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TECHNICAL PAPERS

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	1
<i>Xiaolong Yue, Aalborg University, Denmark</i>	
<i>Xiongfei Wang, Aalborg University, Denmark</i>	
<i>Frede Blaabjerg, Aalborg University, Denmark</i>	
<i>Dushan Boroyevich, Virginia Polytechnic Institute and State University, United States</i>	
<i>Rolando Burgos, Virginia Polytechnic Institute and State University, United States</i>	
<i>Fred Lee, Virginia Polytechnic Institute and State University, United States</i>	
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	8
<i>Nidhi Haryani, Virginia Polytechnic Institute and State University, United States</i>	
<i>Bingyao Sun, Virginia Polytechnic Institute and State University, United States</i>	
<i>Rolando Burgos, Virginia Polytechnic Institute and State University, United States</i>	
Critical-Mode-Based Soft-Switching Modulation for Three-Phase Rectifiers	16
<i>Zhengrong Huang, Virginia Polytechnic Institute and State University, United States</i>	
<i>Zhengyang Liu, Virginia Polytechnic Institute and State University, United States</i>	
<i>Fred C. Lee, Virginia Polytechnic Institute and State University, United States</i>	
<i>Qiang Li, Virginia Polytechnic Institute and State University, United States</i>	
<i>Furong Xiao, Beijing Institute of Technology, China</i>	
An Adaptive Selection of Intermediate Bus Voltage to Optimize Efficiency in a Universal Input Three-Phase Power Factor Correction Circuit	24
<i>Hamidreza Hafezinasab, University of British Columbia, Canada</i>	
<i>Wilson Eberle, University of British Columbia, Canada</i>	
<i>Deepak Gautam, Delta-Q Technologies Corp., Canada</i>	
<i>Chris Botting, Delta-Q Technologies Corp., Canada</i>	
Analysis of One Phase Loss Operation of Three-Phase Isolated Buck Matrix-Type Rectifier with a Boost Switch	30
<i>Jahangir Afsharian, Ryerson University, Canada</i>	
<i>Dewei Xu, Ryerson University, Canada</i>	
<i>Bin Wu, Ryerson University, Canada</i>	
<i>Bing Gong, Murata Power Solution, Canada</i>	
<i>Zhijia Yang, Murata Power Solution, Canada</i>	

A Four-Switch Three-Phase AC-DC Converter with Galvanic Isolation	37
Javad Khodabakhsh, <i>Western University, Canada</i>	
Gerry Moschopoulos, <i>Western University, Canada</i>	

A New Three-Phase Soft-Switched Bridgeless AC/DC Step-Up Converter with Current Fed Voltage Doubler Modules for DC Grid in Wind Systems	44
Mehdi Abbasi, <i>York University, Canada</i>	
John Lam, <i>York University, Canada</i>	

Modular Three-Phase AC-DC LED Driver based on Summing the Light Output of Each Phase	52
Ignacio Castro, <i>Universidad de Oviedo, Spain</i>	
Manuel Arias, <i>Universidad de Oviedo, Spain</i>	
Diego G. Lamar, <i>Universidad de Oviedo, Spain</i>	
Marta M. Hernando, <i>Universidad de Oviedo, Spain</i>	
Javier Sebastian, <i>Universidad de Oviedo, Spain</i>	

A New, Two-Switch, Isolated, Three-Phase AC-DC Converter	60
Yungtaek Jang, <i>Delta Products Corporation, United States</i>	
Milan M. Jovanović, <i>Delta Products Corporation, United States</i>	
Misha Kumar, <i>Delta Products Corporation, United States</i>	
Kurtis High, <i>Delta Products Corporation, United States</i>	
Yihua Chang, <i>Delta Electronics, Inc., Taiwan</i>	
Yiwei Lin, <i>Delta Electronics, Inc., Taiwan</i>	
Chun-Liang Liu, <i>Delta Electronics, Inc., Taiwan</i>	

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.*

A Multi-Level, Multi-Phase Buck Converter with Shared Flying Capacitor for VRM Applications	68
Gianluca Roberts, <i>University of Toronto, Canada</i>	
Nenad Vukadinović, <i>University of Toronto, Canada</i>	
Aleksandar Prodić, <i>University of Toronto, Canada</i>	

An Ultra Efficient Composite Modular Power Delivery Architecture for Solar Farm and Data Center	73
Dong Cao, <i>North Dakota State University, United States</i>	
Xiaofeng Lyu, <i>North Dakota State University, United States</i>	
Yanchao Li, <i>North Dakota State University, United States</i>	
Ze Ni, <i>North Dakota State University, United States</i>	
Jalen Johnson, <i>North Dakota State University, United States</i>	
Shuai Jiang, <i>Google Inc., United States</i>	
Chenhao Nan, <i>Google Inc., United States</i>	

Switched Tank Converters	81
Shuai Jiang, <i>Google Inc., United States</i>	
Chenhao Nan, <i>Google Inc., United States</i>	
Xin Li, <i>Google Inc., United States</i>	
Chee Chung, <i>Google Inc., United States</i>	
Mobashar Yazdani, <i>Google Inc., United States</i>	
Switched Tank Converter based Partial Power Architecture for Voltage Regulation Applications	91
Yiou He, <i>Massachusetts Institute of Technology, United States</i>	
Shuai Jiang, <i>Google Inc., United States</i>	
Chenhao Nan, <i>Google Inc., United States</i>	
PCB Embedded Inductor for High-Frequency ZVS SEPIC Converter	98
Yi Dou, <i>Technical University of Denmark, Denmark</i>	
Ziwei Ouyang, <i>Technical University of Denmark, Denmark</i>	
Prasanth Thummala, <i>Technical University of Denmark, Denmark</i>	
Michael A.E. Andersen, <i>Technical University of Denmark, Denmark</i>	
Design and Evaluation of Hybrid Switched Capacitor Converters for High Voltage, High Power Density Applications	105
J. Stewart, <i>Sandia National Laboratories, United States</i>	
J. Richards, <i>Sandia National Laboratories, United States</i>	
J. Delhotal, <i>Sandia National Laboratories, United States</i>	
J. Neely, <i>Sandia National Laboratories, United States</i>	
J. Flicker, <i>Sandia National Laboratories, United States</i>	
R. Brocato, <i>Sandia National Laboratories, United States</i>	
L. Rashkin, <i>Sandia National Laboratories, United States</i>	
Control Technique for Reliable Operation of the Synchronous Series Capacitor Tapped Inductor Converter	113
Francesco Bez, <i>Università di Padova, Italy</i>	
Giovanni Bonanno, <i>Università di Padova, Italy</i>	
Luca Corradini, <i>Università di Padova, Italy</i>	
Cristian Garbossa, <i>Infineon Technologies Italia Srl, Italy</i>	
A Resonant Switched Capacitor based 4-to-1 Bus Converter Achieving 2180 W/In³ Power Density and 98.9% Peak Efficiency	121
Zichao Ye, <i>University of Illinois at Urbana-Champaign, United States</i>	
Yutian Lei, <i>University of Illinois at Urbana-Champaign, United States</i>	
Robert C.N. Pilawa-Podgurski, <i>University of Illinois at Urbana-Champaign, United States</i>	
Active Capacitor Voltage Balancing Control for Three-Level Flying Capacitor Boost Converter	127
Hung-Chi Chen, <i>National Chiao Tung University, Taiwan</i>	
Che-Yu Lu, <i>National Chiao Tung University, Taiwan</i>	
Wei-Hsiang Lien, <i>National Chiao Tung University, Taiwan</i>	

Session T03: Power Electronics for Utility Interface - Structures & Topologies

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*

50-kW 1kV DC Bus Air-Cooled Inverter with 1.7 kV SiC MOSFETs and 3D-Printed Novel Power Module Packaging Structure for Grid Applications	133
Madhu Chinthavali, <i>Oak Ridge National Laboratory, United States</i>	
Zhiqiang Wang, <i>Oak Ridge National Laboratory, United States</i>	
Steven Campbell, <i>Oak Ridge National Laboratory, United States</i>	
Tong Wu, <i>University of Tennessee, United States</i>	
Burak Ozpineci, <i>Oak Ridge National Laboratory, United States</i>	
Design and Test of the Bidirectional Solid-State Switch for an 160kV/9kA Hybrid DC Circuit Breaker	141
Tianyu Wei, <i>Tsinghua University, China</i>	
Zhanqing Yu, <i>Tsinghua University, China</i>	
Zhengyu Chen, <i>Tsinghua University, China</i>	
Xiangyu Zhang, <i>Tsinghua University, China</i>	
Weijie Wen, <i>Tsinghua University, China</i>	
Yulong Huang, <i>Tsinghua University, China</i>	
Rong Zeng, <i>Tsinghua University, China</i>	
A 10 kV DC Transformer (DCX) based on Current Fed SRC and 15 kV SiC MOSFETs	149
Qianlai Zhu, <i>North Carolina State University, United States</i>	
Li Wang, <i>North Carolina State University, United States</i>	
Liqi Zhang, <i>University of Texas at Austin, United States</i>	
Alex Q. Huang, <i>University of Texas at Austin, United States</i>	
Cascaded Quadruple Active Bridge Structures for Multilevel DC to Three-Phase AC Conversion	156
Prasanta Achanta, <i>University of Colorado Boulder, United States</i>	
Dragan Maksimović, <i>University of Colorado Boulder, United States</i>	
Brian Johnson, <i>National Renewable Energy Laboratory, United States</i>	
Single-Phase Transformerless Dual Buck-Based Grid-Connected Inverter	161
Lucas Munaretto, <i>Universidade Federal de Santa Catarina, Brazil</i>	
Marcelo L. Heldwein, <i>Universidade Federal de Santa Catarina, Brazil</i>	
Common-Ground Transformerless Inverter for Solar Photovoltaic Module	167
Saad Ul Hasan, <i>Macquarie University, Australia</i>	
Benjamin Shaffer, <i>Miami University, United States</i>	
Hassan A. Hassan, <i>Miami University, United States</i>	
Mark J. Scott, <i>Miami University, United States</i>	
Yam Siwakoti, <i>University of Technology Sydney, Australia</i>	
Graham E. Town, <i>Macquarie University, Australia</i>	

Auxiliary Power Supply for Medium-Voltage Power Electronics Systems	173
<i>Jehyuk Won, North Carolina State University, United States</i>	
<i>Gholamreza Jalali, North Carolina State University, United States</i>	
<i>Xinyu Liang, North Carolina State University, United States</i>	
<i>Chi Zhang, North Carolina State University, United States</i>	
<i>Srdjan Srdic, North Carolina State University, United States</i>	
<i>Srdjan Lukic, North Carolina State University, United States</i>	

Multi-Mode Operations for on-Line Uninterruptible Power Supply	180
<i>Jinghang Lu, Aalborg University, Denmark</i>	
<i>Mehdi Savaghebi, Aalborg University, Denmark</i>	
<i>Yajuan Guan, Aalborg University, Denmark</i>	
<i>Mingshen Li, Aalborg University, Denmark</i>	
<i>Josep Guerrero, Aalborg University, Denmark</i>	

Controller and EMI Filter Design for Modular Front-End Solid-State Transformer	188
<i>Jung-Muk Choe, Virginia Polytechnic Institute and State University, United States</i>	
<i>Chih-Shen Yeh, Virginia Polytechnic Institute and State University, United States</i>	
<i>Oscar Yu, Virginia Polytechnic Institute and State University, United States</i>	
<i>Moonhyun Lee, Virginia Polytechnic Institute and State University, United States</i>	
<i>Hao Wen, Virginia Polytechnic Institute and State University, United States</i>	
<i>Jih-Sheng Lai, Virginia Polytechnic Institute and State University, United States</i>	
<i>Lanhua Zhang, Texas Instruments, Inc., United States</i>	

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*

Effect of Asymmetric Layout of IGBT Modules on Reliability of Power Inverters in Motor Drive System	193
<i>Ui-Min Choi, Aalborg University, Denmark</i>	
<i>Ionut Vernica, Aalborg University, Denmark</i>	
<i>Frede Blaabjerg, Aalborg University, Denmark</i>	

Determining the Operating Region for Demagnetization-Free Fault Tolerant Control of Multiphase PMA-SynRM	198
<i>Md. Zakirul Islam, University of Akron, United States</i>	
<i>Akm Arafat, University of Akron, United States</i>	
<i>Seungdeog Choi, University of Akron, United States</i>	

Research on Short Circuit Operation Mechanism and Current Limiting Strategy of Single Phase Inverter	205
<i>Zirui Fu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Fanghua Zhang, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Shixian Li, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Wuji Meng, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Chunjuan Zhang, Nanjing University of Aeronautics and Astronautics, China</i>	

Study of Voltage Spikes and Temperature Rise in Power Module based Integrated Converter for 48 V 20 kW Electrically Excited Synchronous Machines	210
Junfei Tang, <i>Chalmers University of Technology, Sweden</i>	
Yujing Liu, <i>Chalmers University of Technology, Sweden</i>	
Yashovardha Rastogi, <i>Volvo Cars Corporation, Sweden</i>	
Nimananda Sharma, <i>Chalmers University of Technology, Sweden</i>	
Tanmay Shukla, <i>Segula Technologies AB, Sweden</i>	

Post-Fault Operation for Five-Phase Induction Machines under Single-Phase Open using Symmetrical Components	218
Shan He, <i>Zhejiang University, China</i>	
Jin Huang, <i>Zhejiang University, China</i>	
Min Kang, <i>Zhejiang University of Science and Technology, China</i>	

Fault-Tolerant Control Scheme for Modular Multilevel Converter based on Sorting Algorithm without Reserved Submodules	223
Seok-Min Kim, <i>Ajou University, South Korea</i>	
Kyo-Beum Lee, <i>Ajou University, South Korea</i>	
June-Seok Lee, <i>Korean Rail Research Institute, South Korea</i>	

Lifetime Benchmarking of Two DC-Link Passive Filtering Configurations in Adjustable Speed Drives	228
Haoran Wang, <i>Aalborg University, Denmark</i>	
Pooya Davari, <i>Aalborg University, Denmark</i>	
Huai Wang, <i>Aalborg University, Denmark</i>	
Dinesh Kumar, <i>Danfoss Drives A/S, Denmark</i>	
Firuz Zare, <i>University of Queensland, Australia</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

A Novel Current-Mode Actuator Driver for Enhanced Piezoelectric Reliability	234
Bernadette Kinzel, <i>Fraunhofer Research Institution for Microsystems and Solid State Technologies EMFT and University of Bundeswehr, Germany</i>	
Frank Vanselow, <i>Fraunhofer Research Institution for Microsystems and Solid State Technologies EMFT, Germany</i>	
Erkan Isa, <i>Fraunhofer Research Institution for Microsystems and Solid State Technologies EMFT, Germany</i>	
Linus Maurer, <i>Fraunhofer Research Institution for Microsystems and Solid State Technologies EMFT and University of Bundeswehr, Germany</i>	

Session T05: Power Devices Modeling

Location: Room 217A

March 6, 2018 8:30 - 12:00

Session Chairs: Jin Wang, *Ohio State University*
Sara Ahmed, *University of Texas at San Antonio*

A Modified Behavior SPICE Model for SiC BJT	238
Shiwei Liang, <i>Hunan University, China</i>	
Jun Wang, <i>Hunan University, China</i>	
Zhigao Peng, <i>Hunan University, China</i>	
Guanghai Chen, <i>Hunan University, China</i>	
Xin Yin, <i>Hunan University, China</i>	
Z. John Shen, <i>Hunan University, China</i>	
Linfeng Deng, <i>Hunan University, China</i>	

TCAD Modeling of a Lateral GaN HEMT using Empirical Data	244
Michael R. Hontz, <i>University of Toledo, United States</i>	
Rongming Chu, <i>HRL Laboratories, LLC, United States</i>	
Raghav Khanna, <i>University of Toledo, United States</i>	
A Temperature Dependent Lumped-Charge Model for Trench FS-IGBT	249
Yaoqiang Duan, <i>Huazhong University of Science and Technology, China</i>	
Yong Kang, <i>Huazhong University of Science and Technology, China</i>	
Francesco Iannuzzo, <i>Aalborg University, Denmark</i>	
Ionut Trintis, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
An Automated SPICE Modeling Procedure Utilizing Static and Dynamic Characterization of Power FETs	255
Andrew J. Sellers, <i>University of Toledo, United States</i>	
Michael R. Hontz, <i>University of Toledo, United States</i>	
Raghav Khanna, <i>University of Toledo, United States</i>	
Andrew N. Lemmon, <i>University of Alabama, United States</i>	
Ali Shahabi, <i>University of Alabama, United States</i>	
High-Accuracy Modelling of ZVS Energy Loss in Advanced Power Transistors	263
Jaume Roig, <i>ON Semiconductor, Belgium</i>	
German Gomez, <i>ON Semiconductor, Belgium</i>	
Filip Bauwens, <i>ON Semiconductor, Belgium</i>	
Basil Vlachakis, <i>ON Semiconductor, Belgium</i>	
Maria R. Rogina, <i>Universidad de Oviedo, Spain</i>	
Alberto Rodriguez, <i>Universidad de Oviedo, Spain</i>	
Diego G. Lamar, <i>Universidad de Oviedo, Spain</i>	
A Behavioral Transient Model of IGBT for Switching Cell Power Loss Estimation in Electromagnetic Transient Simulation	270
Yanming Xu, <i>University of Manitoba, Canada</i>	
Carl Ngai Man Ho, <i>University of Manitoba, Canada</i>	
Avishek Ghosh, <i>University of Manitoba, Canada</i>	
Dharshana Muthumuni, <i>Manitoba HVDC Research Centre, Canada</i>	
A Fast IGBT Model Considering the Dynamic Performance of both IGBT and Antiparallel Diode	276
Feng Zhang, <i>Xi'an Jiaotong University, China</i>	
Xu Yang, <i>Xi'an Jiaotong University, China</i>	
Wei Xue, <i>Xi'an Jiaotong University, China</i>	
Ruiliang Xie, <i>Xi'an Jiaotong University, China</i>	
Yang Li, <i>Xi'an Jiaotong University, China</i>	
Yilin Sha, <i>Xi'an Jiaotong University, China</i>	
Exploring the Behavior of Parallel Connected SiC Power MOSFETs Influenced by Performance Spread in Circuit Simulations	280
Johanna Müting, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Nick Schneider, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Thomas Ziemann, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Roger Stark, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Ulrike Grossner, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	

Analytic Model for Power MOSFET Turn-Off Switching Loss under the Effect of Significant Current Diversion at Fast Switching Events	287
Bai Nguyen, <i>IBM T. J. Watson Research Center and Washington State University, United States</i>	
Xin Zhang, <i>IBM T.J. Watson Research Center, United States</i>	
Andrew Ferencz, <i>IBM T.J. Watson Research Center, United States</i>	
Todd Takken, <i>IBM T.J. Watson Research Center, United States</i>	
Robert Senger, <i>IBM T.J. Watson Research Center, United States</i>	
Paul Coteus, <i>IBM T.J. Watson Research Center, United States</i>	

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	292
Yuqing Zhang, <i>University of Toronto, Canada</i>	
Ivan Radović, <i>University of Toronto, Canada</i>	
S.M. Ahsanuzzaman, <i>University of Toronto, Canada</i>	
Aleksandar Prodić, <i>University of Toronto, Canada</i>	
Giacomo Calabrese, <i>Texas Instruments, Inc., Germany</i>	
Giovanni Frattini, <i>Texas Instruments, Inc., Italy</i>	
Maurizio Granato, <i>Texas Instruments, Inc., Italy</i>	

A Single Mode Load Tracking Voltage Mode Controller with Near Minimum Deviation Transient Response	298
Tom Moiannou, <i>University of Toronto, Canada</i>	
Yanhui Liu, <i>University of Toronto, Canada</i>	
Aleksandar Prodic, <i>University of Toronto, Canada</i>	
Aleksandar Radic, <i>Appulse Power, Canada</i>	

Near Time Optimal Recovery in a Digitally Current Mode Controlled Buck Converter Driving a CPL	304
Rabisankar Roy, <i>Indian Institute of Technology Kharagpur, India</i>	
Santanu Kapat, <i>Indian Institute of Technology Kharagpur, India</i>	

A Digital Robust Control Scheme for Dual Half-Bridge DC-DC Converters	311
Maxime Tissières, <i>University of Applied Science of Western Switzerland, Switzerland</i>	
Iman Askarian, <i>University of Calgary, Canada</i>	
Majid Pahlevani, <i>University of Calgary, Canada</i>	
André Rotzetta, <i>University of Applied Science of Western Switzerland, Switzerland</i>	
Andy Knight, <i>University of Calgary, Canada</i>	
Ioana Preda, <i>University of Applied Science of Western Switzerland, Switzerland</i>	

$\Delta V/\Delta t$-Intervention Control Concept for Improved Transient Response in Digitally Controlled Boost Converters	316
Samuel Quenzer-Hohmuth, <i>Hochschule Reutlingen, Germany</i>	
Steffen Ritzmann, <i>Robert Bosch GmbH, Germany</i>	
Thoralf Rosahl, <i>Robert Bosch GmbH, Germany</i>	
Bernhard Wicht, <i>Leibniz University Hannover, Germany</i>	

Control of Active Component of Current in Dual Active Bridge Converter	323
Suyash Sushilkumar Shah, <i>North Carolina State University, United States</i>	
Subhashish Bhattacharya, <i>North Carolina State University, United States</i>	

Nonlinear Characteristics of DAB Converter and Linearized Control Method	331
Anping Tong, <i>Shanghai Jiao Tong University, China</i>	
Lijun Hang, <i>Hangzhou Dianzi University, China</i>	
Guojie Li, <i>Shanghai Jiao Tong University, China</i>	
Jingjie Huang, <i>Shanghai Jiao Tong University, China</i>	

New Digital Control Method for Improving Dynamic Response of Synchronous Rectified Flyback Converter with CCM and DCM Mode	338
Shen Xu, <i>Southeast University, China</i>	
Xinpeng Kou, <i>Southeast University, China</i>	
Chong Wang, <i>Southeast University, China</i>	
Qinsong Qian, <i>Southeast University, China</i>	
Weifeng Sun, <i>Southeast University, China</i>	

Distributed Battery System with Wireless Control and Power Transfer – A Concept Introduction	344
Jaber A. Abu Qahouq, <i>University of Alabama, United States</i>	
Yuan Cao, <i>University of Alabama, United States</i>	

Session T07: Inverters for PV Systems

Location: Room 217C

March 6, 2018 8:30 - 12:00

Session Chairs: Afridi Khurram, *University of Colorado Boulder*
Hadi Marlek, *Utah State University*

