do Ceará, Brazil
Samuel S. Queiroz, Universidade Federal do Ceará, Brazil
Siomara R. Lima, Federal Institute of Education, Science and Technology of Ceará, Brazil
Welton da Silva Lima, Universidade Federal do Ceará, Brazil
Rosana G. Almeida, Universidade Federal do Ceará, Brazil
Francisco Kleber A. Lima, Universidade Federal do Ceará, Brazil
Carlos Gustavo C. Branco, Universidade Federal do Ceará, Brazil

Design and Analysis of a New GaN-Based AC/DC Topology for Battery Charging Application
Akrem M. Elrajoubi, University of Arkansas, United States
Kenny George, University of Arkansas, United States
Simon S. Ang, University of Arkansas, United States

Session D14: Control I
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Martin Ordonez, University of British Columbia
Fang Luo, University of Arkansas

A Concurrent Design Methodology for Grid-Current Feedback Active Damping for LCL-Based Grid-Tied Voltage-Source Converter
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Jiuchun Jiang, Beijing Jiaotong University, China
Olorunfemi Ojo, Tennessee Technological University, United States
Josiah Haruna, Tennessee Technological University, United States

Iterative Learning Controller for Flyback Inverter: A Hybrid Learning Scheme
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Byeongcheol Han, Pohang University of Science and Technology, South Korea
Sungho Son, Pohang University of Science and Technology, South Korea
Sooa Kim, Pohang University of Science and Technology, South Korea
Jun-Seok Kim, Pohang University of Science and Technology, South Korea
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A Sampling Scheme for Three-Phase High Switching Frequency and Speed Converter
Bo Liu, University of Tennessee, United States
Ren Ren, University of Tennessee, United States
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Super-High Bandwidth Secondary Control of AC Microgrids
Tomislav Dragičević, Aalborg University, Denmark
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Session D15: Control II
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Martin Ordonez, University of British Columbia

Real-Time Calculation Method for Single-Phase Multilevel Converters based on Phase-Shifted Carrier Pulsewidth Modulation
Junpeng Ma, Southwest Jiaotong University, China
Xiongfei Wang, Aalborg University, Denmark
Frede Blaabjerg, Aalborg University, Denmark
Wensheng Song, Southwest Jiaotong University, China

A Hybrid Communication Topology for Modular Multilevel Converter
Hao Tu, North Carolina State University, United States
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Coil Misalignment Compensation Algorithm for Single-Stage Inductive Wireless Power Transfer System using Model-Based Approach
Mina Kim, Ulsan National Institute of Science and Technology, South Korea
Hwa-Pyeong Park, Ulsan National Institute of Science and Technology, South Korea
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Output Voltage Regulation of IPOS Modular Dual Active Bridge DC/DC Converters using Sliding Mode Control
Sangmin Lee, Yeungnam University, South Korea
Yoon-Cheul Jeung, Yeungnam University, South Korea
Dong-Choon Lee, Yeungnam University, South Korea

A Novel Bidirectional Current Estimator for Digital Controlled DC-DC Converters
Rajat Channappanavar, Indian Institute of Technology Kanpur, India
Santanu Mishra, Indian Institute of Technology Kanpur, India

Active Thermal Cycle Reduction of Power Modules via Gate Resistance Manipulation
Christoph H. van der Broeck, Rheinisch-Westfälische Technische Hochschule Aachen, Germany
Lucas A. Ruppert, Rheinisch-Westfälische Technische Hochschule Aachen, Germany
Robert D. Lorenz, University of Wisconsin-Madison, United States
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Location: Hemisphere Ballroom C1 & C2  
March 8, 2018 11:30 - 14:00  
Session Chairs: Brian Zahnstecher, PowerRox  
Sheldon Williamson, University of Ontario Institute of Technology  

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Session Chairs:  Jason Pries, Oak Ridge National Laboratory
Sara Ahmed, University of Texas at San Antonio

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A New Dynamic PV Firming Control Algorithm using Grid-Tied Three-Port Micro-Converter
Mahmood Alharbi, University of Central Florida, United States
Anirudh Pise, University of Central Florida, United States
Hu Haibing, University of Central Florida, United States
Issa Batarseh, University of Central Florida, United States

A Method for FRT Capacity Enhancement of DFIG based Wind Farm using Saturated Core Fault Current Limiter
Jiaxin Yuan, Wuhan University, China
Zehua Huang, Wuhan University, China
Pengcheng Gan, Wuhan University, China
Feiran Xiao, Wuhan University, China
Xin Yan, Wuhan University, China