Zero-Voltage-Switching Single-Phase Inverter with Active Power Decoupling	348
Zhengyu Ye, <i>Zhejiang University, China</i>	
Yenan Chen, <i>Zhejiang University, China</i>	
Dehong Xu, <i>Zhejiang University, China</i>	

A Transformerless Single-Phase Symmetrical Z-Source HERIC Inverter with Reduced Leakage Currents for PV Systems	356
Kerui Li, <i>University of Hong Kong, China</i>	
Yanfeng Shen, <i>Aalborg University, Denmark</i>	
Yongheng Yang, <i>Aalborg University, Denmark</i>	
Zian Qin, <i>Technische Universiteit Delft, The Netherlands</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

Stability and Resonance Analysis and Improved Design of N-Paralleled Grid-Connected PV Inverters Coupled Due to Grid Impedance	362
Bao Xie, <i>Chongqing University, China</i>	
Lin Zhou, <i>Chongqing University, China</i>	
Chen Zheng, <i>Chongqing University, China</i>	
Qianjin Zhang, <i>Chongqing University, China</i>	

A Common-Ground Single-Phase Five-Level Transformerless Boost Inverter for Photovoltaic Applications	368
Ben Shaffer, <i>Miami University, United States</i>	
Hassan A. Hassan, <i>Miami University, United States</i>	
Mark J. Scott, <i>Miami University, United States</i>	
Saad Ul Hasan, <i>Macquarie University, Australia</i>	
Graham E. Town, <i>Macquarie University, Australia</i>	
Yam Siwakoti, <i>University of Technology Sydney, Australia</i>	
A Novel Control System for Solar Tile Micro-Inverters	375
Nicholas Falconar, <i>University of Calgary, Canada</i>	
Dawood Shekari Beyragh, <i>University of Calgary, Canada</i>	
Majid Pahlevani, <i>University of Calgary, Canada</i>	
GaN based Transformer-Less Microinverter with Coupled Inductor Interleaved Boost and Half Bridge Voltage Swing Inverter	381
Jinia Roy, <i>Arizona State University, United States</i>	
Raja Ayyanar, <i>Arizona State University, United States</i>	
A Low-Cost Single-Stage PV Inverter	387
Yuxiang Shi, <i>ABB, United States</i>	
Zhiguo Pan, <i>ABB, United States</i>	
Rostan Rodrigues, <i>ABB, United States</i>	
Chun Wei, <i>ABB, United States</i>	
Design and Implementation of a 100 kW SiC Filterless PV Inverter with 5 kW/kg Power Density and 99.2% CEC Efficiency	393
Yanjun Shi, <i>Florida State University, United States</i>	
Lu Wang, <i>Florida State University, United States</i>	
Ren Xie, <i>Florida State University, United States</i>	
Hui Li, <i>Florida State University, United States</i>	
Comparative Study of a 100kW PV WBG Inverter using 1200V SiC MOSFET and JFET Cascode Devices	399
Sandro Martin, <i>Florida State University, United States</i>	
Thierry Kayiranga, <i>Florida State University, United States</i>	
Yanjun Shi, <i>Florida State University, United States</i>	
Hui Li, <i>Florida State University, United States</i>	
Session T08: SMP Audio and Battery	
Location: Room 217D	
March 6, 2018 8:30 - 12:00	
Session Chairs: Johan Strydom, <i>Texas Instruments, Inc.</i>	
Ed Massey, <i>Methode Electronics</i>	
Multilevel Tracking Power Supply for Switch-Mode Audio Power Amplifiers	406
Niels E. Iversen, <i>Technical University of Denmark, Denmark</i>	
Vladan Lazarevic, <i>Universidad Politécnica de Madrid, Spain</i>	
Miroslav Vasic, <i>Universidad Politécnica de Madrid, Spain</i>	
Arnold Knott, <i>Technical University of Denmark, Denmark</i>	
Michael A.E. Andersen, <i>Technical University of Denmark, Denmark</i>	
José A. Cobos, <i>Universidad Politécnica de Madrid, Spain</i>	

Improving the Efficiency of Class-D Audio Amplifier Systems using Envelope Tracking DC-DC Power Supplies	412
Robert Bakker, <i>National University of Ireland Galway, Ireland</i>	
Maeve Duffy, <i>National University of Ireland Galway, Ireland</i>	
A High-Frequency Non-Isolated ZVS Synchronous Buck-Boost LED Driver with Fully-Integrated Dynamic Dead-Time Controlled Gate Drive	419
Qi Cheng, <i>University of Texas at Dallas, United States</i>	
Hoi Lee, <i>University of Texas at Dallas, United States</i>	
PWM Dimming Module allowing Wide DC-Link Voltage Variation	423
Victor Sui-pung Cheung, <i>City University of Hong Kong, Hong Kong</i>	
Jeff Po-wa Chow, <i>City University of Hong Kong, Hong Kong</i>	
John Wing-to Fan, <i>City University of Hong Kong, Hong Kong</i>	
Chung-Pui Tung, <i>City University of Hong Kong, Hong Kong</i>	
Henry Shu-Hung Chung, <i>City University of Hong Kong, Hong Kong</i>	
Analysis and Experimentation on a New High Power Factor Off-Line LED Driver based on Interleaved Integrated Buck Flyback Converter	429
Guirguis Z. Abdelmessih, <i>Universidad de Oviedo, Spain</i>	
J. Marcos Alonso, <i>Universidad de Oviedo, Spain</i>	
Wen-Tien Tsai, <i>Industrial Technology Research Institute, Taiwan</i>	
Evaluation of Paralleled Battery System with SoC Balancing and Battery Impedance Magnitude Measurement	437
Yuan Cao, <i>University of Alabama, United States</i>	
Jaber A. Abu Qahouq, <i>University of Alabama, United States</i>	
A Multifunction Series Inductive AC-Link Universal Power Converter with Reduced-Switch Count	442
Khalegh Mozaffari, <i>Northeastern University, United States</i>	
Mahshid Amirabadi, <i>Northeastern University, United States</i>	
Performance Assessment of the VSC using Two Model Predictive Control Schemes	450
M. Alhasheem, <i>Aalborg University, Denmark</i>	
A. Abdelhakim, <i>Università di Padova, Italy</i>	
T. Dragičević, <i>Aalborg University, Denmark</i>	
L. Dalessandro, <i>Schaffner Holding AG, Switzerland</i>	
F. Blaabjerg, <i>Aalborg University, Denmark</i>	
State of Health (SOH) Estimation of Multiple Switching Devices using a Single Intelligent Gate Driver Module	458
Sourov Roy, <i>University of Missouri-Kansas City, United States</i>	
Faisal Khan, <i>University of Missouri-Kansas City, United States</i>	

Session T09: Resonant Converters

Location: Room 214A

March 7, 2018 8:30 - 10:10

Session Chairs: Jason Neely, *Sandia National Laboratories*
Veda Galigekere, *Oak Ridge National Laboratory*

LLC Converters: Beyond Datasheets for MOSFET Power Loss Estimation 464

Ettore Scabeni Glitz, *University of British Columbia, Canada*
Matthieu Amyotte, *University of British Columbia, Canada*
Maria Celeste Garcia Perez, *University of British Columbia, Canada*
Martin Ordenez, *University of British Columbia, Canada*

A WBG based Three Phase 12.5 kW 500 kHz CLLC Resonant Converter with Integrated PCB Winding Transformer 469

Bin Li, *Virginia Polytechnic Institute and State University, United States*
Qiang Li, *Virginia Polytechnic Institute and State University, United States*
Fred C. Lee, *Virginia Polytechnic Institute and State University, United States*

Design and Analysis of a Dual-Input Single-Resonant Tank LLC Converter for PV Applications 476

S. Milad Tayebi, *University of Central Florida, United States*
Haibing Hu, *University of Central Florida, United States*
Osama Abdel-Rahman, *University of Central Florida, United States*
Issa Batarseh, *University of Central Florida, United States*

A Magnetic Integration Half-Turn Planar Transformer for LLC Resonant DC-DC Converters 484

Enguo Rong, *Kunming University of Science and Technology, China*
Siqi Li, *Kunming University of Science and Technology, China*
Rui Zhang, *Kunming University of Science and Technology, China*
Xiao Du, *Kunming University of Science and Technology, China*
Qingyun Min, *Kunming University of Science and Technology, China*
Sizhao Lu, *Kunming University of Science and Technology, China*

A Novel LLC Resonant Controller with Best-in-Class Transient Performance and Low Standby Power Consumption 489

Yalong Li, *Texas Instruments, Inc., United States*
Brent McDonald, *Texas Instruments, Inc., United States*

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*

An Improved Current-Limiting Strategy for Shunt Active Power Filter (SAPF) using Particle Swarm Optimization (PSO) 494

Wu Cao, *Southeast University, China*
Mumu Wu, *Southeast University, China*
Jianfeng Zhao, *Southeast University, China*
Weiqun Liu, *NARI-Relays Electric Co. Ltd., China*
Yu Lu, *NARI-Relays Electric Co. Ltd., China*

Harmonic Current Analysis of the Active Front End System in the Presence of Grid Voltage Disturbance	499
Bo Wen, <i>University of Manchester, United Kingdom</i>	
Paolo Mattavelli, <i>Università di Padova, Italy</i>	

An Adaptive Framework for Mitigating Current Harmonics caused by Distributed Energy Resources	505
John O. Troxler, <i>University of North Carolina at Charlotte, United States</i>	
Robert W. Cox, <i>University of North Carolina at Charlotte, United States</i>	

Distributed Power Quality Enhancement using Residential Power Routers	513
Shuang Zhao, <i>University of Arkansas, United States</i>	
Zhongjing Wang, <i>University of Arkansas, United States</i>	
Janviere Umuhzoza, <i>University of Arkansas, United States</i>	
Alan Mantooth, <i>University of Arkansas, United States</i>	
Yue Zhao, <i>University of Arkansas, United States</i>	
Chris Farnell, <i>University of Arkansas, United States</i>	

Power Quality Assessment in Real Shipboard Microgrid Systems under Unbalanced and Harmonic AC Bus Voltage	521
Wenzhao Liu, <i>Aalborg University, Denmark</i>	
Tomasz Tarasiuk, <i>Gdynia Maritime University, Poland</i>	
Mariusz Gorniak, <i>Gdynia Maritime University, Poland</i>	
Josep M. Guerrero, <i>Aalborg University, Denmark</i>	
Mehdi Savaghebi, <i>Aalborg University, Denmark</i>	
Juan C. Vasquez, <i>Aalborg University, Denmark</i>	
Chun-Lien Su, <i>National Kaohsiung Marine University, Taiwan</i>	

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*

Design and Performance Improvement for Single-Voltage-Loop Controlled Voltage-Source-Converters with a Low LC-Resonant-Frequency	528
Xiaoqiang Li, <i>Nanyang Technological University, Singapore</i>	
Pengfeng Lin, <i>Nanyang Technological University, Singapore</i>	
Yi Tang, <i>Nanyang Technological University, Singapore</i>	
Kai Wang, <i>China University of Mining and Technology, China</i>	

Identification of Load Current Influences on Position Estimation Errors for Sensorless SPMSM Drives	533
Hechao Wang, <i>Aalborg University, Denmark</i>	
Kaiyuan Lu, <i>Aalborg University, Denmark</i>	
Dong Wang, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

Initial Rotor Position Estimation for Wound-Rotor Synchronous Starter/Generators based on Multi-Stage-Structure Characteristics	540
Tao Meng, <i>Northwestern Polytechnical University, China</i>	
Weiguo Liu, <i>Northwestern Polytechnical University, China</i>	
Ningfei Jiao, <i>Northwestern Polytechnical University, China</i>	
Jichang Peng, <i>Northwestern Polytechnical University, China</i>	
Yujie Zhu, <i>Northwestern Polytechnical University, China</i>	

A Torque Ripple Reduction Method for the Aircraft Wound-Rotor Synchronous Starter/Generator in the Starting Mode	546
Shuai Mao, <i>Northwestern Polytechnical University, China</i>	
Weiguo Liu, <i>Northwestern Polytechnical University, China</i>	
Zan Zhang, <i>Northwestern Polytechnical University, China</i>	
Ningfei Jiao, <i>Northwestern Polytechnical University, China</i>	
Dongdong Zhao, <i>Northwestern Polytechnical University, China</i>	

Active Front End Motor-Drive System Operation under Power and Phase Loss	552
Ahmed Sayed-Ahmed, <i>Rockwell Automation, United States</i>	
Brian Seibel, <i>Rockwell Automation, United States</i>	
Russel J. Kerkman, <i>Rockwell Automation, United States</i>	

Session T12: Magnetics

Location: Room 214D

March 7, 2018 8:30 - 10:10

Session Chairs: Matt Wilkowski, *Intel*
Jason Pries, *Oak Ridge National Laboratory*

High Inductance Thin-Film Transformer for High Switching Frequency	560
Dragan Dinulovic, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Mahmoud Shousha, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Martin Haug, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Joe O'Brien, <i>Tyndall National Institute, Ireland</i>	
Santosh Kulkarni, <i>Tyndall National Institute, Ireland</i>	
Paul McCloesky, <i>Tyndall National Institute, Ireland</i>	
Cian O'Mathuna, <i>Tyndall National Institute, Ireland</i>	

Winding Design of Series AC Inductor for Dual Active Bridge Converters	565
Zhan Shen, <i>Aalborg University, Denmark</i>	
Huai Wang, <i>Aalborg University, Denmark</i>	
Yanfeng Shen, <i>Aalborg University, Denmark</i>	
Zian Qin, <i>Technische Universiteit Delft, The Netherlands</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

An Improved Rogowski Coil Configuration for a High Speed, Compact Current Sensor with High Immunity to Voltage Transients	571
Chris Hewson, <i>Power Electronic Measurements Ltd., United Kingdom</i>	
Joanne Aberdeen, <i>Power Electronic Measurements Ltd., United Kingdom</i>	

A Low-Loss Inductor Structure and Design Guidelines for High-Frequency Applications	579
Rachel S. Yang, <i>Massachusetts Institute of Technology, United States</i>	
Alex J. Hanson, <i>Massachusetts Institute of Technology, United States</i>	
David J. Perreault, <i>Massachusetts Institute of Technology, United States</i>	
Charles R. Sullivan, <i>Dartmouth College, United States</i>	

Investigation of Magnetic Field Immunity and Near Magnetic Field Reduction for the Inductors in High Power Density Design	587
Yanwen Lai, <i>University of Florida, United States</i>	
Shuo Wang, <i>University of Florida, United States</i>	

Session T13: EMI Detection and Mitigation Methods

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	595
Anil K. Adapa, <i>Indian Institute of Science, India</i>	
Vinod John, <i>Indian Institute of Science, India</i>	

Investigation of a DC Bus Differential Mode EMI Filter for AC/DC Power Adapters	603
Yiming Li, <i>University of Florida, United States</i>	
Le Yang, <i>University of Florida, United States</i>	
Shuo Wang, <i>University of Florida, United States</i>	
Honggang Sheng, <i>Google Inc., United States</i>	
Srikanth Lakshmikanthan, <i>Google Inc., United States</i>	
Liang Jia, <i>Google Inc., United States</i>	

Research of Active EMI Suppression Strategy for High Power Density Power Supply	611
Yilin Sha, <i>Xi'an Jiaotong University, China</i>	
Wenjie Chen, <i>Xi'an Jiaotong University, China</i>	
Zifeng Zhao, <i>Xi'an Jiaotong University, China</i>	
Feng Zhang, <i>Xi'an Jiaotong University, China</i>	
Changsheng Pei, <i>Huawei Technologies Co. Ltd., China</i>	
Zhensheng Chen, <i>Huawei Technologies Co. Ltd., China</i>	

Magnetic Paste as Feedstock for Additive Manufacturing of Power Magnetics	615
Chao Ding, <i>Virginia Polytechnic Institute and State University, United States</i>	
Lanbing Liu, <i>Virginia Polytechnic Institute and State University, United States</i>	
Yunhui Mei, <i>Tianjin University, China</i>	
Khai D.T. Ngo, <i>Virginia Polytechnic Institute and State University, United States</i>	
Guo-Quan Lu, <i>Virginia Polytechnic Institute and State University, United States</i>	

Analysis of Gate Signal Interference in an Integrated SiC MOSFET Module	619
Ze Zheng Dong, <i>Zhejiang University, China</i>	
Xinke Wu, <i>Zhejiang University, China</i>	
Kuang Sheng, <i>Zhejiang University, China</i>	

Session T14: Battery Systems

Location: Room 217B

March 7, 2018 8:30 - 10:10

Session Chairs: Robert Balog, *Texas A&M University at Qatar*
Reza Sharifi, *Texas Instruments, Inc.*

Frequency Support Comparison for Vanadium and Lithium-Ion BESSs using a Converter-Based Grid Emulator 623

Jessica D. Boles, *University of Tennessee and Massachusetts Institute of Technology, United States*

Yiwei Ma, *University of Tennessee, United States*

Leon M. Tolbert, *University of Tennessee and Oak Ridge National Laboratory, United States*

Fred Wang, *University of Tennessee and Oak Ridge National Laboratory, United States*

Isolated Single Stage Bidirectional AC-DC Converter with Power Decoupling and Reactive Power Control to Interface Battery with the Single Phase Grid 631

Damian Sal Y Rosas, *Universidad Nacional de Ingeniería, Peru*

David Frey, *Institut Polytechnique de Grenoble, France*

Jean-Luc Schanen, *Institut Polytechnique de Grenoble, France*

Jean-Paul Ferrieux, *Institut Polytechnique de Grenoble, France*

The State of Charge Balancing Techniques for Electrical Vehicle Charging Stations with Cascaded H-Bridge Multilevel Converters 637

Amirhossein Moeini, *University of Florida, United States*

Shuo Wang, *University of Florida, United States*

A Grid-Tied Reconfigurable Battery Storage System 645

Fa Chen, *University of Nebraska-Lincoln, United States*

Hongmei Wang, *University of Nebraska-Lincoln, United States*

Wei Qiao, *University of Nebraska-Lincoln, United States*

Liyang Qu, *University of Nebraska-Lincoln, United States*

Rippleless Resonant Boost Converter for Fuel-Cell Power Conditioning Systems 653

Hwasoo Seok, *Pohang University of Science and Technology, South Korea*

Byeongcheol Han, *Pohang University of Science and Technology, South Korea*

Soo-Hong Kim, *LG Innotek Co., Ltd., South Korea*

Jae-Geun Lee, *LG Innotek Co., Ltd., South Korea*

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

Session T15: Charging and Energy Storage Topics

Location: Room 217C

March 7, 2018 8:30 - 10:10

Session Chairs: Omer Onar, *Oak Ridge National Laboratory*
Yingying Kuai, *Caterpillar Inc.*

Extreme Fast Charging Station Architecture for Electric Vehicles with Partial Power Processing 659

Vishnu Mahadeva Iyer, *North Carolina State University, United States*

Srinivas Gulur, *North Carolina State University, United States*

Ghanshyamsinh Gohil, *University of Texas at Dallas, United States*

Subhashish Bhattacharya, *North Carolina State University, United States*

Kilowatt-Scale Large Air-Gap Multi-Modular Capacitive Wireless Power Transfer System for Electric Vehicle Charging	666
Brandon Regensburger, <i>University of Colorado Boulder, United States</i>	
Sreyam Sinha, <i>University of Colorado Boulder, United States</i>	
Ashish Kumar, <i>University of Colorado Boulder, United States</i>	
Jason Vance, <i>University of Colorado Boulder, United States</i>	
Zoya Popović, <i>University of Colorado Boulder, United States</i>	
Khurram K. Afridi, <i>University of Colorado Boulder, United States</i>	

Hybrid Commutation Method with Current Direction Estimation for Three-Phase-to-Single-Phase Matrix Converter	672
Shunsuke Takuma, <i>Nagaoka University of Technology, Japan</i>	
Jun-Ichi Itoh, <i>Nagaoka University of Technology, Japan</i>	

A Direct Multi-Cells-to-Multi-Cells Equalizer based on LC Matrix Converter for Series-Connected Battery Strings	680
Naxin Cui, <i>Shandong University, China</i>	
Yunlong Shang, <i>Shandong University, China</i>	
Qi Zhang, <i>Shandong University, China</i>	
Chenghui Zhang, <i>Shandong University, China</i>	

A Novel Hybrid Energy Storage System using the Multi-Source Inverter	684
Lea Dorn-Gomba, <i>McMaster University, Canada</i>	
Ephrem Chemali, <i>McMaster University, Canada</i>	
Ali Emadi, <i>McMaster University, Canada</i>	

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	692
Ruben Otero-De-Leon, <i>ABB, United States</i>	
Liming Liu, <i>ABB, United States</i>	
Sandeep Bala, <i>ABB, United States</i>	
Giovanni Manchia, <i>ABB S.p.A., Italy</i>	

High Frequency Electroporation for Biomedical Applications using GaN Gate Injection Transistors	698
Hector Sarnago, <i>Universidad de Zaragoza, Spain</i>	
O. Lucía, <i>Universidad de Zaragoza, Spain</i>	
J.M. Burdío, <i>Universidad de Zaragoza, Spain</i>	

A Miniaturized Cost Effective Shared Inductor based Energy Management System for Ultra-Low-Voltage Electromagnetic Energy Harvesters in Battery Powered Applications	703
Mahmoud Shousha, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Dragan Dinulovic, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Michael Brooks, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	
Martin Haug, <i>Würth Elektronik eiSos GmbH & Co. KG, Germany</i>	

Low Voltage Sub-Nanosecond Pulsed Current Driver IC for High-Resolution LIDAR Applications	708
Eli Abramov, <i>Ben-Gurion University of the Negev, Israel</i>	
Michael Evzelman, <i>Ben-Gurion University of the Negev, Israel</i>	
Or Kirshenboim, <i>Ben-Gurion University of the Negev, Israel</i>	
Tom Urkin, <i>Ben-Gurion University of the Negev, Israel</i>	
Mor Mordechai Peretz, <i>Ben-Gurion University of the Negev, Israel</i>	

Session T17: Single-Phase AC-DC Converters

Location: Room 214A

March 7, 2018 14:00 - 17:30

Session Chairs: Gerry Moschopoulos, *Western University*
Leila Parsa, *Rensselaer Polytechnic Institute*

A Novel AC-DC Interleaved ZCS-PWM Boost Converter	716
Ramtin Rasoulinezhad, <i>Western University, Canada</i>	
Adel Abosnina, <i>Western University, Canada</i>	
Gerry Moschopoulos, <i>Western University, Canada</i>	

A Single-Stage Bidirectional Dual-Active-Bridge AC-DC Converter based on Enhancement Mode GaN Power Transistor	723
---	-----

Tianxiang Chen, *University of Texas at Austin, United States*

Ruiyang Yu, *University of Texas at Austin, United States*

Qingyun Huang, *University of Texas at Austin, United States*

Alex Q. Huang, *University of Texas at Austin, United States*

A 99.1% Efficient, 490 W/in³ Power Density Power Factor Correction Front End based on a 7-Level Flying Capacitor Multilevel Converter	729
---	-----

Shibin Qin, *University of Illinois at Urbana-Champaign, United States*

Zitao Liao, *University of Illinois at Urbana-Champaign, United States*

Zichao Ye, *University of Illinois at Urbana-Champaign, United States*

Derek Chou, *University of Illinois at Urbana-Champaign, United States*

Nathan Brooks, *University of Illinois at Urbana-Champaign, United States*

Robert C.N. Pilawa-Podgurski, *University of Illinois at Urbana-Champaign, United States*

Multitrack Power Factor Correction Architecture	737
--	-----

Minjie Chen, *Princeton University, United States*

Sombuddha Chakraborty, *Texas Instruments, Inc., United States*

David J. Perreault, *Massachusetts Institute of Technology, United States*

Improving SRC with Capacitor Bypassing Method for Universal AC-DC Adapter	746
--	-----

Yang Chen, *Queen's University, Canada*

Hongliang Wang, *Queen's University, Canada*

Yan-Fei Liu, *Queen's University, Canada*

P.C. Sen, *Queen's University, Canada*

Xiaodong Liu, *Anhui University of Technology, China*

Minimum Inrush Start-Up Control of a Single-Phase Interleaved Totem-Pole PFC Rectifier 754
Ayan Mallik, *University of Maryland, College Park, United States*
Jiangheng Lu, *University of Maryland, College Park, United States*
Shenli Zou, *University of Maryland, College Park, United States*
Peiwen He, *University of Maryland, College Park, United States*
Alireza Khaligh, *University of Maryland, College Park, United States*

Novel Adaptive Pulse Width Modulator provides Quasi-Fixed Switching Frequency in Constant On/Off-Time Controlled Regulators 760
Giovanni Gritti, *STMicroelectronics, Italy*

Quasi-Resonant Flyback Converter with New Valley Voltage Detection Mechanism 767
Wei-Chia Wu, *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*

Improving Light Load Power Factor for GaN based Totem Pole Bridgeless PFC using Digital Phase Locked Loop based Vector Cancellation and Tracking Error Compensation 771
Manish Bhardwaj, *Texas Instruments, Inc., United States*
Sheng-Yang Yu, *Texas Instruments, Inc., United States*
Zhong Ye, *Texas Instruments, Inc., United States*
Shamim Choudhury, *Texas Instruments, Inc., United States*

Session T18: Soft Switching Converters

Location: Room 214B

March 7, 2018 14:00 - 17:30

Session Chairs: Luke Jenkins, *IBM*
Aleksandar Prodic, *University of Toronto*

Design Considerations of Highly-Efficient Active Clamp Flyback Converter using GaN Power ICs 777
Lingxiao Xue, *Navitas Semiconductors, United States*
Jason Zhang, *Navitas Semiconductors, United States*

Design Consideration of Active Clamp Flyback Converter with Highly Nonlinear Junction Capacitance 783
Pei-Hsin Liu, *Texas Instruments, Inc., United States*

A High-Efficiency High-Power-Density 1MHz LLC Converter with GaN Devices and Integrated Transformer 791
Runruo Chen, *Texas Instruments, Inc., United States*
Sheng-Yang Yu, *Texas Instruments, Inc., United States*

High-Frequency LC³L Resonant DC-DC Converter for Automotive LED Driver Applications 797
Satyaki Mukherjee, *Indian Institute of Technology Kharagpur, India*
Alihossein Sepahvand, *University of Colorado-Boulder, United States*
Dragan Maksimović, *University of Colorado-Boulder, United States*

A Topology Morphing Multi-Element Resonant Converter with Wide Voltage Gain Range ... 803

Liang Yang, *Tianjin University, China*
Yifeng Wang, *Tianjin University, China*
Chengshan Wang, *Tianjin University, China*
Wei Li, *Tianjin University, China*
Mengying Chen, *Tianjin University, China*

Study on Reducing Switching Current in Dual Bridge Series Resonant DC/DC Converter ... 808

Bo Yang, *Chinese Academy of Sciences, China*
Qiongxuan Ge, *Chinese Academy of Sciences, China*
Lu Zhao, *Chinese Academy of Sciences, China*
Zhida Zhou, *Chinese Academy of Sciences, China*
Dongdong Cui, *Chinese Academy of Sciences, China*
Yaohua Li, *Chinese Academy of Sciences, China*

The Improved Dual Active Bridge Converter with a Modified Phase Shift and Variable Frequency Control 814

Feilong Liu, *Yanshan University, China*
Xiaofeng Sun, *Yanshan University, China*
Jia Feng, *Yanshan University, China*
Junjuan Wu, *Yanshan University, China*
Xin Li, *Yanshan University, China*

Merged PWM-Resonant Converter for Direct Panel to Grid-Level Conversion in Localized PV Energy Harvesting 820

Or Kirshenboim, *Ben-Gurion University of the Negev, Israel*
Guy Sovik, *Ben-Gurion University of the Negev, Israel*
Dor Yairi, *Ben-Gurion University of the Negev, Israel*
Mor Mordechai Peretz, *Ben-Gurion University of the Negev, Israel*

An Improved Active Zero Voltage Switching Assisting Circuit with Lower dv/dt for DC-DC Series Resonant Converter with Constant Input Current 826

Tarak Saha, *Utah State University, United States*
Hongjie Wang, *Utah State University, United States*
Baljit Riar, *Utah State University, United States*
Regan Zane, *Utah State University, United States*

Session T19: Control of Inverters and Drives I

Location: Room 214C

March 7, 2018 14:00 - 17:30

Session Chairs: Thomas Gietzold, *United Technologies Aerospace Systems*
Ali Bazzi, *University of Connecticut*

Sensorless Control using a Full-Order Observer based on a Novel Flux Model of High Power Interior Permanent Magnet Synchronous Motor 832

Young-Seol Lim, *Ajou University, South Korea*
June-Seok Lee, *Korean Rail Research Institute, South Korea*
Joon Hyoung Ryu, *Korean Rail Research Institute, South Korea*
Kyo-Beum Lee, *Ajou University, South Korea*

Automatic Advance Angle Control Algorithm using Anti-Windup Feedback Voltage of PI Current Controller for Wide Range Speed Operation of BLDCM	837
Min-Hyo Lee, <i>LG Electronics Inc., South Korea</i>	
Ho-Jin Kim, <i>Busan Techno-Park, South Korea</i>	
Hyeong-Jin Kim, <i>Pusan National University, South Korea</i>	
Jang-Mok Kim, <i>Pusan National University, South Korea</i>	
Line Voltage Difference Integral Method of Commutation Error Adjustment for Sensorless Brushless DC Motor	843
Xuliang Yao, <i>Harbin Engineering University, China</i>	
Hao Lin, <i>Harbin Engineering University, China</i>	
Jicheng Zhao, <i>Harbin Engineering University, China</i>	
Two-Segment Three-Phase PMSM Drive with Carrier Phase-Shift PWM	848
Xun Han, <i>Huazhong University of Science and Technology, China</i>	
Dong Jiang, <i>Huazhong University of Science and Technology, China</i>	
Tianjie Zou, <i>Huazhong University of Science and Technology, China</i>	
Ronghai Qu, <i>Huazhong University of Science and Technology, China</i>	
Kai Yang, <i>Huazhong University of Science and Technology, China</i>	
A Full-Order Sliding Mode Flux Observer with Stator and Rotor Resistance Adaptation for Induction Motor	855
Yuanbo Guo, <i>Dalian University of Technology, China</i>	
Ze Li, <i>Dalian University of Technology, China</i>	
Bijun Dai, <i>Dalian University of Technology, China</i>	
Xiaohua Zhang, <i>Dalian University of Technology, China</i>	
Stability Analysis and Improvement of V/Hz Controlled Adjustable Speed Drives Equipped with Small DC-Link Thin Film Capacitors	861
Zhentian Qian, <i>Zhejiang University, China</i>	
Wenxi Yao, <i>Zhejiang University, China</i>	
Kevin Lee, <i>Eaton Corporation, United States</i>	
Suppressing Dead-Time Effect in Current-Controlled Three-Phase PWM Inverters by using Virtual Inductor	867
Adinda Ihsani Putri, <i>Institute of Technology Bandung, Indonesia</i>	
Arwindra Rizqiawan, <i>Institute of Technology Bandung, Indonesia</i>	
Tridesmana Rachmilda, <i>Institute of Technology Bandung, Indonesia</i>	
Yanuarsyah Haroen, <i>Institute of Technology Bandung, Indonesia</i>	
Pekik Argo Dahono, <i>Institute of Technology Bandung, Indonesia</i>	
Hybrid Space Vector Pulse Width Modulation Synthesis to Minimize the Common-Mode Voltage	872
Ameer Janabi, <i>Michigan State University, United States</i>	
Bingsen Wang, <i>Michigan State University, United States</i>	

Session T20: GaN Device Opportunities and Challenges

Location: Room 214D

March 7, 2018 14:00 - 17:30

Session Chairs: Tim McDonald, *Infineon Technologies*
Xin Zhang, *IBM*

Opportunities and Design Considerations of GaN HEMTs in ZVS Applications 880

Juncheng Lu, *GaN Systems Inc., Canada*

Ruoyu Hou, *GaN Systems Inc., Canada*

Di Chen, *GaN Systems Inc., Canada*

Design Considerations for GaN Transistor based Synchronous Rectification 886

David Reusch, *Efficient Power Conversion Corporation, United States*

John Glaser, *Efficient Power Conversion Corporation, United States*

High Power 3-Phase to 3-Phase Matrix Converter using Dual-Gate GaN Bidirectional Switches 894

Hidekazu Umeda, *Panasonic Corporation, Japan*

Yasuhiro Yamada, *Panasonic Corporation, Japan*

Kenichi Asanuma, *Panasonic Corporation, Japan*

Fumito Kusama, *Panasonic Corporation, Japan*

Yusuke Kinoshita, *Panasonic Corporation, Japan*

Hiroaki Ueno, *Panasonic Corporation, Japan*

Hidetoshi Ishida, *Panasonic Corporation, Japan*

Tsuguyasu Hatsuda, *Panasonic Corporation, Japan*

Tetsuzo Ueda, *Panasonic Corporation, Japan*

Dynamic On-State Resistance Evaluation of GaN Devices under Hard and Soft Switching Conditions 898

Rui Li, *Zhejiang University, China*

Xinke Wu, *Zhejiang University, China*

Gang Xie, *Zhejiang University, China*

Kuang Sheng, *Zhejiang University, China*

Wideband Contactless Current Sensing using Hybrid Magnetoresistor-Rogowski Sensor in High Frequency Power Electronic Converters 904

Shahriar Jalal Nibir, *University of North Carolina at Charlotte, United States*

Sven Hauer, *University of North Carolina at Charlotte, United States*

Mehrdad Biglarbegian, *University of North Carolina at Charlotte, United States*

Babak Parkhideh, *University of North Carolina at Charlotte, United States*

The Mitigating Effects of the Threshold Voltage Shifting on the False Turn-on of GaN E-HEMTs 909

Guangzhao Xu, *Xi'an Jiaotong University, China*

Xu Yang, *Xi'an Jiaotong University, China*

Ruiliang Xie, *Xi'an Jiaotong University, China*

Feng Zhang, *Xi'an Jiaotong University, China*

Naizeng Wang, *Xi'an Jiaotong University, China*

Mofan Tian, *Xi'an Jiaotong University, China*

Haiyang Jia, *Xi'an Jiaotong University, China*

Laili Wang, *Xi'an Jiaotong University, China*

An Analytical Turn-on Power Loss Model for 650-V GaN eHEMTs	913
Yanfeng Shen, <i>Aalborg University, Denmark</i>	
Huai Wang, <i>Aalborg University, Denmark</i>	
Zhan Shen, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
Zian Qin, <i>Technische Universiteit Delft, The Netherlands</i>	

Parasitic Capacitance Eloss Loss Mechanism, Calculation, and Measurement in Hard-Switching for GaN HEMTs	919
Ruoyu Hou, <i>GaN Systems Inc., Canada</i>	
Juncheng Lu, <i>GaN Systems Inc., Canada</i>	
Di Chen, <i>GaN Systems Inc., Canada</i>	

High Precision Gate Signal Timing Control based Active Voltage Balancing Scheme for Series-Connected Fast Switching Field-Effect Transistors	925
Zheyu Zhang, <i>University of Tennessee, United States</i>	
Handong Gui, <i>University of Tennessee, United States</i>	
Jiahao Niu, <i>University of Tennessee, United States</i>	
Ruirui Chen, <i>University of Tennessee, United States</i>	
Fred Wang, <i>University of Tennessee, United States</i>	
Leon M. Tolbert, <i>University of Tennessee, United States</i>	
Daniel J. Costinett, <i>University of Tennessee, United States</i>	
Benjamin J. Blalock, <i>University of Tennessee, United States</i>	

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*

Impedance-Based Analysis of DC Link Control in Voltage Source Rectifiers	931
Dapeng Lu, <i>Aalborg University, Denmark</i>	
Xiongfei Wang, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

Modeling Resonant Converters in a Rotating, Polar Coordinate	938
Yi-Hsun Hsieh, <i>Virginia Polytechnic Institute and State University, United States</i>	
Fred C. Lee, <i>Virginia Polytechnic Institute and State University, United States</i>	

First Order Design by Optimization Method: Application to an Interleaved Buck Converter and Validation	944
Mylène Delhommais, <i>Institut Polytechnique de Grenoble, France</i>	
Jean-Luc Schanen, <i>Institut Polytechnique de Grenoble, France</i>	
Frédéric Wurtz, <i>Institut Polytechnique de Grenoble, France</i>	
Cécile Rigaud, <i>TRONICO-ALCEN, France</i>	
Sylvain Chardon, <i>TRONICO-ALCEN, France</i>	

Approaches for Continuous-Time Dynamic Modeling of the Asymmetric Dual-Active Half-Bridge Converter	952
Shiladri Chakraborty, <i>Indian Institute of Technology Kharagpur, India</i>	
Manas Palmal, <i>Indian Institute of Technology Kharagpur, India</i>	
Souvik Chattopadhyay, <i>Indian Institute of Technology Kharagpur, India</i>	

Analysis and Evaluation of Input Power Splitting Method between Multiple Transmitters for Maximum Wireless Power Transfer	959
Yuan Cao, <i>University of Alabama, United States</i>	
Jaber A. Abu Qahouq, <i>University of Alabama, United States</i>	
Virtual Impedance based Stability Analysis for Direct Digital Controlled Single-Phase Grid-Connected Inverter with LCL Filter having Wide Inductance Variation	963
Tsai-Fu Wu, <i>National Tsing Hua University, Taiwan</i>	
Mitradata Misra, <i>National Tsing Hua University, Taiwan</i>	
Ying-Yi Jhang, <i>National Tsing Hua University, Taiwan</i>	
Chun-Yi Lin, <i>National Tsing Hua University, Taiwan</i>	
Multi-Objective Optimization based Real-Time Control for PEV Hybrid Energy Management Systems	969
Xiaoying Lu, <i>ShanghaiTech University, China</i>	
Yaojiang Chen, <i>ShanghaiTech University, China</i>	
Haoyu Wang, <i>ShanghaiTech University, China</i>	
Utilizing Method of Moments Electromagnetic Technology to Model High Speed Power Converter Parasitics	976
Chris Mueth, <i>Keysight Technologies, United States</i>	
EMI Noise Source Modeling based on Network Theory for Power Converters with Mixed-Mode Characterization	984
Huan Zhang, <i>University of Florida, United States</i>	
Shuo Wang, <i>University of Florida, United States</i>	

Session T22: Control Strategies for Inverters & Motor Drives

Location: Room 217B

March 7, 2018 14:00 - 17:30

Session Chairs: Jaber Abu Qahouq, *University of Alabama*

Xiong Li, *Texas Instrument, Inc.*

Common-mode Voltage Elimination of Three-level T-type Inverters with a Finite Control Set Model Predictive Control Method	992
Xiaodong Wang, <i>University of Electronic Science and Technology of China, China</i>	
Jiaoxiao Zou, <i>University of Electronic Science and Technology of China, China</i>	
Jiancheng Zhao, <i>University of Electronic Science and Technology of China, China</i>	
Zhenhua Dong, <i>University of Electronic Science and Technology of China, China</i>	
Min Wei, <i>University of Electronic Science and Technology of China, China</i>	
Xie Chuan, <i>University of Electronic Science and Technology of China, China</i>	
Kai Li, <i>University of Electronic Science and Technology of China, China</i>	
Using One FPGA to Control Two High-Switching-Frequency PMSM Drive Systems through a Novel Time-Division Multiplexing Method	998
Fanning Jin, <i>University of Michigan-Dearborn, United States</i>	
Wei Qian, <i>University of Michigan-Dearborn, United States</i>	
Hua Bai, <i>University of Michigan-Dearborn, United States</i>	
Dingguo Lu, <i>Mercedes-Benz Research/Development Center, United States</i>	
Bing Cheng, <i>Mercedes-Benz Research/Development Center, United States</i>	

Improved Virtual Synchronous Generator Control Strategy for Seamless Switching 1003

Zishun Peng, *Hunan University, China*
Jun Wang, *Hunan University, China*
Yuxing Dai, *Hunan University, China*
Yeting Wen, *Hunan University, China*
Z. John Shen, *Hunan University, China*
Zongjian Li, *Hunan University, China*
Daqiang Bi, *Tsinghua University, China*

Decentralized Control of Series Stacked Bidirectional DC-AC Modules 1008

Prasanta K. Achanta, *University of Colorado Boulder, United States*
Dragan Maksimović, *University of Colorado Boulder, United States*
Milan Ilic, *Empower Micro Systems, United States*

A Novel Adaptive Control for Three-Phase Inverter 1014

Xiangjun Quan, *University of Texas at Austin, United States*
Alex Q. Huang, *University of Texas at Austin, United States*
Xiaobo Dou, *Southeast University, China*
Zaijun Wu, *Southeast University, China*
Minqiang Hu, *Southeast University, China*

Reference Current Regulation for Inverter with Virtual Resistor Damping Control 1019

Cheng Nie, *Xi'an Jiaotong University, China*
Wanjuan Lei, *Xi'an Jiaotong University, China*
Yue Wang, *Xi'an Jiaotong University, China*
Tian Li, *Xi'an Jiaotong University, China*
Yan Zhang, *Xi'an Jiaotong University, China*

Expanding the CCM Boundary of a Current-Fed Switched Inverter 1025

Anil Gambhir, *Indian Institute of Technology Kanpur, India*
Santanu Mishra, *Indian Institute of Technology Kanpur, India*

Stationary Reference Frame based Current Control Structure with Improved Disturbance Rejection for Grid Connected Converters 1031

Srinivas Gulur, *North Carolina State University, United States*
Vishnu Mahadeva Iyer, *North Carolina State University, United States*
Subhashish Bhattacharya, *North Carolina State University, United States*

Sliding Mode Control of the Modular Multilevel Converter 1036

Qichen Yang, *Georgia Institute of Technology, United States*
Maryam Saeedifard, *Georgia Institute of Technology, United States*

Session T23: Wireless Power Transfer Applications

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*

Thin Self-Resonant Structures with a High-Q for Wireless Power Transfer 1044

Aaron L.F. Stein, *Dartmouth College, United States*
Phyo Aung Kyaw, *Dartmouth College, United States*
Jesse Feldman-Stein, *Dartmouth College, United States*
Charles R. Sullivan, *Dartmouth College, United States*

Analysis and Design of a Series Self-Resonant Coil for Wireless Power Transfer	1052
Jie Li, <i>University of Tennessee, United States</i>	
Daniel Costinett, <i>University of Tennessee, United States</i>	
A Hybrid RF and Vibration Energy Harvester for Wearable Devices	1060
Son Nguyen, <i>University of California, Davis, United States</i>	
Rajeevan Amirtharajah, <i>University of California, Davis, United States</i>	
A 10 nW, 10 mV Signal Detector using a 2 pA Standby Voltage Reference, for Always-on Sensors and Receivers	1065
Salah-Eddine Adami, <i>University of Bristol, United Kingdom</i>	
Guang Yang, <i>University of Bristol, United Kingdom</i>	
Chunhong Zhang, <i>University of Bristol, United Kingdom</i>	
Plamen Proynov, <i>University of Bristol, United Kingdom</i>	
Bernard H. Stark, <i>University of Bristol, United Kingdom</i>	
A Burst Mode Pulse Density Modulation Scheme for Inductive Power Transfer Systems without Communication Modules	1071
Shuxin Chen, <i>Nanyang Technological University, Singapore</i>	
Hongchang Li, <i>Nanyang Technological University, Singapore</i>	
Yi Tang, <i>Nanyang Technological University, Singapore</i>	
A Dynamic Tuning Method Utilizing Inductor Paralleled with Load for Inductive Power Transfer	1076
Yeran Liu, <i>Southwest Jiaotong University, China</i>	
Ruikun Mai, <i>Southwest Jiaotong University, China</i>	
Pengfei Yue, <i>Southwest Jiaotong University, China</i>	
Zhengyou He, <i>Southwest Jiaotong University, China</i>	
Design and Analysis of the S/P Compensated Contactless Converter for High Voltage Ignition	1080
Jingwen Gao, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Qianhong Chen, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Xiaoyong Ren, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Zhiliang Zhang, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Hui Shi, <i>China Academy of Engineering Physics, China</i>	
Hanzheng Ran, <i>China Academy of Engineering Physics, China</i>	
Transmission Characteristics Analysis of a Double-cheeked MCR WPT System with Two Receivers under Varying Spatial Scales	1086
Weiwei Ye, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Fuxin Liu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Tianming Mei, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Xuling Chen, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Ralph M. Kennel, <i>Technische Universität München, Germany</i>	
Magnetic-Field-Model based Analysis of Two-Phase Magnetically Coupled Resonant Wireless Power Transfer System	1092
Tianming Mei, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Fuxin Liu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Chong Jiang, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Xuling Chen, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Ralph M. Kennel, <i>Technische Universität München, Germany</i>	