Single-Phase Dual-Mode Four-Switch Buck-Boost Transformerless PV Inverter with Inherent Leakage Current Elimination
Qingyun Huang, University of Texas at Austin, United States
Qingxuan Ma, University of Texas at Austin, United States
Alex Q. Huang, University of Texas at Austin, United States

Sensitivity Analysis of the Wind Farm High Frequency Resonance under Transmission Cable Resistance Variation
Yipeng Song, Aalborg University, Denmark
Esmaeil Ebrahimzadeh, Aalborg University, Denmark
Frede Blaabjerg, Aalborg University, Denmark

A Synergistic Modulation Method for Hybrid Cascaded Photovoltaic Inverter with Supercapacitor
Lan Xiong, Hubei University of Technology, China
Huimei Liu, Hubei University of Technology, China
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Active Gate Driver for SiC MOSFET based PV Inverter with Enhanced Operating Range
Sayan Acharya, North Carolina State University, United States
Xu She, GE Global Research, United States
Fengfeng Tao, GE Global Research, United States
Tony Frangieh, GE Global Research, United States
Rajib Datta, GE Global Research, United States

Comparative Evaluation of Modulation Strategies for a Single-Phase PV Micro-Inverter with High-Frequency Transformer
Jonatas Rodrigo Kinas, Universidade Federal de Campina Grande, Brazil
Diego A. Acevedo-Bueno, Universidade Federal de Campina Grande, Brazil
Gabriel Sales Lins Rodrigues, Universidade Federal de Campina Grande, Brazil
Montê Alves Vitorino, Universidade Federal de Campina Grande, Brazil
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Session Chairs: Yingying Kuai, Caterpillar Inc.

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Stability Improvement of Microgrids using a Novel Reduced UPFC Structure via Nonlinear Optimal Control
Hossein Saberi, Louisiana State University, United States
Shahab Mehraeen, Louisiana State University, United States
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Stability and Improvement of LCL-Filtered Inverters using only Grid Current Feedback Active Damping for Weak Grid Applications
Jinming Xu, Nanjing University of Aeronautics and Astronautics, China
Binfeng Zhang, Nanjing University of Aeronautics and Astronautics, China
Shaojun Xie, Nanjing University of Aeronautics and Astronautics, China

An Improved Discontinuous Space Vector Modulation Scheme for the Three-Phase Impedance Source Inverters
Ahmed Abdelhakim, Università di Padova, Italy
Frede Blaabjerg, Aalborg University, Denmark
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A Phase Feedforward based Virtual Synchronous Generator Control Scheme
Mingxuan Li, Xi’an Jiaotong University, China
Yue Wang, Xi’an Jiaotong University, China
Hui Zhou, Xi’an Jiaotong University, China
Weihao Hu, Aalborg University, Denmark

An Improved Hierarchy and Autonomous Control for DC Microgrid based on both Model Predictive and Distributed Droop Control
Shunlong Xiao, Texas A&M University, United States
Robert S. Balog, Texas A&M University, United States

Two-Degree-of-Freedom Admittance-Type Droop Control for Plug-and-Play DC Microgrid
Zheming Jin, Aalborg University, Denmark
Josep M. Guerrero, Aalborg University, Denmark

A Complete Small Signal Modelling and Adaptive Stability Analysis of Nonlinear Droop-Controlled Microgrids
Hassan Abdelgabir, University of Akron, United States
Ali R. Boynezi, University of Akron, United States
Ali Elrayyah, Qatar Environment and Energy Research Institute, Qatar
Yilmaz Sozer, University of Akron, United States

Session D19: Renewable Energy Systems
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Seungdeog Choi, University of Akron
Ruoyu Hou, GaN Systems Inc.

Modeling and Control of a Dual Cell Link for Battery-Balancing Auxiliary Power Modules
Weizhong Wang, Columbia University, United States
Matthias Preindl, Columbia University, United States
Diagnosis of Inter-Turn Short Circuit and Rotor Eccentricity for PMSG used in Wave Energy Conversion
Hongwei Fang, Tianjin University, China
Yuzhu Feng, Tianjin University, China
Runan Song, Tianjin University, China
Ru Jiang, China North Vehicle Research Institute, China

Circuit Parameters Extraction Algorithm for a Lithium-Ion Battery Charging System Incorporated with Electrochemical Impedance Spectroscopy
S M Rakiul Islam, University of Connecticut, United States
Sung-Yeul Park, University of Connecticut, United States
Balakumar Balasingam, University of Windsor, Canada