Session T24: Photovoltaic & Grid Tie Systems

Location: Room 217D

March 7, 2018 14:00 - 17:30

Session Chairs: Martin Ordonez, *University of British Columbia*
Veda Galigekere, *Oak Ridge National Laboratory*

Distributed MPPT for Modular Differential Power Processing in Scalable Photovoltaic System	1098
Chang Liu, <i>Northeastern University, United States</i>	
Yue Zheng, <i>Northeastern University, United States</i>	
Deyu Li, <i>Northeastern University, United States</i>	
Brad Lehman, <i>Northeastern University, United States</i>	
Reliability Evaluation of an Impedance-Source PV Microconverter	1104
Yanfeng Shen, <i>Aalborg University, Denmark</i>	
Elizaveta Liivik, <i>Tallinn University of Technology, Estonia</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
Dmitri Vinnikov, <i>Tallinn University of Technology, Estonia</i>	
Huai Wang, <i>Aalborg University, Denmark</i>	
Andrii Chub, <i>Tallinn University of Technology, Estonia</i>	
On-Line Global Maximum Power Point (GMPP) Identification of Solar PV Plants	1109
Matam Manjunath, <i>National Institute of Technology Goa, India</i>	
B. Venugopal Reddy, <i>National Institute of Technology Goa, India</i>	
Ye Zhao, <i>Northeastern University, United States</i>	
Brad Lehman, <i>Northeastern University, United States</i>	
A General Algorithm for Flexible Active Power Control of Photovoltaic Systems	1115
Hossein Dehghani Tafti, <i>Nanyang Technological University, Singapore</i>	
Ariya Sangwongwanich, <i>Aalborg University, Denmark</i>	
Yongheng Yang, <i>Aalborg University, Denmark</i>	
Georgios Konstantinou, <i>University of New South Wales, Australia</i>	
Josep Pou, <i>Nanyang Technological University, Singapore</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
Soft-Switching Technique for a Three-Phase Bidirectional Grid-Tie DC-AC-AC Converter ...	1122
Mahmoud A. Sayed, <i>Nagoya Institute of Technology, Japan</i>	
Kazuma Suzuki, <i>Nagoya Institute of Technology, Japan</i>	
Takaharu Takeshita, <i>Nagoya Institute of Technology, Japan</i>	
Wataru Kitagawa, <i>Nagoya Institute of Technology, Japan</i>	
Adaptive Synchronization of Grid-Connected Three-Phase Inverters by using Virtual Oscillator Control	1130
Mingshen Li, <i>Aalborg University, Denmark</i>	
Yonghao Gui, <i>Aalborg University, Denmark</i>	
Juan C. Vasquez, <i>Aalborg University, Denmark</i>	
Josep M. Guerrero, <i>Aalborg University, Denmark</i>	

Distributed Autonomous Voltage Balancing Control for a Modular IPOS DC Grid-Connected Renewable Power System	1136
Xiaofeng Dong, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Hongfei Wu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Yangjun Lu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Haibing Hu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Kai Sun, <i>Tsinghua University, China</i>	

Adaptive Control Method for Enhancing the Stability of Grid-Connected Inverters under Very Weak Grid Condition	1141
Jinming Xu, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Qiang Qian, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Shaojun Xie, <i>Nanjing University of Aeronautics and Astronautics, China</i>	

Multi-Purpose Generic Board for Hands-On Power Electronics Education of Different Power Converter Topologies in PV Applications	1147
Mehrddad Biglarbegian, <i>University of North Carolina at Charlotte, United States</i>	
Iman Mazhari, <i>University of North Carolina at Charlotte, United States</i>	
Hamidreza Jafarian, <i>University of North Carolina at Charlotte, United States</i>	
Namwon Kim, <i>University of North Carolina at Charlotte, United States</i>	
Babak Parkhideh, <i>University of North Carolina at Charlotte, United States</i>	
Johan Enslin, <i>Clemson University, United States</i>	

Session T25: DC-DC Converter Applications

Location: Room 214A

March 8, 2018 8:30 - 11:20

Session Chairs: Olivier Trescases, *University of Toronto*
David Reusch, *Efficient Power Conversion Corporation*

Design of a 1 kV Bidirectional DC-DC Converter with 650 V GaN Transistors	1155
Andrew Stillwell, <i>University of Illinois at Urbana-Champaign, United States</i>	
Margaret E. Blackwell, <i>University of Illinois at Urbana-Champaign, United States</i>	
Robert C.N. Pilawa-Podgurski, <i>University of Illinois at Urbana-Champaign, United States</i>	

Efficiency/Cost Trade-Off Design of a Multiple-Active-Bridge Converter for Smart Transformer	1163
Levy F. Costa, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Giampaolo Buticchi, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Marco Liserre, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	

A 6.6kW SiC Bidirectional On-Board Charger	1171
Haoran Li, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Lei Bai, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Zhiliang Zhang, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Shengdong Wang, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Jiacheng Tang, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Xiaoyong Ren, <i>Nanjing University of Aeronautics and Astronautics, China</i>	
Jianfei Li, <i>Sineng Electric Corporation, China</i>	

Performance Evaluation of a VLC Transmitter based on the Split of the Power 1179
Juan Rodríguez, *Universidad de Oviedo, Spain*
Daniel G. Aller, *Universidad de Oviedo, Spain*
Diego G. Lamar, *Universidad de Oviedo, Spain*
Javier Sebastián, *Universidad de Oviedo, Spain*

High Current Switching Capacitor Converter for On-Package VR 1187
Stefano Saggini, *Università degli Studi di Udine, Italy*
Shuai Jiang, *Google Inc., United States*
Mario Ursino, *Università degli Studi di Udine, Italy*
Chenhao Nan, *Google Inc., United States*
Roberto Rizzolatti, *Università degli Studi di Udine, Italy*

Single-Inductor Multiple-Output Converter for High-Power LED Applications with Independent Current Control based on SiC SBD 1192
Jinjin Liu, *Xidian University, China*
Hongliang Lv, *Xidian University, China*
Yimeng Zhang, *Xidian University, China*
Qingwen Song, *Xidian University, China*
Yuming Zhang, *Xidian University, China*
Xiaoyan Tang, *Xidian University, China*

Modeling and Control of Sigma Converter for 48V Voltage Regulator Application 1199
Virginia Li, *Virginia Polytechnic Institute and State University, United States*
Mohamed H. Ahmed, *Virginia Polytechnic Institute and State University, United States*
Qiang Li, *Virginia Polytechnic Institute and State University, United States*
Fred C. Lee, *Virginia Polytechnic Institute and State University, United States*

Session T26: Switched And Synchronous Reluctance Motor Drives

Location: Room 214B

March 8, 2018 8:30 - 11:20

Session Chairs: Prerit Pramod, *Nexteer Automotive*
Rakib Islam, *Nexteer Automotive*

Acoustic Noise Mitigation of Switched Reluctance Machines with Windows in Both Stator and Rotor Poles 1205
Mohammed Elamin, *University of Akron, United States*
Yusuf Yasa, *University of Akron, United States*
Omer Gundogmus, *University of Akron, United States*
Yilmaz Sozer, *University of Akron, United States*
John Kutz, *DCS Corp., United States*
Joshua Tylenda, *United States Army, United States*
Ronnie L. Wright, *DCS Corp., United States*

Design of an Axial-Flux Switch Reluctance Motor for a Novel Integrated Motor-Compressor System 1211
Abdul W. Bandarkar, *University of Akron, United States*
Iftekhhar Hasan, *University of Akron, United States*
Yilmaz Sozer, *University of Akron, United States*
J.A. De Abreu-Garcia, *University of Akron, United States*

Torque Ripple Minimization in SRMs at Medium and High Speeds using a Multi-Stator Windings with a Novel Power Converter 1217
Oguzhan Kilic, *University of Akron, United States*
Ali Elrayyah, *Qatar Environment and Energy Research Institute, Qatar*
Yilmaz Sozer, *University of Akron, United States*

A Novel Boost Converter for Segmented-Stator Hybrid-Excitation Switched Reluctance Motor Drive with High Performance 1223
Wen Ding, *Xi'an Jiaotong University, China*
Shuai Yang, *Xi'an Jiaotong University, China*
Yanfang Hu, *Xi'an Jiaotong University, China*

State Space Modeling and Feedback Control of Five-Phase Permanent Magnet Assisted Synchronous Reluctance Motor under Open Phase Faults 1229
Akm Arafat, *University of Akron, United States*
Seungdeog Choi, *University of Akron, United States*

Three-Phase Four-Leg Drive for DC-Biased Sinusoidal Current Vernier Reluctance Machine 1236
An Li, *Huazhong University of Science and Technology, China*
Zihan Gao, *Huazhong University of Science and Technology, China*
Dong Jiang, *Huazhong University of Science and Technology, China*
Wubin Kong, *Huazhong University of Science and Technology, China*
Shaofeng Jia, *Huazhong University of Science and Technology, China*
Ronghai Qu, *Huazhong University of Science and Technology, China*

Low-Cost Sub-Fractional Horsepower Brushless Direct Current Claw-Pole Machine Topology for Fan Applications 1242
Stefan Leitner, *Technische Universität Graz, Austria*
Hannes Gruebler, *Technische Universität Graz, Austria*
Annette Muetze, *Technische Universität Graz, Austria*

Session T27: Power Module Integration & Prognostics
Location: Room 214C
March 8, 2018 8:30 - 11:20
Session Chairs: Liming Liu, *ABB*
Zach Pan, *ABB*

A Power Converter Integration Approach with a Multi-Functional Heat Sink Shaped Inductor 1249
Wenbo Liu, *Queen's University, Canada*
Yan-Fei Liu, *Queen's University, Canada*
Laili Wang, *Xi'an Jiaotong University, China*

Three-Phase Inverter Employing PCB Embedded GaN FETs 1256
Stephen Savulak, *United Technologies Corporation, United States*
Ben Guo, *United Technologies Corporation, United States*
Shashank Krishnamurthy, *Otis Elevator Company, United States*

Gate Driver Design and Continuous Operation of an Improved 1200V/200A FREEDM-Pair Half-Bridge Power Module	1261
Liqi Zhang, <i>University of Texas at Austin, United States</i>	
Xin Zhao, <i>University of Texas at Austin, United States</i>	
Xiaoqing Song, <i>ABB, United States</i>	
Qianlai Zhu, <i>North Carolina State University, United States</i>	
Soumik Sen, <i>University of Texas at Austin, United States</i>	
Pengkun Liu, <i>University of Texas at Austin, United States</i>	
Junhong Tong, <i>University of Texas at Austin, United States</i>	
Alex Q. Huang, <i>University of Texas at Austin, United States</i>	
Performance Optimization of a 1.2kV SiC High Density Half Bridge Power Module in 3D Package	1266
Xin Zhao, <i>University of Texas at Austin, United States</i>	
Bo Gao, <i>North Carolina State University, United States</i>	
Liqi Zhang, <i>University of Texas at Austin, United States</i>	
Douglas C. Hopkins, <i>North Carolina State University, United States</i>	
Alex Q. Huang, <i>University of Texas at Austin, United States</i>	
On Condition Monitoring of High Frequency Power GaN Converters with Adaptive Prognostics	1272
Mehrdad Biglarbegian, <i>University of North Carolina at Charlotte, United States</i>	
Saman Mostafavi, <i>University of North Carolina at Charlotte, United States</i>	
Sven Hauer, <i>University of North Carolina at Charlotte, United States</i>	
Shahriar Jalal Nibir, <i>University of North Carolina at Charlotte, United States</i>	
Namwon Kim, <i>University of North Carolina at Charlotte, United States</i>	
Robert Cox, <i>University of North Carolina at Charlotte, United States</i>	
Babak Parkhideh, <i>University of North Carolina at Charlotte, United States</i>	
Miller Plateau as an Indicator of SiC MOSFET Gate Oxide Degradation	1280
Ze Ni, <i>North Dakota State University, United States</i>	
Yanchao Li, <i>North Dakota State University, United States</i>	
Xiaofeng Lyu, <i>North Dakota State University, United States</i>	
Om Prakash Yadav, <i>North Dakota State University, United States</i>	
Dong Cao, <i>North Dakota State University, United States</i>	
6.0kV, 100A, 175kHz Super Cascode Power Module for Medium Voltage, High Power Applications	1288
Bo Gao, <i>North Carolina State University, United States</i>	
Adam J. Morgan, <i>North Carolina State University, United States</i>	
Yang Xu, <i>North Carolina State University, United States</i>	
Xin Zhao, <i>North Carolina State University, United States</i>	
Douglas C. Hopkins, <i>North Carolina State University, United States</i>	

Session T28: Power Quality Oriented Control

Location: Room 214D

March 8, 2018 8:30 - 11:20

Session Chairs: Martin Ordonez, *University of British Columbia*
Manish Bhardwaj, *Texas Instrument, Inc.*

An Improved Burst-Mode Control for VIENNA Rectifiers to Mitigate DC Voltage Ripples at Light Load	1294
<i>Xinxi Tang, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Yang Cao, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Yan Xing, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Haibing Hu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Lidong Xu, JiangSu JinFan Power Technology Co., Ltd., China</i>	
Control Strategy for Reduction of Current Distortion in Reverse Matrix Converter under Unbalanced Input Conditions	1299
<i>Dongho Choi, Ajou University, South Korea</i>	
<i>Yeongsu Bak, Ajou University, South Korea</i>	
<i>Jong-Pil Lee, Korea Electrotechnology Research Institute, South Korea</i>	
<i>Tae-Jin Kim, Korea Electrotechnology Research Institute, South Korea</i>	
<i>Kyo-Beum Lee, Ajou University, South Korea</i>	
Analysis and Design of Enhanced DFT-Based Controller for Selective Harmonic Compensation in Active Power Filters	1305
<i>Hao Chen, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Huawu Liu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Yan Xing, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Haibing Hu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Kai Sun, Tsinghua University, China</i>	
Analysis of Dead-Time Harmonics in Single-Phase Transformerless Full-Bridge PV Inverters	1310
<i>Yongheng Yang, Aalborg University, Denmark</i>	
<i>Keliang Zhou, University of Glasgow, United Kingdom</i>	
<i>Frede Blaabjerg, Aalborg University, Denmark</i>	
Application of Generalized Peak Current Controllers for Active Power Filters and Rectifiers with Power Factor Correction	1316
<i>Mohammad Ebrahimi, University of Alberta, Canada</i>	
<i>S. Ali Khajehoddin, University of Alberta, Canada</i>	
Minimum Conduction Loss ZVS Control for Buck-Type Active Filter Operating as Decoupling Circuit	1322
<i>Behnam Koushki, Queen's University, Canada</i>	
<i>Praveen Jain, Queen's University, Canada</i>	
<i>Alireza Bakhshai, Queen's University, Canada</i>	
Improved Selective Harmonic Compensation for Single-Phase Inverters	1329
<i>Jiao Jiao, Auburn University, United States</i>	
<i>John Y. Hung, Auburn University, United States</i>	
<i>R.M. Nelms, Auburn University, United States</i>	

Session T29: Wireless Power Transfer for EV Applications

Location: Room 217A

March 8, 2018 8:30 - 11:20

Session Chairs: Raghav Khanna, *University of Toledo*

Sheldon Williamson, *University of Ontario Institute of Technology*

A Study on the Shielding for Wireless Charging Systems of Electric Vehicles 1336

Hongzhi Cui, *Zhejiang University, China*

Wenxing Zhong, *Zhejiang University, China*

Hao Li, *Zhejiang University, China*

Fengchun He, *Zhejiang University, China*

Min Chen, *Zhejiang University, China*

Dehong Xu, *Zhejiang University, China*

An Optimal ZVS Angle Selection for Constant Current Charging of EV's Battery in Series-Series Compensated Wireless Power Transmission System 1344

Yongbin Jiang, *Xi'an Jiaotong University, China*

Junwen Liu, *Xi'an Jiaotong University, China*

Xiufang Hu, *Xi'an Jiaotong University, China*

Laili Wang, *Xi'an Jiaotong University, China*

Yue Wang, *Xi'an Jiaotong University, China*

Gaidi Ning, *Xi'an Jiaotong University, China*

Optimization of Ferrite Core to Reduce the Core Loss in Double-D Pad of Wireless Charging System for Electric Vehicles 1350

Mostak Mohammad, *University of Akron, United States*

Seungdeog Choi, *University of Akron, United States*

Integrated Control of Bridge Type Inductive Power Transfer Systems for Light Load Efficiency Improvement 1357

Sangjoon Ann, *Sungkyunkwan University, South Korea*

Jongeun Byun, *Sungkyunkwan University, South Korea*

Dongmyoung Joo, *Sungkyunkwan University, South Korea*

Byoung Kuk Lee, *Sungkyunkwan University, South Korea*

A Reverse-Coupled Bipolar Coil Structure for an Integrated LCC-Compensated Inductive Power Transfer System 1363

Fei Lu, *San Diego State University, United States*

Hua Zhang, *San Diego State University, United States*

Chong Zhu, *San Diego State University, United States*

Ying Mei, *LG Electronics Inc., China*

Jie Zhang, *LG Electronics Inc., China*

Chris Mi, *San Diego State University, United States*

Analysis and Designed of Three-Phase Capacitive Coupled Wireless Power Transfer for High Power Charging System 1369

Bo Luo, *Southwest Jiaotong University, China*

Ruikun Mai, *Southwest Jiaotong University, China*

Rui Shi, *Southwest Jiaotong University, China*

Zhengyou He, *Southwest Jiaotong University, China*

Non-Linear Capacitor based Variable Capacitor for Self-Tuning Resonant Converter in Wireless Power Transfer	1375
Hulong Zeng, <i>Michigan State University, United States</i>	
Fang Zheng Peng, <i>Michigan State University, United States</i>	

Session T30: Renewable Energy Topics

Location: Room 217B

March 8, 2018 8:30 - 11:20

Session Chairs: Katherine Kim, *Ulsan National Institute of Science and Technology*
Haoyu Wang, *ShanghaiTech University*

Power Management of a Self-Powered Multi-Parameter Wireless Sensor for IoT Application	1380
Dingyi He, <i>University of Texas at Dallas, United States</i>	
Babak Fahimi, <i>University of Texas at Dallas, United States</i>	

Multi-Port Bidirectional Three-Phase AC-DC Converter with High Frequency Isolation	1386
Allan U. Barbosa, <i>Universidade Federal do Ceará, Brazil</i>	
Bruno R. de Almeida, <i>University of Fortaleza, Brazil</i>	
Demercil de Souza Oliveira Jr., <i>Universidade Federal do Ceará, Brazil</i>	
Paulo P. Praça, <i>Universidade Federal do Ceará, Brazil</i>	
Luiz Henrique S.C. Barreto, <i>Universidade Federal do Ceará, Brazil</i>	

A New Vector Control of Brushless Doubly-Fed Induction Generator with Transient Current Compensation for Stand-Alone Power Generation Applications	1392
Yi Liu, <i>Huazhong University of Science and Technology, China</i>	
Wei Xu, <i>Huazhong University of Science and Technology, China</i>	
Kailiang Yu, <i>Huazhong University of Science and Technology, China</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

A Passivity-Based Decentralized Control Strategy for Current-Controlled Inverters in AC Microgrids	1399
Hui Yu, <i>North Carolina State University, United States</i>	
Hao Tu, <i>North Carolina State University, United States</i>	
Srdjan Lukic, <i>North Carolina State University, United States</i>	

Power Management of Virtual Synchronous Generators through using Hybrid Energy Storage Systems	1407
Jingyang Fang, <i>Nanyang Technological University, Singapore</i>	
Xiaoqiang Li, <i>Nanyang Technological University, Singapore</i>	
Yi Tang, <i>Nanyang Technological University, Singapore</i>	
Hongchang Li, <i>Nanyang Technological University, Singapore</i>	

Design of Virtual Synchronous Generators with Enhanced Frequency Regulation and Reduced Voltage Distortions	1412
Jingyang Fang, <i>Nanyang Technological University, Singapore</i>	
Xiaoqiang Li, <i>Nanyang Technological University, Singapore</i>	
Yi Tang, <i>Nanyang Technological University, Singapore</i>	
Hongchang Li, <i>Nanyang Technological University, Singapore</i>	

A New Power Flow Control Approach for Power Converters in Single-Phase Microgrids ... 1420

Sajjad M. Kaviri, *Queen's University, Canada*
Hadis Hajebrahimi, *Queen's University, Canada*
Majid Pahlevani, *University of Calgary, Canada*
Praveen Jain, *Queen's University, Canada*
Alireza Bakhshai, *Queen's University, Canada*

Session T31: Conversion Systems for Electric Vehicles

Location: Room 217C

March 8, 2018 8:30 - 11:20

Session Chairs: Serkan Dusmez, *Texas Instruments, Inc.*
Yongheng Yang, *Aalborg University*

High Efficiency SiC Traction Inverter for Electric Vehicle Applications 1428

Jianglin Zhu, *University of Colorado Boulder, United States*
Hyeokjin Kim, *University of Colorado Boulder, United States*
Hua Chen, *University of Colorado Boulder, United States*
Robert Erickson, *University of Colorado Boulder, United States*
Dragan Maksimović, *University of Colorado Boulder, United States*

A Quadruple Active Bridge Converter as the Storage Interface in the More Electric Aircraft 1434

Giampaolo Buticchi, *Christian-Albrechts-Universität zu Kiel, Germany*
Levy Costa, *Christian-Albrechts-Universität zu Kiel, Germany*
Davide Barater, *Università degli Studi di Parma, Italy*
Marco Liserre, *Christian-Albrechts-Universität zu Kiel, Germany*
Eugenio Dominguez, *SerTec S.L., Germany*

Resonant Switched Capacitor Converter based DC Auto-Transformer for Urban Rail Transit 1441

Miao Wang, *Beijing Jiaotong University, China*
Xiaofeng Yang, *Beijing Jiaotong University, China*
Lulu Wang, *Beijing Jiaotong University, China*
Trillion Q. Zheng, *Beijing Jiaotong University, China*

A Single-Stage Bi-Directional AC-DC Converter with no Electrolytic Capacitor for EV 1447

Behnam Koushki, *Queen's University, Canada*
Praveen Jain, *Queen's University, Canada*
Alireza Bakhshai, *Queen's University, Canada*

A Unity Power Factor Active Rectifier with Optimum Space-Vector Predictive DC Voltage Control for Variable Frequency Supply Suitable for More Electric Aircraft Applications 1455

Joseph Benzaquen, *Kansas State University, United States*
Mohammad B. Shadmand, *Kansas State University, United States*
Arlie Stonestreet II, *Ultra Electronics ICE, Inc., United States*
Behrooz Mirafzal, *Kansas State University, United States*

A Hybrid Negative Current Compensation System for High-Speed Railway Power System .. 1461

Jiaxin Yuan, *Wuhan University, China*
Feiran Xiao, *Wuhan University, China*
Chenmeng Zhang, *Wuhan University, China*
Zhou Ni, *Wuhan University, China*
Yongheng Zhong, *Wuhan University, China*

Discontinuous Conduction Mode Three Phase Buck-Boost Derived PFC Converter for More Electric Aircraft with Reduced Switching, Sensing and Control Requirements 1467

Sivanagaraju Gangavarapu, *Concordia University, Canada*
Akshay K. Rathore, *Concordia University, Canada*
D.W. Fulwani, *Indian Institute of Technology Jodhpur, India*

Session T32: Grid Applications

Location: Room 217D

March 8, 2018 8:30 - 11:20

Session Chairs: Mike Seeman, *ETA power*
Zhong Nie, *SF Motors*

Reactive Power Compensation and Resonance Damping for Three-Phase Buck-Type Dynamic Capacitor 1473

Liangli Xiong, *Huazhong University of Science and Technology, China*
Ke Dai, *Huazhong University of Science and Technology, China*
Xinwen Chen, *Huazhong University of Science and Technology, China*
Xiaosheng Wang, *Huazhong University of Science and Technology, China*
Ziwei Dai, *Rensselaer Polytechnic Institute, United States*

Duty-Cycle Plus Phase-Shift Control for a Dual Active Half Bridge based Bipolar DC Microgrid 1479

Fei Gao, *University of Oxford, United Kingdom*
Dan Rogers, *University of Oxford, United Kingdom*

Investigation of Control and Applications of Modular Multilevel Converter with Sub-Modular Series IGBTs 1486

Lu Yue, *State University of New York at Buffalo, United States*
Xiu Yao, *State University of New York at Buffalo, United States*

Three-Phase Buck-Boost Y-Inverter with Wide DC Input Voltage Range 1492

Michael Antivachis, *Eidgenössische Technische Hochschule Zürich, Switzerland*
Dominik Bortis, *Eidgenössische Technische Hochschule Zürich, Switzerland*
Lukas Schrittwieser, *Eidgenössische Technische Hochschule Zürich, Switzerland*
Johann W. Kolar, *Eidgenössische Technische Hochschule Zürich, Switzerland*

Energy Storage System Control Strategy to Minimize the Voltage and Frequency Fluctuation in the Microgrid 1500

Qin Lei, *Arizona State University, United States*
Yunpeng Si, *Arizona State University, United States*
Yifu Liu, *Arizona State University, United States*

A Novel Three-Phase Bidirectional DC-DC Converter for UPS Applications 1506
Adel Ali Abosnina, *Western University, Canada*
Gerry Moschopoulos, *Western University, Canada*

Model Predictive Direct Current Control Strategy for Three-Level T-Type Rectifier under Unbalanced Grid Voltage Conditions 1514
Xiaoyan Li, *Shandong University, China*
Chenghui Zhang, *Shandong University, China*
Alian Chen, *Shandong University, China*
Xiangyang Xing, *Shandong University, China*
Guangxian Zhang, *Shandong University, China*

Session T33: High Conversion Ratio Converters

Location: Room 214A

March 8, 2018 14:00 - 17:30

Session Chairs: Xin Zhang, *IBM*

Robert Pilawa, *University of California, Berkeley*

A Novel and Simple Hybrid DC-DC Converter of Resonant Forward and PWM Flyback 1520
Han Peng, *FSP-Powerland Technology Inc., China*
Mengtian Yu, *Nanjing University of Aeronautics and Astronautics, China*
Jin Ke, *Nanjing University of Aeronautics and Astronautics, China*
Ming Xu, *FSP-Powerland Technology Inc., China*

Boost Half-Bridge DC-DC Converter with Reconfigurable Rectifier for Ultra-Wide Input Voltage Range Applications 1528
Dmitri Vinnikov, *Tallinn University of Technology, Estonia*
Andrii Chub, *Tallinn University of Technology, Estonia*
Elizaveta Liivik, *Aalborg University, Denmark*
Frede Blaabjerg, *Aalborg University, Denmark*
Yam Siwakoti, *University of Technology Sydney, Australia*

A Novel High-Gain Three-Phase DC-DC PWM Boost Converter 1533
Adel Ali Abosnina, *Western University, Canada*
Gerry Moschopoulos, *Western University, Canada*

A Switched-Boost DC/DC Converter with High Voltage Gain and Continuous Input Current 1540
Ali Mostaan, *Iranian Central Oil Field Company, Iran*
Ahmed Abdelhakim, *Università di Padova, Italy*
Mohsen Soltani, *Aalborg University, Denmark*
Frede Blaabjerg, *Aalborg University, Denmark*

Closed-Loop Voltage Control of a GaN-Based Modular Multilevel Clamped Capacitor Converter 1546
Liyao Wu, *Georgia Institute of Technology, United States*
Maryam Saeedifard, *Georgia Institute of Technology, United States*

Direct 400 VDC to 1 VDC Power Conversion with Input Series Output Parallel Connection for Data Center Power Supplies	1554
Yutian Cui, <i>University of Tennessee, United States</i>	
Leon M. Tolbert, <i>University of Tennessee, United States</i>	
Daniel J. Costinett, <i>University of Tennessee, United States</i>	
Fred Wang, <i>University of Tennessee, United States</i>	
Benjamin J. Blalock, <i>University of Tennessee, United States</i>	

A High-Voltage-Gain DC-DC Converter for Powering a Multi-Mode Monopropellant-Electrospray Propulsion System in Satellites	1561
Bhanu Prashant Baddipadiga, <i>Missouri University of Science and Technology, United States</i>	
Scott Strathman, <i>Missouri University of Science and Technology, United States</i>	
Mehdi Ferdowsi, <i>Missouri University of Science and Technology, United States</i>	
Jonathan W. Kimball, <i>Missouri University of Science and Technology, United States</i>	

A Nonisolated Three-Level Bidirectional DC-DC Converter	1566
Jianfei Chen, <i>Chongqing University, China</i>	
Caisheng Wang, <i>Wayne State University, United States</i>	
Jian Li, <i>Chongqing University, China</i>	
Chenguang Jiang, <i>Wayne State University, United States</i>	
Chen Duan, <i>Wayne State University, United States</i>	

A Phase-Shift-Based Synchronous Rectification Scheme for Bi-Directional High-Step-Down CLLC Resonant Converters	1571
Yucheng Gao, <i>Tsinghua University, China</i>	
Kai Sun, <i>Tsinghua University, China</i>	
Xiang Lin, <i>Tsinghua University, China</i>	
Zhiqiang Guo, <i>Tsinghua University, China</i>	

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	1577
Yuri Panov, <i>Delta Products Corporation, United States</i>	
Milan M. Jovanović, <i>Delta Products Corporation, United States</i>	
Brian T. Irving, <i>Delta Products Corporation, United States</i>	

A Hardware Decoupling Method for Series-Resonance-Based Isolated Three-Port DC/DC Converters	1585
Panbao Wang, <i>Harbin Institute of Technology, China</i>	
Wei Wang, <i>Harbin Institute of Technology, China</i>	
Dianguo Xu, <i>Harbin Institute of Technology, China</i>	
Xiaonan Lu, <i>Argonne National Laboratory, United States</i>	

A Partially Rated DC-DC Converter for Power Flow Control in Meshed LVDC Distribution Grids	1591
Pavel Purgat, <i>Technische Universiteit Delft, The Netherlands</i>	
Ryan Adilardi Prakoso, <i>Technische Universiteit Delft, The Netherlands</i>	
Laurens Mackay, <i>Technische Universiteit Delft, The Netherlands</i>	
Zian Qin, <i>Technische Universiteit Delft, The Netherlands</i>	
Laura Ramirez-Elizondo, <i>Technische Universiteit Delft, The Netherlands</i>	
Pavol Bauer, <i>Technische Universiteit Delft, The Netherlands</i>	
A Carrier Magnitude Varying Modulation for Distributed Static Series Compensator to Achieve a Maximum Reactive Power Generating Capability	1597
Yunting Liu, <i>Michigan State University, United States</i>	
Fang Zheng Peng, <i>Michigan State University, United States</i>	
Asymmetric Low-Voltage Ride-Through Scheme and Dynamic Voltage Regulation in Distributed Generation Units	1603
Masoud M. Shabestary, <i>University of Alberta, Canada</i>	
Shahed Mortazavian, <i>University of Alberta, Canada</i>	
Yasser A-R.I. Mohamed, <i>University of Alberta, Canada</i>	
Smart Transformer Universal Operation	1609
Youngjong Ko, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Andrii Chub, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Levy Costa, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Markus Andresen, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Marco Liserre, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Proportional Integral-Resonant and Dual Loop Current Control Structure Comparison for Grid Connected Converters in the Rotating Frame	1617
Srinivas Gulur, <i>North Carolina State University, United States</i>	
Vishnu Mahadeva Iyer, <i>North Carolina State University, United States</i>	
Subhashish Bhattacharya, <i>North Carolina State University, United States</i>	
A Single-Phase Self-Synchronized Synchronverter with Bounded Droop Characteristics	1624
Tarek Younis, <i>Aswan University, Egypt</i>	
Mohamed Ismeil, <i>Aswan University, Egypt</i>	
Mohamed Orabi, <i>Aswan University, Egypt</i>	
E.K. Hussain, <i>University of Sheffield, United Kingdom</i>	
Optimal Design of Hybrid Battery Energy Storage System for Minimizing the Number of Batteries with High Efficiency Control Algorithm based on Fuzzy Logic	1630
Tae-Won Noh, <i>Sungkyunkwan University, South Korea</i>	
Jung-Hoon Ahn, <i>Sungkyunkwan University, South Korea</i>	
Hyo Min Ahn, <i>Sungkyunkwan University, South Korea</i>	
Byoung Kuk Lee, <i>Sungkyunkwan University, South Korea</i>	

Session T35: Multi-level Inverters and Converters

Location: Room 214C

March 8, 2018 14:00 - 17:30

Session Chairs: Scott Ramsay, *DRS Consolidated Controls*
Jeff Czapor, *DRS Consolidated Controls*

A Novel Switched-Capacitor Multilevel Inverter offering Modularity in Design 1635

Y.C. Fong, *Hong Kong Polytechnic University, Hong Kong*
Raghu Raman Sekhar, *Hong Kong Polytechnic University, Hong Kong*
M. Moonson Chen, *Hong Kong Polytechnic University, Hong Kong*
K.W.E. Cheng, *Hong Kong Polytechnic University, Hong Kong*

Quasi Two-Level PWM Operation of a Nine-Arm Modular Multilevel Converter for Six-Phase Medium-Voltage Motor Drives 1641

Mohamed S. Diab, *University of Strathclyde, United Kingdom*
Grain P. Adam, *University of Strathclyde, United Kingdom*
B.W. Williams, *University of Strathclyde, United Kingdom*
Ahmed M. Massoud, *Qatar University, Qatar*
Shehab Ahmed, *Texas A&M University at Qatar, Qatar*

Hardware Design of a 1.7 kV SiC MOSFET based MMC for Medium Voltage Motor Drives . 1649

He Li, *Ohio State University, United States*
Karun Potty, *Ohio State University, United States*
Ziwei Ke, *Ohio State University, United States*
Jianyu Pan, *Ohio State University, United States*
Yingzhuo Chen, *Ohio State University, United States*
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*
Longya Xu, *Ohio State University, United States*
Jin Wang, *Ohio State University, United States*

Power-Dense Multilevel Inverter Module using Interleaved GaN-Based Phases for Electric Aircraft Propulsion 1656

Nathan Pallo, *University of Illinois at Urbana-Champaign, United States*
Thomas Foulkes, *University of Illinois at Urbana-Champaign, United States*
Tomas Modeer, *University of Illinois at Urbana-Champaign, United States*
Samantha Coday, *University of Illinois at Urbana-Champaign, United States*
Robert Pilawa-Podgurski, *University of Illinois at Urbana-Champaign, United States*

Transient Analysis of a Modular Multilevel Converter with Coupled Arm Inductors 1662

Bogdan Džonlaga, *CentraleSupélec, France*
Davi Rabelo Joca, *CentraleSupélec, France*
Loïc Quéval, *CentraleSupélec, France*
Jean-Claude Vannier, *CentraleSupélec, France*

Capacitor Voltage Balancing of a Nested T-Type Four-Level Inverter using Space Vector Modulation 1668

Ahoora Bahrami, *McMaster University, Canada*
Mehdi Narimani, *McMaster University, Canada*

Spatial Repetitive Controller for Improved Steady State Performance of Droop Regulated Modular Multilevel Converter in Wind Farm Application 1673
Sandeep Kolluri, *National University of Singapore, Singapore*
Naga Brahmendra Yadav Gorla, *National University of Singapore, Singapore*
Rajesh Sapkota, *National University of Singapore, Singapore*
Sanjib Kumar Panda, *National University of Singapore, Singapore*

A Novel Zero-Sequence Current Elimination PWM Scheme for an Open-End Winding Motor Drive with Dual Two-Level Inverter 1679
Zewei Shen, *Huazhong University of Science and Technology, China*
Dong Jiang, *Huazhong University of Science and Technology, China*
Jianan Chen, *Huazhong University of Science and Technology, China*
Ronghai Qu, *Huazhong University of Science and Technology, China*

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*

Junction Temperature Estimation of SiC MOSFETs based on Extended Kalman Filtering 1687
Xiangyu Han, *Georgia Institute of Technology, United States*
Maryam Saeedifard, *Georgia Institute of Technology, United States*

An Accurate Calorimetric Method for Measurement of Switching Losses in Silicon Carbide (SiC) MOSFETs 1695
Anup Anurag, *North Carolina State University, United States*
Sayan Acharya, *North Carolina State University, United States*
Yos Prabowo, *North Carolina State University, United States*
Ghanshyamsinh Gohil, *University of Texas at Dallas, United States*
Hulgize Kassa, *North Carolina State University, United States*
Subhashish Bhattacharya, *North Carolina State University, United States*

High Voltage SiC Super-Cascode Power Switch Parameter Optimization for Loss Reduction 1701
Xintong Lyu, *Ohio State University, United States*
He Li, *Ohio State University, United States*
Boxue Hu, *Ohio State University, United States*
Zhuxuan Ma, *Ohio State University, United States*
Jin Wang, *Ohio State University, United States*

High Current Medium Voltage Solid State Circuit Breaker using Paralleled 15kV SiC ETO ... 1706
Liqi Zhang, *University of Texas at Austin, United States*
Richard Woodley, *North Carolina State University, United States*
Xiaoqing Song, *ABB, United States*
Soumik Sen, *University of Texas at Austin, United States*
Xin Zhao, *University of Texas at Austin, United States*
Alex Q. Huang, *University of Texas at Austin, United States*

Experimental Evaluation of IGCT Converters with Reduced di/dt Limiting Inductance 1710
Tianyu Wei, *Tsinghua University, China*
Qiang Song, *Tsinghua University, China*
Jianguo Li, *Tsinghua University, China*
Biao Zhao, *Tsinghua University, China*
Zhengyu Chen, *Tsinghua University, China*
Rong Zeng, *Tsinghua University, China*

Optimal Control Strategies for SiC MOSFET and Si IGBT based Hybrid Switch 1717
Zongjian Li, *Hunan University, China*
Jun Wang, *Hunan University, China*
Xi Jiang, *Hunan University, China*
Z. John Shen, *Hunan University, China*
Xin Yin, *Hunan University, China*
Cheng Zeng, *Hunan University, China*
Linfeng Deng, *Hunan University, China*

Increasing Emitter Efficiency in 3.3-kV Enhanced Trench IGBTs for Higher Short-Circuit Capability 1722
Paula Diaz Reigosa, *Aalborg University, Denmark*
Francesco Iannuzzo, *Aalborg University, Denmark*
Munaf Rahimo, *ABB Switzerland Ltd. Semiconductors, Switzerland*
Chiara Corvasce, *ABB Switzerland Ltd. Semiconductors, Switzerland*
Frede Blaabjerg, *Aalborg University, Denmark*

Thermal Resistor and Capacitor Parameter Identification using Cooling Curve of IGBT Module 1729
Jun Zhang, *Chongqing University, China*
Xiong Du, *Chongqing University, China*
Shuai Zheng, *Chongqing University, China*
Heng-Ming Tai, *University of Tulsa, United States*

Improved Dynamic Voltage Sharing in Multilevel Converters through Diode Characterization 1734
Juan D. Ramirez, *GE Healthcare, United States*
Luke A. Solomon, *GE Power, United States*
Daniel F. Opila, *United States Naval Academy, United States*

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*

Understanding Middle-Point Inductance's Effect on Switching Transients for Multi-Chip SiC Package Design with P-Cell/N-Cell Concept 1742
Fei Yang, *University of Tennessee, United States*
Zhiqiang Wang, *Oak Ridge National Laboratory, United States*
Zheyu Zhang, *University of Tennessee, United States*
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*

Modeling of Variable Magnetic Elements including Hysteresis and Eddy Current Losses	1750
Sarah Saeed, <i>Universidad de Oviedo, Spain</i>	
Jorge García, <i>Universidad de Oviedo, Spain</i>	
Ramy Georgious, <i>Universidad de Oviedo, Spain</i>	
Minimum Loss Operation of High-Frequency Inductors	1756
Panteleimon Papamanolis, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Florian Krismer, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Johann W. Kolar, <i>Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
Permeance based Modeling of Magnetic Hysteresis with Inclusion of Eddy Current Effect	1764
Min Luo, <i>École Polytechnique Fédérale de Lausanne, Switzerland</i>	
Drazen Dujic, <i>École Polytechnique Fédérale de Lausanne, Switzerland</i>	
Jost Allmeling, <i>Plexim GmbH, Switzerland</i>	
Estimation and Minimization of Power Loop Inductance in 135 kW SiC Traction Inverter	1772
Bryce Aberg, <i>North Carolina State University, United States</i>	
Radha Sree Krishna Moorthy, <i>North Carolina State University, United States</i>	
Li Yang, <i>North Carolina State University, United States</i>	
Wensong Yu, <i>North Carolina State University, United States</i>	
Iqbal Husain, <i>North Carolina State University, United States</i>	
Modeling and Reduction of Radiated EMI for Isolated Power Converters	1778
Yingjie Zhang, <i>University of Florida, United States</i>	
Shuo Wang, <i>University of Florida, United States</i>	
Yongbin Chu, <i>Texas Instruments, Inc., United States</i>	
Multi-Variable Optimization Methodology for Medium-Frequency High-Power Transformer Design Employing Steepest Descent Method	1786
Annoy Kumar Das, <i>Indian Institute of Technology Bombay, India</i>	
Zhongbao Wei, <i>Nanyang Technological University, Singapore</i>	
Baylon G. Fernandes, <i>Indian Institute of Technology Bombay, India</i>	
Haonan Tian, <i>Nanyang Technological University, Singapore</i>	
Madasamy P. Thevar, <i>Nanyang Technological University, Singapore</i>	
Shuyu Cao, <i>Nanyang Technological University, Singapore</i>	
Vaisambhayana B. Sriram, <i>Nanyang Technological University, Singapore</i>	
Anshuman Tripathi, <i>Nanyang Technological University, Singapore</i>	
Philip C. Kjær, <i>Vestas Wind System A/S, Denmark</i>	
AC Winding Loss in Closed Core Thin Film Transformers Accounting for Two Dimensional Magnetic Fields	1794
Ciaran Feeney, <i>Sengled, China</i>	
Ningning Wang, <i>Sengled, China</i>	
Design for Reliability and Robustness Tool Platform for Power Electronic Systems – Study Case on Motor Drive Applications	1799
Ionut Vernica, <i>Aalborg University, Denmark</i>	
Huai Wang, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

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 1807

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 1815

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 1821

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 1829

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 1834

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 1841

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 1846

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	1854
Jacob Dyer, <i>University of Tennessee, United States</i>	
Zheyu Zhang, <i>University of Tennessee, United States</i>	
Fred Wang, <i>University of Tennessee, United States</i>	
Daniel Costinett, <i>University of Tennessee, United States</i>	
Leon M. Tolbert, <i>University of Tennessee, United States</i>	
Benjamin J. Blalock, <i>University of Tennessee, United States</i>	

A 150V Monolithic Synchronous Gate Driver with Built-in ZVS Detection for Half-Bridge Converters	1861
Lin Cong, <i>University of Texas at Dallas, United States</i>	
Hoi Lee, <i>University of Texas at Dallas, United States</i>	

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	1865
Zhe Zhang, <i>Technical University of Denmark, Denmark</i>	
Kevin Tomas-Manez, <i>Technical University of Denmark, Denmark</i>	
Yudi Xiao, <i>Technical University of Denmark, Denmark</i>	
Michael A.E. Andersen, <i>Technical University of Denmark, Denmark</i>	

Power Plateau and Anti-Power Phenomenon of Dual Active Bridge Converter with Phase-Shift Modulation	1871
Yudi Xiao, <i>Fuzhou University and Danmarks Tekniske Universitet, China</i>	
Zhe Zhang, <i>Technical University of Denmark, Denmark</i>	
Xingkui Mao, <i>Fuzhou University, China</i>	
Kevin Tomas Manez, <i>Technical University of Denmark, Denmark</i>	
Michael A.E. Andersen, <i>Technical University of Denmark, Denmark</i>	

Hybrid Resonant Half-Bridge DC/DC Converter with Wide Input Voltage Range	1876
Bumyun Kim, <i>Pohang University of Science and Technology, South Korea</i>	
Sooa Kim, <i>Pohang University of Science and Technology, South Korea</i>	
Dong-Young Huh, <i>LG Innotek Co., Ltd., South Korea</i>	
Jung-Hwan Choi, <i>LG Innotek Co., Ltd., South Korea</i>	
Minsung Kim, <i>Pohang University of Science and Technology, South Korea</i>	

Sensorless Phase Shift Control for Phase Shifted DC-DC Converters for Eliminating DC Transients from Transformer Winding Currents	1882
Ritwik Chattopadhyay, <i>North Carolina State University, United States</i>	
Utkarsh Raheja, <i>North Carolina State University, United States</i>	
Ghanshyamsinh Gohil, <i>University of Texas at Dallas, United States</i>	
Viju Nair, <i>North Carolina State University, United States</i>	
Subhashish Bhattacharya, <i>North Carolina State University, United States</i>	