An Efficient Voltage Equalization Algorithm for Low-Power Supercapacitor Applications
Yu Song, Central South University, China
Weirong Liu, Central South University, China
Hongtao Liao, Central South University, China
Heng Li, Central South University, China
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Jun Peng, Central South University, China
Zhiwu Huang, Central South University, China

Outlier Mining-Based Fault Diagnosis for Multicell Lithium-Ion Batteries using a Low-Priced Microcontroller
Taesic Kim, Texas A&M University-Kingsville, United States
Amit Adhikaree, Texas A&M University-Kingsville, United States
Rajendra Pandey, Texas A&M University-Kingsville, United States
Daewook Kang, Korea Electrotechnology Research Institute, South Korea
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Chang-Yeol Oh, Korea Electrotechnology Research Institute, South Korea
Juwon Back, Korea Electrotechnology Research Institute, South Korea

Low-Frequency Input Ripple Current Compensation in Single-Phase Fuel Cell Power Systems
Soumya Sinha, University of Houston, United States
Wajiha Shiren, University of Houston, United States
Sumit Pramanick, University of Houston, United States

A Hybrid Flyback LED Driver with Utility Grid and Renewable Energy Interface
Awab Ali, University of Akron, United States
Jonathan Lange, ESIEE Amiens, France
Ali Elrayyah, Qatar Environment and Energy Research Institute, Qatar
Yilmaz Sozer, University of Akron, United States
J.A. De Abreu-Garcia, University of Akron, United States
Augustin Mpanda, ESIEE Amiens, France
Frozen Leg Operation of a Three-Phase Dual Active Bridge DC/DC Converter at Light Loads
Saeid Haghbin, Chalmers University of Technology, Sweden
Frede Blaabjerg, Aalborg University, Denmark
Farzad Yazdani, Sharif University of Technology, Iran
Amir Sajjad Bahman, Aalborg University, Denmark

Adaptive Detection of DC Arc Faults based on Hurst Exponents and Current Envelope
Yousef Abdullah, Ohio State University, United States
Boxue Hu, Ohio State University, United States
Zhuo Wei, Ohio State University, United States
Jin Wang, Ohio State University, United States
Amin Emrani, Ford Motor Company, United States

SiC based On-Board EV Power-Hub with High-Efficiency DC Transfer Mode through AC Port for Vehicle-to-Vehicle Charging
Miad Nasr, University of Toronto, Canada
Kshitij Gupta, University of Toronto, Canada
Carlos Da Silva, University of Toronto, Canada
Cristina H. Amon, University of Toronto, Canada
Olivier Trescases, University of Toronto, Canada

Three-Phase On-Board Charger with Three Modules of Single-Stage Interleaved Soft-Switching AC-DC Converter
Byeongwoo Kim, Seoul National University of Science and Technology, South Korea
Hyojun Kim, Seoul National University of Science and Technology, South Korea
Sewan Choi, Seoul National University of Science and Technology, South Korea

An Improved Minimum-cost Charging Schedule for Large-Scale Penetration of Electric Vehicles
Wenping Zhang, University of New Brunswick, Canada
Caleb Dreise, University of New Brunswick, Canada
Riming Shao, University of New Brunswick, Canada
Liuchen Chang, University of New Brunswick, Canada

Accurate Voltage Equalization of Supercapacitors with Online Identification Model
Xiaoyong Zhang, Central South University, China
Yun Jiao, Central South University, China
Hongtao Liao, Central South University, China
Heng Li, Central South University, China
Yanhu Zhou, Central South University, China
Zhiwu Huang, Central South University, China

Design and Optimization of a Dielectric-Gas-Based Single-Phase Electrostatic Motor
Nannan Zhao, Xi’an University of Architecture and Technology, China
Fei Lu, San Diego State University, United States
Hua Zhang, San Diego State University, United States
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Chris Mi, San Diego State University, United States

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Location: Hemisphere Ballroom C1 & C2
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Session Chairs: Jim Spangler, Spangler Prototype Inc.