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	1930
Zhiyong Xia, <i>University of Alabama, United States</i>	
Jaber A. Abu Qahouq, <i>University of Alabama, United States</i>	
Design and Implementation of a Distributed Control Structure for Modular Multilevel Matrix Converter	1934
Jian Liu, <i>Zhejiang University, China</i>	
Wenxi Yao, <i>Zhejiang University, China</i>	
Zhengyu Lu, <i>Zhejiang University, China</i>	
Jiankai Ma, <i>Newcastle University, United Kingdom</i>	
A Non-Isolated Asynchronous Low Power High Voltage Boost Converter for Discontinuous Conduction Mode and Portable Applications	1940
Frank Vanselow, <i>Fraunhofer EMFT, Germany</i>	
Bernadette Kinzel, <i>Fraunhofer EMFT, Germany</i>	
Linus Maurer, <i>Universität der Bundeswehr, Germany</i>	
Erkan Isa, <i>Fraunhofer EMFT, Germany</i>	
A Novel Bidirectional Three-Phase AC-DC/DC-AC Converter for PMSM Virtual Machine System with Common DC Bus	1944
Arvind H. Kadam, <i>University of Ontario Institute of Technology, Canada</i>	
Rishi Menon, <i>University of Ontario Institute of Technology, Canada</i>	
Sheldon S. Williamson, <i>University of Ontario Institute of Technology, Canada</i>	
A Series-AC-Link ISOP AC-AC Converter with Two Power Cells	1952
Ehsan Afshari, <i>Northeastern University, United States</i>	
Mahshid Amirabadi, <i>Northeastern University, United States</i>	
Analysis and Design Method for Parallel Quasi Resonant Inverter in Induction Heating Applications	1959
Isaac Nam, <i>GE Appliances, a Haier Company, United States</i>	
SiC Solid State Circuit Breaker with an Adjustable Current-Time Tripping Profile	1968
Yanjun Feng, <i>Illinois Institute of Technology, United States</i>	
Yuanfeng Zhou, <i>Illinois Institute of Technology, United States</i>	
Z. John Shen, <i>Illinois Institute of Technology, United States</i>	
Design of a High Power MEMS Relay with Zero Voltage Switching and Isolated Power and Signal Transfer	1974
Yan Zhang, <i>Queen's University and Xi'an Jiaotong University, Canada</i>	
Wenbo Liu, <i>Queen's University, Canada</i>	
Lei Kou, <i>Queen's University, Canada</i>	
Yan-Fei Liu, <i>Queen's University, Canada</i>	
Chris Keimel, <i>Menlo Micro, Inc., United States</i>	

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*

Peng Fang, *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.*

Robert Pilawa, *University of California, Berkeley*

A Digital Detecting Method for Synchronous Rectification based on Dual-Verification for LLC Resonant Converter 2091
Qinsong Qian, *Southeast University, China*
Shen Xu, *Southeast University, China*
Juzheng Yu, *Southeast University, China*
Weifeng Sun, *Southeast University, China*
Haisong Li, *Wuxi Chipown Microelectronics Co. Ltd., China*

Flyback Converter with Hybrid Clamp 2098
Laszlo Huber, *Delta Products Corporation, United States*
Milan M. Jovanović, *Delta Products Corporation, United States*
Haibin Song, *Delta Electronics Shanghai, China*
Daofei Xu, *Delta Electronics Shanghai, China*
Alpha Zhang, *Delta Electronics Shanghai, China*
Chien-Chung Chang, *Delta Electronics Inc., Taiwan*

Integrated Switched-Capacitor-Based Cold-Start Circuit for DC-DC Energy Harvesters with Wide Input/Output Voltage Range and Low Inductance in 40-nm CMOS 2104
D.K.W. Li, *University of Toronto, Canada*
M. Ashourloo, *University of Toronto, Canada*
M. Rose, *NXP Semiconductors, The Netherlands*
H.J. Bergveld, *NXP Semiconductors, The Netherlands*
O. Trescases, *University of Toronto, Canada*

Integrated Magnetics Design for a Full-Bridge Phase-Shifted Converter	2110
Yu-Chen Liu, <i>National Ilan University, Taiwan</i>	
Chen Chen, <i>National Taiwan University of Science and Technology, Taiwan</i>	
Shu-Yi Lin, <i>National Taiwan University of Science and Technology, Taiwan</i>	
Cheng-You Xiao, <i>National Taiwan University of Science and Technology, Taiwan</i>	
Katherine A. Kim, <i>Ulsan National Institute of Science and Technology, South Korea</i>	
Yao-Ching Hsieh, <i>National Taiwan University of Science and Technology, Taiwan</i>	
Huang-Jen Chiu, <i>National Taiwan University of Science and Technology, Taiwan</i>	
LLC Resonant Converter with Wide Output Voltage Control Characteristics According to Operating Mode Transition	2117
Eun-Soo Kim, <i>Jeonju University, South Korea</i>	
Jicheol Lee, <i>Jeonju University, South Korea</i>	
Yechang Heo, <i>Jeonju University, South Korea</i>	
Takongmo Marius, <i>Jeonju University, South Korea</i>	
Jongseong Ju, <i>Jeonju University, South Korea</i>	
Yoon-Sang Kook, <i>Pac Tech – Packaging Technologies GmbH, South Korea</i>	
LLC Resonant Converter with Wide Output Voltage Control Ranges Operating at a Constant Switching Frequency	2124
Eun-Soo Kim, <i>Jeonju University, South Korea</i>	
Jicheol Lee, <i>Jeonju University, South Korea</i>	
Yechang Heo, <i>Jeonju University, South Korea</i>	
Takongmo Marius, <i>Jeonju University, South Korea</i>	
An Improved Analysis Method of Loss for the LCLC Multi-Resonant Three-Port Bidirectional DC-DC Converter	2129
Bo Chen, <i>Tianjin University, China</i>	
Yifeng Wang, <i>Tianjin University, China</i>	
Ping Wang, <i>Tianjin University, China</i>	
Wei Li, <i>Tianjin University, China</i>	
Fuqiang Han, <i>Tianjin University, China</i>	
Liang Yang, <i>Tianjin University, China</i>	
A Study of Multilevel Resonant DC-DC Converters for Conventional DC Voltage Bus Applications	2135
Javad Khodabakhsh, <i>Western University, Canada</i>	
Gerry Moschopoulos, <i>Western University, Canada</i>	
Light-Load Efficiency Improvement for LLC Converter with Synchronous Rectification in Solid-State Transformer Application	2142
Chih-Shen Yeh, <i>Virginia Polytechnic Institute and State University, United States</i>	
Lanhua Zhang, <i>Texas Instruments, Inc., United States</i>	
Jung-Muk Choe, <i>Virginia Polytechnic Institute and State University, United States</i>	
Cheng-Wei Chen, <i>Virginia Polytechnic Institute and State University, United States</i>	
Oscar Yu, <i>Virginia Polytechnic Institute and State University, United States</i>	
Jih-Sheng Lai, <i>Virginia Polytechnic Institute and State University, United States</i>	
Hybrid Buck Converter Optimization and Comparison for Smart Phone Integrated Battery Chargers	2148
Gabriel Gabian, <i>University of Tennessee, United States</i>	
Jordan Gamble, <i>University of Tennessee, United States</i>	
Benjamin Blalock, <i>University of Tennessee, United States</i>	
Daniel Costinett, <i>University of Tennessee, United States</i>	

Design of an All-GaN Bidirectional DC-DC Converter for Medium Voltage DC Ship Power Systems using Series-Stacked GaN Modules	2155
Mehdi Shojaie, <i>Florida International University, United States</i>	
Nour Elsayad, <i>Florida International University, United States</i>	
O.A. Mohammed, <i>Florida International University, United States</i>	
Ceramic Capacitor Controlled Resonant LLC Converters	2162
Ido Kolberg, <i>Tel Aviv University, Israel</i>	
Doron Shmilovitz, <i>Tel Aviv University, Israel</i>	
Shmuel Ben-Yaakov, <i>Ben-Gurion University of the Negev, Israel</i>	
Comparative Analysis of Two Compact and Highly Efficient Resonant Switched Capacitor Converters	2168
Miroslav Vasić, <i>Universidad Politécnica de Madrid, Spain</i>	
Diego Serrano, <i>Universidad Politécnica de Madrid, Spain</i>	
Pedro Alou, <i>Universidad Politécnica de Madrid, Spain</i>	
Jesús A. Oliver, <i>Universidad Politécnica de Madrid, Spain</i>	
Petar Grbović, <i>Huawei European Research Center, Germany</i>	
José A. Cobos, <i>Universidad Politécnica de Madrid, Spain</i>	
Zero Inductor Voltage Multilevel Bus Converter	2175
Samuel Webb, <i>Queen's University, Canada</i>	
Tianshu Liu, <i>Queen's University, Canada</i>	
Yan-Fei Liu, <i>Queen's University, Canada</i>	
A General Multi-Phase Coupled-Resonant-Tank Resonant Converter	2183
Hongliang Wang, <i>Queen's University, Canada</i>	
Yang Chen, <i>Queen's University, Canada</i>	
Yan-Fei Liu, <i>Queen's University, Canada</i>	
P.C. Sen, <i>Queen's University, Canada</i>	
System Optimization of a High Power Density Non-Isolated Intermediate Bus Converter for 48 V Server Applications	2191
David Reusch, <i>Efficient Power Conversion Corporation, United States</i>	
Suvankar Biswas, <i>Efficient Power Conversion Corporation, United States</i>	
Yuanzhe Zhang, <i>Efficient Power Conversion Corporation, United States</i>	
A Current-Fed DC-DC Converter using Two Transformers with Reducing Current Ripple and Wide Input Range	2198
Deshang Sha, <i>Beijing Institute of Technology, China</i>	
Ke Liu, <i>Beijing Institute of Technology, China</i>	
Xiao Wang, <i>Beijing Institute of Technology, China</i>	
Jiankun Zhang, <i>Beijing Institute of Technology, China</i>	

Session D03: Miscellaneous Topics in DC-DC Converters II

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Abhijit Pathak, *Infineon Technologies*

- Duty Phase Shift Technique for Extended-Duty-Ratio Boost Converter for Reducing Device Voltage Stress Over Wider Operating Range** 2203
Jinia Roy, *Arizona State University, United States*
Raja Ayyanar, *Arizona State University, United States*
- Modeling and Dynamics Investigation of an Active-Clamp Buck Converter** 2209
Ziwei Yu, *Arizona State University, United States*
Chenhao Nan, *Google Inc., United States*
Raja Ayyanar, *Arizona State University, United States*
- Real-Time Adaptive Timing Control of Synchronous Rectifiers in High Frequency GaN LLC Converter** 2214
Zhuoran Liu, *Chinese Academy of Sciences, China*
Ruiyang Yu, *University of Texas at Austin, United States*
Tianxiang Chen, *University of Texas at Austin, United States*
Qingyun Huang, *University of Texas at Austin, United States*
Alex Q. Huang, *University of Texas at Austin, United States*
- A Multi-Channel LED Driver with Selective Dimming** 2221
Ye Cikai, *National University of Singapore, Singapore*
Pritam Das, *Binghamton University, United States*
Sahoo Sanjib Kumar, *National University of Singapore, Singapore*
Majid Pahlevaninezhad, *University of Calgary, Canada*
- An Improved Analysis of dv/dt-Induced Low-Side MOSFET False Turn on in Synchronous Buck Converters** 2227
Ruqi Li, *Cisco, Inc., United States*
Joyce Zhu, *Cisco, Inc., United States*
Manjing Xie, *Texas Instruments, Inc., United States*
- 60 V-to-35 kV Input-Parallel Output-Series DC-DC Converter using Multi-Level Class-DE Rectifiers** 2235
Sanghyeon Park, *Stanford University, United States*
Lei Gu, *Stanford University, United States*
Juan Rivas-Davila, *Stanford University, United States*
- Modelling the Performance of a SiC-Based Synchronous Boost Converter using Different Conduction Modes** 2242
Maria R. Rogina, *Universidad de Oviedo, Spain*
Alberto Rodriguez, *Universidad de Oviedo, Spain*
Aitor Vazquez, *Universidad de Oviedo, Spain*
Diego G. Lamar, *Universidad de Oviedo, Spain*
Marta M. Hernando, *Universidad de Oviedo, Spain*

A Helical Air-Core Transformer with Even Current Distribution for VHF Converters	2249
<i>Jiahua Xu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Zhiliang Zhang, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Xinlu Chen, Beijing Century Goldray Semiconductor Co., Ltd., China</i>	
<i>Ke Xu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Zhou Dong, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Xiaoyong Ren, Nanjing University of Aeronautics and Astronautics, China</i>	
Air-Core Transformer Integration for GaN VHF Converters	2256
<i>Ke Xu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Zhiliang Zhang, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Zhi-Wei Xu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Jiahua Xu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Xiaoyong Ren, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Qianhong Chen, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Fengbing Yu, Mornsun Company, China</i>	
Discrete-Time Framework for Digital Control Design in a High-Frequency Dual Active Bridge Converter	2264
<i>Avishek Pal, Indian Institute of Technology Kharagpur, India</i>	
<i>Santanu Kapat, Indian Institute of Technology Kharagpur, India</i>	
<i>Kapil Jha, GE Global Research, India</i>	
<i>Arvind Tiwari, GE Global Research, India</i>	
A Self-Bias Supply Scheme for the Control Circuit in Power Converter	2271
<i>Lijuan Shen, Zhejiang University, China</i>	
<i>Junjun Zhang, Fudan University, China</i>	
<i>Junming Zhang, Zhejiang University, China</i>	
<i>Shuai Shao, Zhejiang University, China</i>	
Analysis, Design and Control of a Resonant Forward-Flyback Converter	2275
<i>Chao Quan, FSP-Powerland Technology Inc., China</i>	
<i>Yuchuan Geng, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Qianhong Chen, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Ming Xu, FSP-Powerland Technology Inc., China</i>	
<i>Julu Sun, FSP-Powerland Technology Inc., China</i>	
A Sliding Mode Duty-Ratio Control with Current Balancing Algorithm for Interleaved Buck Converters	2281
<i>Mohammad Hazzaz Mahmud, University of Arkansas, United States</i>	
<i>Yue Zhao, University of Arkansas, United States</i>	
<i>Yuzhi Zhang, ABB, United States</i>	
Optimal Design of Multi-Winding Planar Transformers in 1 MHz GaN Multiple-Output Forward Converters	2288
<i>Dongdong Hu, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Dongdong Ye, Beijing Institute of Control Engineering, China</i>	
<i>Zhiliang Zhang, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Binghui He, Nanjing University of Aeronautics and Astronautics, China</i>	
<i>Xiaoyong Ren, Nanjing University of Aeronautics and Astronautics, China</i>	

A SiC-Based Isolated DC/DC Converter for High Density Data Center Applications 2294
Ali Shahabi, *University of Alabama, United States*
Andrew Lemmon, *University of Alabama, United States*
Ryan Graves, *University of Alabama, United States*
Sujit Banerjee, *Monolith Semiconductor, Inc., United States*
Levi Gant, *Monolith Semiconductor, Inc., United States*
Luke L. Jenkins, *IBM T.J. Watson Research Center, United States*

Novel High-Gain Hybrid Current-Driven DC-DC Converter Topology 2302
Snehal Bagawade, *Queen's University, Canada*
Majid Pahlevani, *University of Calgary, Canada*
Ryan Fernandes, *Sparq Systems Inc., Canada*
Praveen Jain, *Queen's University, Canada*

Half-Bridge Controller with Optimized Pre-Biased Start-Up 2310
Wangxin Huang, *Texas Instruments, Inc., United States*
Tobin Hagan, *Texas Instruments, Inc., United States*
Maxim Franke, *Texas Instruments, Inc., United States*
Brent McDonald, *Texas Instruments, Inc., United States*
Oscar Persson, *Flex Power, Sweden*

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*

Harmonic Filter Topologies for Low DC Bus Capacitance of 6-Pulse Rectifier Front End Adjustable Speed Drives 2315
Tin Luu, *MTE Corporation, United States*
Todd Shudarek, *MTE Corporation, United States*

A Study of Power Electronic based Stall and Electromechanical Yaw Power Control Strategies in Small-Scale Grid-Connected Wind Turbines 2323
Ebrahim Mohammadi, *Graduate University of Advanced Technology, Iran*
Roohollah Fadaeinedjad, *Graduate University of Advanced Technology, Iran*
Gerry Moschopoulos, *Western University, Canada*

Finite States Model Predictive Direct Power Control for Phase Leg Faults Tolerant Operation of Bidirectional AC/DC Converter 2330
Nan Jin, *Zhengzhou University of Light Industry, China*
Leilei Guo, *Zhengzhou University of Light Industry, China*
Chongyan Zhao, *Zhengzhou University of Light Industry, China*
Zhifeng Dou, *Zhengzhou University of Light Industry, China*
Guangzhao Cui, *Zhengzhou University of Light Industry, China*

A PS-SWM Strategy for Isolated Modular Multilevel DC/DC Converter with Reduced Passive Component Size and Low Total Device Rating 2337
Ran Mo, *Florida State University, United States*
Ren Xie, *Florida State University, United States*
Yanjun Shi, *Florida State University, United States*
Hui Li, *Florida State University, United States*

Atypical PWM for Maximizing 2L-VSI DC-Bus Utilization in Inverter-Based Microgrids with Ancillary Services	2343
Aswad Adib, <i>Kansas State University, United States</i>	
Jacob Lamb, <i>Rockwell Automation, United States</i>	
Behrooz Mirafzal, <i>Kansas State University, United States</i>	
Reachability Analysis for a Grid-Connected Voltage-Sourced Converter (VSC)	2349
Parisa M. Shabestari, <i>Washington State University, United States</i>	
Saleh Ziaeinejad, <i>Washington State University, United States</i>	
Ali Mehrizi-Sani, <i>Washington State University, United States</i>	
Provision of Ancillary Service in a Grid-Connected Photovoltaic Power System	2355
Jéssica P.M. Rocha, <i>Universidade Federal do Paráíba, Brazil</i>	
Fabiano Salvadori, <i>Universidade Federal do Paráíba, Brazil</i>	
Camila S. Gehrke, <i>Universidade Federal do Paráíba, Brazil</i>	
Solid State Auto-Transformer Concept for Multi-Pulse Rectifiers	2362
Harish S. Krishnamoorthy, <i>University of Houston, United States</i>	
Srikanth Yerra, <i>University of Houston, United States</i>	
Use of Series Negative Impedance to Cancel the Effect of Equivalent Grid Impedance on the Grid-Connected Inverter Stability in the DPGS	2368
Yuanbin He, <i>Hangzhou Dianzi University, China</i>	
Chun-Tak Lai, <i>City University of Hong Kong, Hong Kong</i>	
Henry Shu-Hung Chung, <i>City University of Hong Kong, Hong Kong</i>	
Xin Zhang, <i>Nanyang Technological University, Singapore</i>	
Weimin Wu, <i>Shanghai Maritime University, China</i>	
An Accurate Power Control Scheme for Droop-Controlled Grid-Connected Inverters	2374
Baojin Liu, <i>Xi'an Jiaotong University, China</i>	
Jinjun Liu, <i>Xi'an Jiaotong University, China</i>	
Zeng Liu, <i>Xi'an Jiaotong University, China</i>	
Teng Wu, <i>Xi'an Jiaotong University, China</i>	
Ronghui An, <i>Xi'an Jiaotong University, China</i>	
Session D05: Power Electronics for Utility Interface II	
Location: Hemisphere Ballroom C1 & C2	
March 8, 2018 11:30 - 14:00	
Session Chairs: Alireza Bakhshai, <i>Queen's University</i>	
Xiong Li, <i>Texas Instrument, Inc.</i>	
Scale-Up Methodology of a Modular Multilevel Converter for HVDC Applications	2379
Mohammed Alharbi, <i>North Carolina State University, United States</i>	
Subhashish Bhattacharya, <i>North Carolina State University, United States</i>	
A SiC-Based Power Electronics Interface for Integrating a Battery Energy Storage Into the Medium (13.8 kV) Distribution System	2387
Janviere Umuhoza, <i>University of Arkansas, United States</i>	
Haider Mhiesan, <i>University of Arkansas, United States</i>	
Kenneth Mordi, <i>University of Arkansas, United States</i>	
Chris Farnell, <i>University of Arkansas, United States</i>	
H. Alan Mantooh, <i>University of Arkansas, United States</i>	

A New Active EMI Filter with Virtual Impedance Enhancement 2393
Zhe Zhang, *University of Connecticut, United States*
Weiqiang Chen, *University of Connecticut, United States*
Ali M. Bazzi, *University of Connecticut, United States*
Scott Ramsay, *DRS Consolidated Controls, Inc., United States*
Jeffrey Czapor, *DRS Consolidated Controls, Inc., United States*
John Aslanidis, *DRS Consolidated Controls, Inc., United States*

Energy Management of Microgrid in Smart Building Considering Air Temperature Impact 2398
Mohamad Abou Houran, *Xi'an Jiaotong University, China*
Xu Yang, *Xi'an Jiaotong University, China*
Wenjie Chen, *Xi'an Jiaotong University, China*

Single-Phase Bidirectional Three-Level T-Type Inverter 2405
Min-Kwon Yang, *Chonbuk National University, South Korea*
Woo-Young Choi, *Chonbuk National University, South Korea*

A Design Investigation of a 1 MVA SiC Medium Voltage Three Phase Rectifier based on Isolated Dual Active Bridge 2409
Hanning Tang, *University of Texas at Austin, United States*
Alex Q. Huang, *University of Texas at Austin, United States*

A Novel Single-Stage High-Frequency Boost Inverter for PV Grid-Tie Applications 2417
Hamdy Radwan, *Aswan University, Egypt*
Mahmoud A. Sayed, *Nagoya Institute of Technology, Japan*
Takaharu Takeshita, *Nagoya Institute of Technology, Japan*
Adel A. Elbaset, *Minia University, Egypt*
G. Shabib, *Aswan University, Egypt*

A New Six-Switch Five-Level Boost-Active Neutral Point Clamped (5L-Boost-ANPC) Inverter 2424
Yam P. Siwakoti, *University of Technology Sydney, Australia*

Modeling and Stability Analysis for Multiple Parallel Grid-Connected Inverters System 2431
Xiaoming Zou, *Chongqing University, China*
Xiong Du, *Chongqing University, China*
Guoning Wang, *Chongqing University, China*

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*

Starting Current Reduction of Single-Phase Induction Motor for Ultra-Low Temperature Freezer N/A
Seon-Hwan Hwang, *Kyungnam University, South Korea*
Jang-Mok Kim, *Pusan National University, South Korea*

A Novel Initial Rotor Position Estimation Method for Wound-Rotor Synchronous Starter/Generator	2440
Rui Wang, <i>Northwestern Polytechnical University, China</i>	
Weiguo Liu, <i>Northwestern Polytechnical University, China</i>	
Yujie Zhu, <i>Northwestern Polytechnical University, China</i>	
Jichang Peng, <i>Northwestern Polytechnical University, China</i>	
Tao Meng, <i>Northwestern Polytechnical University, China</i>	
Two-Phase X-Type Current Source Rectifier with Reduced Active Switch Count for Open-End Permanent-Magnet Synchronous Generator	2446
Louelson A. Costa, <i>Universidade Federal de Campina Grande, Brazil</i>	
Montiê A. Vitorino, <i>Universidade Federal de Campina Grande, Brazil</i>	
Maurício B.R. Corrêa, <i>Universidade Federal de Campina Grande, Brazil</i>	
Filipe A.C. Bahia, <i>Universidade Federal de Campina Grande, Brazil</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
Online Stator End Winding Thermography using Infrared Sensor Array	2454
Padmanabhan Sampath Kumar, <i>Nanyang Technological University, Singapore</i>	
Lihua Xie, <i>Nanyang Technological University, Singapore</i>	
Mohamed Sathik Mohamed Halick, <i>Nanyang Technological University, Singapore</i>	
Viswanathan Vaiyapuri, <i>Rolls-Royce Singapore Pte., Ltd., Singapore</i>	
Direct Torque Model Predictive Control of a Poly-Phase Permanent Magnet Synchronous Motor with Current Harmonic Suppression and Loss Reduction	2460
Benjamin Cao, <i>University of Pittsburgh, United States</i>	
Brandon M. Grainger, <i>University of Pittsburgh, United States</i>	
Xin Wang, <i>Southern Illinois University-Edwardsville, United States</i>	
Yu Zou, <i>Saginaw Valley State University, United States</i>	
Zhi-Hong Mao, <i>University of Pittsburgh, United States</i>	
Generalized Tri-State PWM Method based High Frequency SiC Three-Phase Inverter	2465
Junzhong Xu, <i>Shanghai Jiao Tong University, China</i>	
Yong Wang, <i>Shanghai Jiao Tong University, China</i>	
Erlong Zhu, <i>Shanghai Jiao Tong University, China</i>	
Khurram Hashmi, <i>Shanghai Jiao Tong University, China</i>	
Xiaoyu Zha, <i>Shanghai Jiao Tong University, China</i>	
Jingwen Han, <i>Shanghai Jiao Tong University, China</i>	
Houjun Tang, <i>Shanghai Jiao Tong University, China</i>	
A Simple Zero-Sequence Voltage Injection Method to balance the Neutral-Point Potential for Three-Level NPC Inverters	2471
Xingda Zhou, <i>Chongqing University, China</i>	
Shuai Lu, <i>Chongqing University, China</i>	
An Improved Drive Signal Exchange Strategy for Cascaded H-Bridge Topology	2476
Hanyang Yu, <i>Zhejiang University, China</i>	
Jian Liu, <i>Zhejiang University, China</i>	
Wenxi Yao, <i>Zhejiang University, China</i>	
Zhengyu Lu, <i>Zhejiang University, China</i>	
Yu Ji, <i>State Grid Nantong Power Supply Company, China</i>	

Online Fault Detection of Stator Winding Faults in IM Driven by DTC using the Off-Diagonal Term of the Symmetrical Component Impedance Matrix	2482
<i>Alberto Berzoy, Florida International University, United States</i>	
<i>Hassan H. Eldeeb, Florida International University, United States</i>	
<i>Osama Mohammed, Florida International University, United States</i>	
Pulse-Width Modulation Scheme for a ZVS Single-Phase Inverter in Rectifier Operation ...	2488
<i>Yenan Chen, Zhejiang University, China</i>	
<i>Dehong Xu, Zhejiang University, China</i>	
An Improved High-Frequency Common-Mode Voltage Injection Method in Modular Multilevel Converter in Motor Drive Application	2496
<i>Shuguang Song, Xi'an Jiaotong University, China</i>	
<i>Jinjun Liu, Xi'an Jiaotong University, China</i>	
<i>Shaodi Ouyang, Xi'an Jiaotong University, China</i>	
<i>Xingxing Chen, Xi'an Jiaotong University, China</i>	
A Power Decoupling Control Method for the Regenerative Cascaded-H-Bridge-Based Motor Drive	2501
<i>Ze-zhou Yang, Wuhan University, China</i>	
<i>Jin-wu Gong, Wuhan University, China</i>	
<i>Jian-jun Sun, Wuhan University, China</i>	
<i>Yi Tang, Nanyang Technological University, Singapore</i>	
<i>Cheng Cheng, Wuhan University, China</i>	
<i>Xiao-ming Zha, Wuhan University, China</i>	
<i>Jinmao Gu, Beijing Xinhang Electrical and Mechanical Equipment Co., Ltd., China</i>	
Voltage based 2/3/4-Step Commutation for Direct Three-Level Matrix Converter	2507
<i>Martin Leubner, Technische Universität Dresden, Germany</i>	
<i>Nico Remus, Technische Universität Dresden, Germany</i>	
<i>Stephan Schwarz, Technische Universität Dresden, Germany</i>	
<i>Wilfried Hofmann, Technische Universität Dresden, Germany</i>	
Common-Mode Noise Reduction with Impedance Balancing in DC-Fed Motor Drives	2515
<i>Ruirui Chen, University of Tennessee, United States</i>	
<i>Zheyu Zhang, University of Tennessee, United States</i>	
<i>Ren Ren, University of Tennessee, United States</i>	
<i>Jiahao Niu, University of Tennessee, United States</i>	
<i>Handong Gui, University of Tennessee, United States</i>	
<i>Fred Wang, University of Tennessee and Oak Ridge National Laboratory, United States</i>	
<i>Leon M. Tolbert, University of Tennessee and Oak Ridge National Laboratory, United States</i>	
<i>Daniel J. Costinett, University of Tennessee and Oak Ridge National Laboratory, United States</i>	
<i>Benjamin J. Blalock, University of Tennessee, United States</i>	
Constant Duty Cycle Sinusoidal Output Inverter with Sine Amplitude Modulated High Frequency Link	2521
<i>Gustavo C. Knabben, Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
<i>Dominik Neumayr, Eidgenössische Technische Hochschule Zürich, Switzerland</i>	
<i>Johann W. Kolar, Eidgenössische Technische Hochschule Zürich, Switzerland</i>	

An Enhanced PWM Method for Loss Balancing of Five Level T-Type Inverter in PV Systems	2530
Mokhtar Aly, <i>Aswan University, Egypt</i>	
Emad M. Ahmed, <i>Aswan University, Egypt</i>	
Mohamed Orabi, <i>Aswan University, Egypt</i>	
Masahito Shoyama, <i>Kyushu University, Japan</i>	

Optimized Short-Through Time Distribution for Inductor Current Ripple Reduction in Z-Source Inverter	2536
Ryuji Iijima, <i>University of Tsukuba, Japan</i>	
Takanori Isobe, <i>University of Tsukuba, Japan</i>	
Hiroshi Tadano, <i>University of Tsukuba, Japan</i>	

Carrier-Based PWM Design of Multilevel ANPC-Based Converter through Hierarchical Decomposition	2542
Yuzhuo Li, <i>University of Alberta, Canada</i>	
Yun Wei Li, <i>University of Alberta, Canada</i>	
Hao Tian, <i>University of Alberta, Canada</i>	

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*

New Topology for a Single-Phase Buck-Boost Inverter	2550
Andreas Mattos Pratto Correa, <i>Universidade Federal de Santa Catarina, Brazil</i>	
Telles Brunelli Lazzarin, <i>Universidade Federal de Santa Catarina, Brazil</i>	
Ivo Barbi, <i>Universidade Federal de Santa Catarina, Brazil</i>	

Analysis and Design of an Energy Regenerative Snubber for Magnetically Coupled Impedance Source Converters	2555
Mojtaba Forouzesh, <i>Aalborg University, Denmark</i>	
Ahmed Abdelhakim, <i>Università di Padova, Italy</i>	
Yam Siwakoti, <i>University of Technology Sydney, Australia</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	

A Novel Forward-Mode Five-Level Inverter with High Frequency Link	2562
Kunshan Gong, <i>Nanjing University of Science and Technology, China</i>	
Lei Li, <i>Nanjing University of Science and Technology, China</i>	

An EMI-Less Full-Bridge Inverter for High Speed SiC Switching Devices	2570
Jun Sakata, <i>Keio University, Japan</i>	
Masao Taguchi, <i>Keio University, Japan</i>	
Shoichi Sasaki, <i>Keio University, Japan</i>	
Tadahiro Kuroda, <i>Keio University, Japan</i>	
Keiji Toda, <i>Toyota Motor Corporation, Japan</i>	

Research on a Multi-Port Converter with Nine-Switch Cells	2577
Pan Wang, <i>Wuhan University, China</i>	
Xiaoming Zha, <i>Wuhan University, China</i>	
Fei Liu, <i>Wuhan University, China</i>	
Chao Chen, <i>Wuhan University, China</i>	
Tianyi Yu, <i>Wuhan University, China</i>	
Yizhan Zhuang, <i>Wuhan University, China</i>	
Jinwu Gong, <i>Wuhan University, China</i>	
Pan Wang, <i>Wuhan Electric Power Technical College, China</i>	
Common-Mode Inductor Saturation Analysis and Design Optimization based on Spectrum Concept	2583
Ruirui Chen, <i>University of Tennessee, United States</i>	
Zheyu Zhang, <i>University of Tennessee, United States</i>	
Ren Ren, <i>University of Tennessee, United States</i>	
Jiahao Niu, <i>University of Tennessee, United States</i>	
Handong Gui, <i>University of Tennessee, United States</i>	
Fred Wang, <i>University of Tennessee and Oak Ridge National Laboratory, United States</i>	
Leon M. Tolbert, <i>University of Tennessee and Oak Ridge National Laboratory, United States</i>	
Daniel J. Costinett, <i>University of Tennessee and Oak Ridge National Laboratory, United States</i>	
Benjamin J. Blalock, <i>University of Tennessee, United States</i>	
Investigation and Evaluation of High Power SiC MOSFETs Switching Performance and Overshoot Voltage	2589
Peizhong Yi, <i>Rockwell Automation, United States</i>	
Yujia Cui, <i>Rockwell Automation, United States</i>	
Anthony Vang, <i>Rockwell Automation, United States</i>	
Lixiang Wei, <i>Rockwell Automation, United States</i>	
Open-End Multilevel Six-Phase Machine Drive System with Three Three-Leg NPC Converters	2593
Ivan da Silva, <i>Universidade Federal de Campina Grande, Brazil</i>	
Cursino B. Jacobina, <i>Universidade Federal de Campina Grande, Brazil</i>	
Ayslan C.N. Maia, <i>Universidade Federal de Campina Grande and Federal Institute of Alagoas, Brazil</i>	
Isaac S. Freitas, <i>Universidade Federal do Paraíba, Brazil</i>	
Reuben P.R. Sousa, <i>Universidade Federal de Campina Grande, Brazil</i>	
Comparative Investigation of PWM Current-Source Inverters for Future Machine Drives using High-Frequency Wide-Bandgap Power Switches	2601
Hang Dai, <i>University of Wisconsin-Madison, United States</i>	
Thomas M. Jahns, <i>University of Wisconsin-Madison, United States</i>	
A Three-Level, T-Type, Power Electronics Building Block using Si-SiC Hybrid Switch for High-Speed Drives	2609
Amol Deshpande, <i>University of Arkansas, United States</i>	
Yingzhuo Chen, <i>Ohio State University, United States</i>	
Balaji Narayanasamy, <i>University of Arkansas, United States</i>	
Arvind S. Sathyanarayanan, <i>Ohio State University, United States</i>	
Fang Luo, <i>University of Arkansas, United States</i>	
One-Inductor Single-Stage Differential Boost Inverter Operated in Discontinuous Current Mode for Single-Phase Grid-Tied Photovoltaic System	2617
Ayato Sagehashi, <i>Nagaoka University of Technology, Japan</i>	
Le Hoai Nam, <i>Nagaoka University of Technology, Japan</i>	
Jun-Ichi Itoh, <i>Nagaoka University of Technology, Japan</i>	

Comparative Performance Evaluation of Common Mode Voltage Reduction Three-Phase Inverter Topologies 2625
Di Han, *University of Wisconsin-Madison, United States*
Woongkul Lee, *University of Wisconsin-Madison, United States*
Silong Li, *University of Wisconsin-Madison, United States*
Bulent Sarlioglu, *University of Wisconsin-Madison, United States*

Dynamic Control Set-Model Predictive Control for Field-Oriented Control of VSI-PMSM 2630
Shuai Wang, *Ryerson University, Canada*
Dewei Xu, *Ryerson University, Canada*
Chushan Li, *ZJU-UIUC Institute, China*

Fault-Tolerant Operation with 1-Phase Open in Parallel-Connected Motor 2637
Sunku Kwon, *Seoul National University, South Korea*
Jung-Ik Ha, *Seoul National University, South Korea*

Duo-Active-Neutral-Point-Clamped Multilevel Converter: An Exploration of the Fundamental Topology and Experimental Verification 2642
Vahid Dargahi, *Clemson University, United States*
Keith A. Corzine, *University of California, Santa Cruz, United States*
Johan H. Enslin, *Clemson University, United States*
Mostafa Abarzadeh, *École de Technologie Supérieure / University of Quebec, Canada*
Arash Khoshkbar Sadigh, *Extron Electronics, United States*
José Rodríguez, *Universidad Andres Bello, Chile*
Frede Blaabjerg, *Aalborg University, Denmark*

Session D08: Magnetics and Capacitors

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Edward Herbert, *Power Sources Manufacturers Association*
Stephan Carlsen, *Raytheon Co.*

Integrated Inductors, Capacitors, and Damping in Bus Bars for dv/dt Filter Applications 2650
Andy Schroedermeier, *University of Wisconsin-Madison, United States*
Daniel C. Ludois, *University of Wisconsin-Madison, United States*

Thermal Model of Litz Wire Toroidal Inductor based on Experimental Measurements 2658
Mylene Delhommais, *Institut Polytechnique de Grenoble, France*
Jean-Luc Schanen, *Institut Polytechnique de Grenoble, France*
Frédéric Wurtz, *Institut Polytechnique de Grenoble, France*
Cécile Rigaud, *TRONICO-ALCEN, France*
Sylvain Chardon, *TRONICO-ALCEN, France*
Stéphane Vighetti, *SIREPE, France*

Comparison between Desaturation Sensing and Rogowski Coil Current Sensing for Shortcircuit Protection of 1.2 kV, 300 A SiC MOSFET Module 2666
Slavko Mocevic, *Virginia Polytechnic Institute and State University, United States*
Jun Wang, *Virginia Polytechnic Institute and State University, United States*
Rolando Burgos, *Virginia Polytechnic Institute and State University, United States*
Dushan Boroyevich, *Virginia Polytechnic Institute and State University, United States*
Constantin Stancu, *General Motors, United States*
Marko Jaksic, *General Motors, United States*
Brian Peaslee, *General Motors, United States*

High Power Density PCB Coil Array Applied to Domestic Induction Heating Appliances ... 2673

J. Serrano, *Universidad de Zaragoza, Spain*
J. Acero, *Universidad de Zaragoza, Spain*
I. Lope, *B/S/H/ Home Appliances Group, Spain*
C. Carretero, *Universidad de Zaragoza, Spain*
J.M. Burdío, *Universidad de Zaragoza, Spain*

High Frequency LLC Resonant Converter with Magnetic Shunt Integrated Planar Transformer 2678

Mingxiao Li, *Technical University of Denmark, Denmark*
Ziwei Ouyang, *Technical University of Denmark, Denmark*
Michael A.E. Andersen, *Technical University of Denmark, Denmark*

Impact of Charge Redistribution on Delivered Energy of Supercapacitors with Constant Power Loads 2686

Hengzhao Yang, *California State University-Long Beach, United States*

Test Fixture to Apply DC Bias and AC Ripple Current for Reliability Testing of Electrolytic Capacitors 2691

Xuechao Wang, *Rockwell Automation, United States*
Marzieh Karami, *Rockwell Automation, United States*
Rangarajan M. Tallam, *Rockwell Automation, United States*

Thermal Management of Compact Nanocrystalline Inductors for Power Dense Converters 2696

Yiren Wang, *University of Manchester, United Kingdom*
Gerardo Calderon-Lopez, *University of Manchester, United Kingdom*
Andrew Forsyth, *University of Manchester, United Kingdom*

Session D09: Power Devices

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Hui Li, *Florida State University*
Rostan Rodrigues, *ABB*

Comparative Evaluation of Static and Dynamic Performance of 1.2-kV SiC Power Switches 2704

Yang Jiao, *Delta Products Corporation, United States*
Milan M. Jovanović, *Delta Products Corporation, United States*

Dynamic Performance of 4H-SiC Power MOSFETs and Si IGBTs Over Wide Temperature Range 2712

Jinwei Qi, *Xi'an Jiaotong University, China*
Kai Tian, *Xi'an Jiaotong University, China*
Zhangsong Mao, *Xi'an Jiaotong University, China*
Song Yang, *Xi'an Jiaotong University, China*
Wenjie Song, *Xi'an Jiaotong University, China*
Mingchao Yang, *Xi'an Jiaotong University, China*
Anping Zhang, *Xi'an Jiaotong University, China*

Developing a Standardized Method for Measuring and Quantifying Dynamic On-State Resistance via a Survey of Low Voltage GaN HEMTs 2717
Thomas Foulkes, *University of Illinois at Urbana-Champaign, United States*
Tomas Modeer, *University of Illinois at Urbana-Champaign, United States*
Robert C.N. Pilawa-Podgurski, *University of Illinois at Urbana-Champaign, United States*

Development of Isolated SenseGaN Current Monitoring for Boundary Conduction Mode Control of Power Converters 2725
Mehrdad Biglarbegan, *University of North Carolina at Charlotte, United States*
Namwon Kim, *University of North Carolina at Charlotte, United States*
Tiefu Zhao, *University of North Carolina at Charlotte, United States*
Babak Parkhideh, *University of North Carolina at Charlotte, United States*

Voltage Rating and Performances Enhancement Technology for Market Available Diodes 2730
Han Peng, *FSP-Powerland Technology Inc., China*
Kunqi Li, *Nanjing University of Aeronautics and Astronautics, China*
Xiaoyong Ren, *Nanjing University of Aeronautics and Astronautics, China*
Ming Xu, *FSP-Powerland Technology Inc., China*

Single Shot Avalanche Energy Characterization of 10kV, 10A 4H-SiC MOSFETs 2737
Ashish Kumar, *North Carolina State University, United States*
Sanket Parashar, *North Carolina State University, United States*
Jayant Baliga, *North Carolina State University, United States*
Subhashish Bhattacharya, *North Carolina State University, United States*

Investigations on Circuits and Layout for Non-Intrusive Switch Current Measurements in High Frequency Converters using Parallel GaN HEMTs 2743
Shahriar Jalal Nibir, *University of North Carolina at Charlotte, United States*
Daniel Fregosi, *University of North Carolina at Charlotte, United States*
Babak Parkhideh, *University of North Carolina at Charlotte, United States*

Session D10: Device Reliability

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*

High Reliable and High Bonding Strength of Silver Sintered Joints on Copper Surfaces by Pressure Sintering under Air Atmosphere N/A
Ly May Chew, *Heraeus Deutschland GmbH & Co. KG, Germany*
Wolfgang Schmitt, *Heraeus Deutschland GmbH & Co. KG, Germany*

Power Semiconductor Ageing Test Bench dedicated to Photovoltaic Applications 2755
Mouhannad Dbeiss, *Institut Polytechnique de Grenoble, France*
Yvan Avenas, *Institut Polytechnique de Grenoble, France*

A New Gate Drive Technique for Superjunction MOSFETs to Compensate the Effects of Common Source Inductance 2763
Bernhard Zojer, *Infineon Technologies Austria AG, Austria*

Online Junction Temperature for Off-the-Shelf Power Converters 2769
Mohamed Halick Mohamed Sathik, *Nanyang Technological University, Singapore*
Sundararajan Prasanth, *Nanyang Technological University, Singapore*
Firman Sasongko, *Nanyang Technological University, Singapore*
Sampath Kumar Padmanabhan, *Nanyang Technological University, Singapore*
Josep Pou, *Nanyang Technological University, Singapore*
Rejeki Simanjorang, *Rolls-Royce Singapore Pte. Ltd., Singapore*

Short Circuit Characterization of 3rd Generation 10 kV SiC MOSFET 2775
Shiqi Ji, *University of Tennessee, United States*
Marko Laitinen, *Danfoss Drives A/S, United States*
Xingxuan Huang, *University of Tennessee, United States*
Jingjing Sun, *University of Tennessee, United States*
Bill Giewont, *Danfoss Drives A/S, United States*
Leon M. Tolbert, *University of Tennessee and Oak Ridge National Laboratory, United States*
Fred Wang, *University of Tennessee and Oak Ridge National Laboratory, United States*

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*

Top Die Surface Reprocessing for Planar Package with Double Sided Cooling 2780
Puqi Ning, *Chinese Academy of Sciences, China*
Lei Li, *Chinese Academy of Sciences, China*
Xuhui Wen, *Chinese Academy of Sciences, China*
Qiongxuan Ge, *Chinese Academy of Sciences, China*
Yaohua Li, *Chinese Academy of Sciences, China*
Yunhui Mei, *Tianjin University, China*

Temperature Dependency of the On-State Voltage of IGBT and its Application in Thermal Resistance Test 2786
Lei Li, *Chinese Academy of Sciences, China*
Puqi Ning, *Chinese Academy of Sciences, China*
Ye Li, *Chinese Academy of Sciences, China*
Xuhui Wen, *Chinese Academy of Sciences, China*
Dong Zhang, *Chinese Academy of Sciences, China*
Qiongxuan Ge, *Chinese Academy of Sciences, China*
Yaohua Li, *Chinese Academy of Sciences, China*

A Dynamic Thermal Controller for Power Semiconductor Devices 2792
Mohamed Halick Mohamed Sathik, *Nanyang Technological University, Singapore*
Sundararajan Prasanth, *Nanyang Technological University, Singapore*
Firman Sasongko, *Nanyang Technological University, Singapore*
Sampath Kumar Padmanabhan, *Nanyang Technological University, Singapore*
Josep Pou, *Nanyang Technological University, Singapore*
Rejeki Simanjorang, *Nanyang Technological University, Singapore*