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Peter Lindahl, Massachusetts Institute of Technology, United States
Arijit Banerjee, University of Illinois at Urbana-Champaign, United States
Steven B. Leeb, Massachusetts Institute of Technology, United States

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Leila Parsa, University of California, Santa Cruz, United States

A High Power Factor Two-Channel PSR Flyback LED Driver with Controllable Output Current Sharing based on Open-Looped SSPR Control
Chunqiao Wu, Hangzhou Dianzi University, China
Hanjing Dong, Hangzhou Dianzi University, China
Xiaogao Xie, Hangzhou Dianzi University, China

Session D22: Industrial and Grid Applications
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Yogesh Ramadass, Texas Instruments, Inc.
Geng Niu, Karma Automotive

DC Distributed Systems Stabilization and Performance Improvement using Small-Signal Voltage Injection
Ahmed Aldhaheri, George Washington University, United States
Amir Etemadi, George Washington University, United States

Load Adaptive Modulation Method for All-Metal Induction Heating Application
Hwa-Pyeong Park, Ulsan National Institute of Science and Technology, South Korea
Mina Kim, Ulsan National Institute of Science and Technology, South Korea
Jee-Hoon Jung, Ulsan National Institute of Science and Technology, South Korea
Ho-Sung Kim, Korea Electrotechnology Research Institute, South Korea

Research on Common Mode Voltage Suppression of Three-Phase Four-Bridge Matrix Converter Considering Unbalance Inductance
Songtao Huang, Xiangtan University, China
Yougui Guo, Xiangtan University, China
Lie Xu, Tsinghua University, China
Yu Guo, University of Illinois at Chicago, China
YongDong Li, Tsinghua University, China
Wenlang Deng, Xiangtan University, China

Modified Bi-Directional Z-Source Breaker with Reclosing and Rebreaking Capabilities
Swati G. Savaliya, Indian Institute of Technology Bombay, India
Baylon G. Fernandes, Indian Institute of Technology Bombay, India

High-Performance and Cost-Effective Single-Ended Induction Heating Appliance using New MOS-Controlled Thyristors
H. Sarnago, Universidad de Zaragoza, Spain
O. Lucía, Universidad de Zaragoza, Spain
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A Novel Platform for Power Train Model of Electric Cars with Experimental Validation using Real-Time Hardware in-the-Loop (HIL): A Case Study of GM Chevrolet Volt 2nd Generation
Khalil Algarny, University of Ontario Institute of Technology, Canada
Ahmed S. Abdelrahman, University of Ontario Institute of Technology, Canada
Mohamed Youssef, University of Ontario Institute of Technology, Canada

A New Control Method for Series Resonant Inverter with Inherently Phase-Locked Coil Current with Induction Cookware Applications
Jong-Woo Kim, Virginia Polytechnic Institute and State University, United States
Moonhyun Lee, Virginia Polytechnic Institute and State University, United States
Jih-Sheng Lai, Virginia Polytechnic Institute and State University, United States

Lifetime-Based Power Routing of Smart Transformer with CHB and DAB Converters
Vivek Raveendran, Christian-Albrechts-Universität zu Kiel, Germany
Markus Andresen, Christian-Albrechts-Universität zu Kiel, Germany
Marco Liserre, Christian-Albrechts-Universität zu Kiel, Germany
Giampaolo Buticchi, University of Nottingham Ningbo China, China

Soft-Transient Modulation Strategy for Improved Efficiency and EMC Performance of PFC Converters Applied to Flexible Induction Heating Appliances
Mario Pérez-Tarragona, Universidad de Zaragoza, Spain
Héctor Sarnago, Universidad de Zaragoza, Spain
Óscar Lucía, Universidad de Zaragoza, Spain
José M. Burdío, Universidad de Zaragoza, Spain

Single-Phase to Two-Phase Power Converter
Bruna S. Gehrke, Universidade Federal de Campina Grande, Brazil
Cursino B. Jacobina, Universidade Federal de Campina Grande, Brazil
Nayara B. de Freitas, Universidade Federal de Campina Grande, Brazil
Antonio de P.D. Queiroz, Universidade Federal de Campina Grande and Federal Institute of Paraiba, Brazil

Power Rectifier based on Open-End Converter with Floating Capacitor under Non-Sinusoidal and Unbalanced Input
Alan S. Felinto, Universidade Federal de Campina Grande, Brazil
Cursino B. Jacobina, Universidade Federal de Campina Grande, Brazil
João P.R.A. Mélio, Universidade Federal de Campina Grande, Brazil
Gregory A.A. Carlos, Federal Institute of Alagoas, Brazil
Ivan da Silva, Universidade Federal de Campina Grande, Brazil

Doubly-Fed Machine with Wireless Power Transfer Ability
Jun Lee, Seoul National University, South Korea
Jung-Ik Ha, Seoul National University, South Korea
Session D23: Switchmode Power Supply & Battery Applications
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Sombuddha Chakraboty, Texas Instruments, Inc.

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