Modular Heat Sink for Chip-Scale GaN Transistors in Multilevel Converters	2798
Nathan Pallo, <i>University of Illinois at Urbana-Champaign, United States</i>	
Chirag Kharangate, <i>Stanford University, United States</i>	
Tomas Modeer, <i>University of Illinois at Urbana-Champaign, United States</i>	
Joseph Schaadt, <i>Stanford University, United States</i>	
Mehdi Asheghi, <i>Stanford University, United States</i>	
Kenneth Goodson, <i>Stanford University, United States</i>	
Robert Pilawa-Podgurski, <i>University of Illinois at Urbana-Champaign, United States</i>	
 Analysis and Design of an Overcurrent Protection Scheme based on Parasitic Inductance of SiC MOSFET Power Module	 2806
Keyao Sun, <i>Virginia Polytechnic Institute and State University, United States</i>	
Jun Wang, <i>Virginia Polytechnic Institute and State University, United States</i>	
Rolando Burgos, <i>Virginia Polytechnic Institute and State University, United States</i>	
Dushan Boroyevich, <i>Virginia Polytechnic Institute and State University, United States</i>	
Yonghan Kang, <i>LG Electronics Inc., United States</i>	
Edward Choi, <i>LG Electronics Inc., United States</i>	
 Online Junction Temperature Extraction and Aging Detection of IGBT via Miller Plateau Width	 2813
Jingcun Liu, <i>Xi'an Jiaotong University, China</i>	
Guogang Zhang, <i>Xi'an Jiaotong University, China</i>	
Qian Chen, <i>Xi'an Jiaotong University, China</i>	
Lu Qi, <i>Xi'an Jiaotong University, China</i>	
Zheng Qin, <i>Xi'an Jiaotong University, China</i>	
Jianhua Wang, <i>Xi'an Jiaotong University, China</i>	
Yingsan Geng, <i>Xi'an Jiaotong University, China</i>	
 Bus Bar Embedded Rogowski Coil	 2821
Yoshikazu Kuwabara, <i>Tokyo Metropolitan University, Japan</i>	
Keiji Wada, <i>Tokyo Metropolitan University, Japan</i>	
Jean-Michel Guichon, <i>Institut Polytechnique de Grenoble, France</i>	
Jean-Luc Schanen, <i>Institut Polytechnique de Grenoble, France</i>	
James Roudet, <i>Institut Polytechnique de Grenoble, France</i>	
 Active Power Cycling and Condition Monitoring of IGBT Power Modules using Reflectometry	 2827
Abu Hanif, <i>University of Missouri-Kansas City, United States</i>	
Swagat Das, <i>University of Missouri-Kansas City, United States</i>	
Faisal Khan, <i>University of Missouri-Kansas City, United States</i>	
 Development of a Low-Inductance SiC Trench MOSFET Power Module for High-Frequency Application	 2834
Zhiqiang Wang, <i>Oak Ridge National Laboratory, United States</i>	
Fei Yang, <i>University of Tennessee, United States</i>	
Steven Campbell, <i>Oak Ridge National Laboratory, United States</i>	
Madhu Chinthavali, <i>Oak Ridge National Laboratory, United States</i>	

Session D12: Power Devices Modeling & Simulation

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Marco Meola, *Integrated Device Technology*
Yu Du, *ABB*

A Scalable Drain Current Model of AlN/GaN MIS-HEMTs with Embedded Source Field-Plate Structures 2842

H. Aoki, *Teikyo Heisei University, Japan*
H. Sakairi, *ROHM Co., Ltd., Japan*
N. Kuroda, *ROHM Co., Ltd., Japan*
Y. Nakamura, *ROHM Co., Ltd., Japan*
K. Chikamatsu, *ROHM Co., Ltd., Japan*
K. Nakahara, *ROHM Co., Ltd., Japan*

Inverter Power Module Parasitics Modeling with Cross-Coupling Simplification for Fast Model Extraction and Switching Characteristics Simulation 2848

Thomas D. Bayer, *General Electric, United States*

Electro-Thermal Co-Simulation of Two Parallel-Connected SiC-MOSFETs under Thermally-Imbalanced Conditions 2855

Yasushige Mukunoki, *Mitsubishi Electric Corp., Japan*
Takeshi Horiguchi, *Mitsubishi Electric Corp., Japan*
Akinori Nishizawa, *Mitsubishi Electric Corp., Japan*
Kentaro Konno, *Tokyo Institute of Technology, Japan*
Tsubasa Matsuo, *Tokyo Institute of Technology, Japan*
Masaki Kuzumoto, *Tokyo Institute of Technology, Japan*
Makoto Hagiwara, *Tokyo Institute of Technology, Japan*
Hirofumi Akagi, *Tokyo Institute of Technology, Japan*

A Full Power Emulation Platform for Evaluating Power Semiconductors 2861

Juncheng Lu, *GaN Systems Inc., Canada*
Yajie Qiu, *GaN Systems Inc., Canada*
Di Chen, *GaN Systems Inc., Canada*

Normalization-Based Approach to Electric Motor BVR Related Capacitances Computation 2868

J. Ahola, *Lappeenranta University of Technology, Finland*
A. Muetze, *Technische Universität Graz, Austria*
M. Niemelä, *Lappeenranta University of Technology, Finland*
A. Romanenko, *Lappeenranta University of Technology, Finland*

Circuit Simulation of a Silicon-Carbide MOSFET Considering the Effect of the Parasitic Elements on Circuit Boards by using S-Parameters 2875

Tatsuya Yanagi, *ROHM Co., Ltd., Japan*
Hiroyuki Sakairi, *ROHM Co., Ltd., Japan*
Hirotaka Otake, *ROHM Co., Ltd., Japan*
Naotaka Kuroda, *ROHM Co., Ltd., Japan*
Seiya Kitagawa, *ROHM Co., Ltd., Japan*
Noriyoshi Hashimoto, *Keysight Technologies International Japan G.K., Japan*
Ryo Takeda, *Keysight Technologies International Japan G.K., Japan*
Ken Nakahara, *ROHM Co., Ltd., Japan*

Ceramic Capacitors: Turning a Deficiency into an Advantage 2879

Shmuel Ben-Yaakov, *Ben-Gurion University of the Negev, Israel*
Ilya Zeltser, *Rafael Advanced Defense Systems Ltd., Israel*

Fatigue Life Prediction Model for Surface Mountable Power Electronics Fuses 2886

Ramdev Kanapady, *Eaton Corporation, United States*
Tissaphern Mirfakhrai, *Eaton Corporation, United States*
Clarita Knoll, *Eaton Corporation, United States*
Zhuomin Liu, *Eaton Corporation, United States*

Finite Element Model Optimization and Thermal Network Parameter Extraction of Press-Pack IGBT 2892

Hai Ren, *Chongqing University, China*
Wei Lai, *Chongqing University, China*
Zeshen Jiang, *Chongqing University, China*
Shengyang Kang, *Chongqing University, China*
Ran Yao, *Chongqing University, China*
Li Ran, *Chongqing University, China*
Hui Li, *Chongqing University, China*
Rui Jin, *Global Energy Interconnection Research Institute, China*
Jialiang Wen, *Global Energy Interconnection Research Institute, China*

Modeling the Gate Driver IC for GaN Transistor: A Black-Box Approach 2900

Ruiliang Xie, *Xi'an Jiaotong University and Hong Kong University of Science and Technology, China*
Guangzhao Xu, *Xi'an Jiaotong University, China*
Xu Yang, *Xi'an Jiaotong University, China*
Gaofei Tang, *Hong Kong University of Science and Technology, Hong Kong*
Jin Wei, *Hong Kong University of Science and Technology, Hong Kong*
Yidong Tian, *Xi'an Jiaotong University, China*
Feng Zhang, *Xi'an Jiaotong University, China*
Wenjie Chen, *Xi'an Jiaotong University, China*
Laili Wang, *Xi'an Jiaotong University, China*
Kevin J. Chen, *Hong Kong University of Science and Technology, Hong Kong*

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*

A New Electronic Design Automation Tool for the Optimization of PwrSoC/PwrSiP DC-DC Converters 2905

Ciaran Feeney, *Sengled, China*
Ningning Wang, *Sengled, China*

Modeling and Analysis of Coexisting Slow- and Fast-Scale Instabilities in Current-Mode PI-Controlled H-Bridge Inverter	2910
<i>Xuanlyu Wu, Northwestern Polytechnical University, China</i>	
<i>Weilin Li, Northwestern Polytechnical University, China</i>	
<i>Ruihong Zhang, Northwestern Polytechnical University, China</i>	
<i>Xiaohua Wu, Northwestern Polytechnical University, China</i>	
<i>Xiaobin Zhang, Northwestern Polytechnical University, China</i>	
<i>Bei Wang, Xi'an XD Electric Research Institute Co., Ltd., China</i>	
<i>Guochun Xiao, Xi'an Jiaotong University, China</i>	
<i>Shuai Zhang, Xi'an Jiaotong University, China</i>	
Simplified Discrete-Time Modeling and Dynamic Characteristics Analysis of PI-Controlled Voltage Source Inverter	2914
<i>Xuanlyu Wu, Northwestern Polytechnical University, China</i>	
<i>Ruihong Zhang, Northwestern Polytechnical University, China</i>	
<i>Weilin Li, Northwestern Polytechnical University, China</i>	
<i>Xiaohua Wu, Northwestern Polytechnical University, China</i>	
<i>Xiaobin Zhang, Northwestern Polytechnical University, China</i>	
<i>Bei Wang, Xi'an XD Electric Research Institute Co., Ltd., China</i>	
<i>Guochun Xiao, Xi'an Jiaotong University, China</i>	
<i>Daoshu Yang, Xi'an Jiaotong University, China</i>	
Sate-Space Modelling and Design of a 10MHz 180W Class E DC/DC Converter using WBG Devices	2918
<i>Samer Aldhaher, Imperial College London, United Kingdom</i>	
<i>Paul D. Mitcheson, Imperial College London, United Kingdom</i>	
An Improved Robust Adaptive Parameter Identifier for DC-DC Converters using H-Infinity Design	2922
<i>Palak Jain, National University of Singapore, Singapore</i>	
<i>Jason Poon, University of California, Berkeley, United States</i>	
<i>Li Jian, Northeast Electric Power University, China</i>	
<i>Costas Spanos, University of California, Berkeley, United States</i>	
<i>Seth R. Sanders, University of California, Berkeley, United States</i>	
<i>Jian-Xin Xu, National University of Singapore, Singapore</i>	
<i>Sanjib Kumar Panda, National University of Singapore, Singapore</i>	
Harmonics and Voltage Quality in Post-Fault Reconfigured Multi-Level Inverters	2927
<i>Weiqiang Chen, University of Connecticut, United States</i>	
<i>Ethan Hotchkiss, University of Connecticut, United States</i>	
<i>Ali Bazzi, University of Connecticut, United States</i>	
Fault-Tolerant Performance Comparisons between External and Internal Rotor PMA-SynRMs	2933
<i>Sai Sudheer Reddy Bonthu, University of Akron, United States</i>	
<i>Md. Tawhid Bin Tarek, University of Akron, United States</i>	
<i>Akm Arafat, University of Akron, United States</i>	
<i>Md. Zakirul Islam, University of Akron, United States</i>	
<i>Seungdeog Choi, University of Akron, United States</i>	

Performance Analysis of Rare-Earth and Rare-Earth Free External Rotor Motors under Eccentricity Faults 2940
Sai Sudheer Reddy Bonthu, *University of Akron, United States*
Md. Tawhid Bin Tarek, *University of Akron, United States*
Md. Zakirul Islam, *University of Akron, United States*
Seungdeog Choi, *University of Akron, United States*

Novel Hardware-in-the-Loop Simulation (HILS) Technology for Virtual Testing of a Power Supply 2947
Yu Yonezawa, *Fujitsu Laboratories Ltd., Japan*
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 2952
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 2959
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 N/A
Jiazhi Liang, *Beijing Jiaotong University, China*
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 2973
Minsung Kim, *Pohang University of Science and Technology, South Korea*
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*
Kwang-Seop Kim, *Pohang University of Science and Technology, South Korea*
Hyosin Kim, *Pohang University of Science and Technology, South Korea*

A Gate Drive with Active Voltage Divider based Auxiliary Power Supply for Medium Voltage SiC Device in High Voltage Applications	2979
Boxue Hu, <i>Ohio State University, United States</i>	
Zhuo Wei, <i>Ohio State University, United States</i>	
He Li, <i>Ohio State University, United States</i>	
Diang Xing, <i>Ohio State University, United States</i>	
Risha Na, <i>Ohio State University, United States</i>	
John A. Brothers, <i>Ohio State University, United States</i>	
Jin Wang, <i>Ohio State University, United States</i>	
 New Communication and Isolation Technology for Integrated Gate Driver IC Solutions Suitable for IGBT and Si/SiC MOSFETs: Gate Drive Units, Intelligent Integrated Drivers	2986
Andrew Smith, <i>Power Integrations, Inc., United States</i>	
Kevin Lenz, <i>Power Integrations, Inc., Germany</i>	
 Sensorless Control of Switched Reluctance Motor Drive using an Improved Simplified Flux Linkage Model Method	2992
Tao Wang, <i>Xi'an Jiaotong University, China</i>	
Wen Ding, <i>Xi'an Jiaotong University, China</i>	
Yanfang Hu, <i>Xi'an Jiaotong University, China</i>	
Shuai Yang, <i>Xi'an Jiaotong University, China</i>	
Shuai Li, <i>Xi'an Jiaotong University, China</i>	
 A Fast Selection Algorithm based on Binary Numbers for Capacitor Voltage Balance in Modular Multilevel Converter	2999
Tao Wang, <i>Huazhong University of Science and Technology, China</i>	
Hua Lin, <i>Huazhong University of Science and Technology, China</i>	
Zhe Wang, <i>Huazhong University of Science and Technology, China</i>	
Yajun Ma, <i>Huazhong University of Science and Technology, China</i>	
Xingwei Wang, <i>Huazhong University of Science and Technology, China</i>	
 The Improved Model Predictive Control based on Novel Error Correction between Reference and Predicted Current	3005
Guiping Du, <i>South China University of Technology, China</i>	
Jiajian Li, <i>South China University of Technology, China</i>	
Zhifei Liu, <i>South China University of Technology, China</i>	
 Transient Angle Stability Analysis of Grid-Connected Converters with the First-Order Active Power Loop	3011
Heng Wu, <i>Aalborg University, Denmark</i>	
Xiongfei Wang, <i>Aalborg University, Denmark</i>	
 Closed Loop Analog Active Gate Driver for Fast Switching and Active Damping of SiC MOSFET	3017
Vamshi Krishna M, <i>Indian Institute of Technology Madras, India</i>	
Kamalesh Hatua, <i>Indian Institute of Technology Madras, India</i>	
 Methods for Monitoring 3-D Temperature Distributions in Power Electronic Modules	3022
Christoph H. van der Broeck, <i>Rheinisch-Westfälische Technische Hochschule Aachen, Germany</i>	
Robert D. Lorenz, <i>University of Wisconsin-Madison, United States</i>	
Rik W. De Doncker, <i>Rheinisch-Westfälische Technische Hochschule Aachen, Germany</i>	

A Sampling Scheme for Three-Phase High Switching Frequency and Speed Converter 3031
Bo Liu, *University of Tennessee, United States*
Ren Ren, *University of Tennessee, United States*
Zheyu Zhang, *University of Tennessee, United States*
Fred Wang, *University of Tennessee and Oak Ridge National Laboratory, United States*
Daniel Costinett, *University of Tennessee, United States*

Super-High Bandwidth Secondary Control of AC Microgrids 3036
Tomislav Dragičević, *Aalborg University, Denmark*
Rasool Heydari, *Aalborg University, Denmark*
Frede Blaabjerg, *Aalborg University, Denmark*

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 3043
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 3051
Hao Tu, *North Carolina State University, United States*
Srdjan Lukic, *North Carolina State University, United States*

Coil Misalignment Compensation Algorithm for Single-Stage Inductive Wireless Power Transfer System using Model-Based Approach 3057
Mina Kim, *Ulsan National Institute of Science and Technology, South Korea*
Hwa-Pyeong Park, *Ulsan National Institute of Science and Technology, South Korea*
Jee-Hoon Jung, *Ulsan National Institute of Science and Technology, South Korea*

Output Voltage Regulation of IPOS Modular Dual Active Bridge DC/DC Converters using Sliding Mode Control 3062
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 3068
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 3074
Christoph H. van der Broeck, *Rheinisch-Westfälische Technische Hochschule Aachen, Germany*
Lukas A. Ruppert, *Rheinisch-Westfälische Technische Hochschule Aachen, Germany*
Robert D. Lorenz, *University of Wisconsin-Madison, United States*
Rik W. De Doncker, *Rheinisch-Westfälische Technische Hochschule Aachen, Germany*

Single-Inductor Multi-Capacitor Buck Converter for High Peak-to-Average Power Envelope Tracking	3083
V. Inder Kumar, <i>Indian Institute of Technology Kharagpur, India</i>	
Arnab Dey, <i>Indian Institute of Technology Kharagpur, India</i>	
Santanu Kapat, <i>Indian Institute of Technology Kharagpur, India</i>	
Active Power Decoupling Method based on Dual Buck Circuit with Model Predictive Control	3089
Shunlong Xiao, <i>Texas A&M University, United States</i>	
Xiao Li, <i>Texas A&M University, United States</i>	
Haiyu Zhang, <i>Texas A&M University, United States</i>	
Robert S. Balog, <i>Texas A&M University, United States</i>	
Noise Mitigation and Delay Compensation in High Frequency Dual Current Programmed Mode Control	3095
Kamal Sabi, <i>University of Tennessee, United States</i>	
Daniel Costinett, <i>University of Tennessee, United States</i>	
Peak Offsetting based CPM Controller for Multi-Level Flying Capacitor Converters	3102
Liangji Lu, <i>University of Toronto, Canada</i>	
S.M. Ahsanuzzaman, <i>University of Toronto, Canada</i>	
Aleksandar Prodić, <i>University of Toronto, Canada</i>	
Giacomo Calabrese, <i>Texas Instruments, Inc., Germany</i>	
Giovanni Frattini, <i>Texas Instruments, Inc., Italy</i>	
Maurizio Granato, <i>Texas Instruments, Inc., Italy</i>	
Active Gate Control for Switching Waveform Shaping Irrespective of the Circuit Stray Inductance in a Practical Full-Bridge IGBT Inverter	3108
Tomoyuki Mannen, <i>Tokyo Metropolitan University, Japan</i>	
Keiji Wada, <i>Tokyo Metropolitan University, Japan</i>	
Hidemine Obara, <i>Yokohama National University, Japan</i>	
Koutaro Miyazaki, <i>University of Tokyo, Japan</i>	
Makoto Takamiya, <i>University of Tokyo, Japan</i>	
Takayasu Sakurai, <i>University of Tokyo, Japan</i>	
An Improved Modulation Strategy for Quasi-Z-source Rectifier with Minimum Switching Frequency and High Efficiency	3114
Xinying Li, <i>Xi'an Jiaotong University, China</i>	
Yan Zhang, <i>Xi'an Jiaotong University, China</i>	
Yanfei Huang, <i>Xi'an Jiaotong University, China</i>	
Kaicheng Ding, <i>Xi'an Jiaotong University, China</i>	
Jinjun Liu, <i>Xi'an Jiaotong University, China</i>	
AC- and DC-Side Start-Up Strategies for Half-/Full-Bridge Hybrid Modular Multilevel Converter	3121
Ang Li, <i>Huazhong University of Science and Technology, China</i>	
Lei Lin, <i>Huazhong University of Science and Technology, China</i>	
Chen Xu, <i>Huazhong University of Science and Technology, China</i>	
Jiabing Hu, <i>Huazhong University of Science and Technology, China</i>	

Session D16: Wireless Power Transfer

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*

Modeling the Dynamics of Wireless Power Transfer using a Generalized Average Model of High-Q Resonators 3127

Hongchang Li, *Nanyang Technological University, Singapore*

Jingyang Fang, *Nanyang Technological University, Singapore*

Xiaoqiang Li, *Nanyang Technological University, Singapore*

Shuxin Chen, *Nanyang Technological University, Singapore*

Yi Tang, *Nanyang Technological University, Singapore*

Resonant Full-Bridge Synchronous Rectifier Utilizing 15V GaN Transistors for Wireless Power Transfer Applications following Airfuel Standard Operating at 6.78 MHz 3131

Christopher Have Kiaerskou Jensen, *Technical University of Denmark, Denmark*

Frederik Monrad Spliid, *Technical University of Denmark, Denmark*

Jens Christian Hertel, *Technical University of Denmark, Denmark*

Yasser Nour, *Technical University of Denmark, Denmark*

Tiberiu-Gabriel Zsurzsan, *Technical University of Denmark, Denmark*

Arnold Knott, *Technical University of Denmark, Denmark*

Analysis and Design of Load Independent ZPA Operation for P/S and PS/S Tank Networks in IPT Applications 3138

Suwendu Samanta, *Concordia University, Canada*

Akshay Kumar Rathore, *Concordia University, Canada*

A Pulse Density Modulation Method for ZVS Full-Bridge Converters in Wireless Power Transfer Systems 3143

Hongchang Li, *Nanyang Technological University, Singapore*

Jingyang Fang, *Nanyang Technological University, Singapore*

Shuxin Chen, *Nanyang Technological University, Singapore*

Yi Tang, *Nanyang Technological University, Singapore*

Kangping Wang, *Xi'an Jiaotong University, China*

High Efficiency Capacitive Power Transfer Converter 3149

Jaime Lopez-Lopez, *Universidad Carlos III de Madrid, Spain*

Carlos Salto, *Universidad Carlos III de Madrid, Spain*

Pablo Zumel, *Universidad Carlos III de Madrid, Spain*

Cristina Fernández, *Universidad Carlos III de Madrid, Spain*

Alba Rodríguez-Lorente, *Universidad Carlos III de Madrid, Spain*

Emilio Olías, *Universidad Carlos III de Madrid, Spain*

A High-Frequency Inverter Architecture for Providing Variable Compensation in Wireless Power Transfer Systems 3154

Ashish Kumar, *University of Colorado Boulder, United States*

Sreyam Sinha, *University of Colorado Boulder, United States*

Khurram K. Afridi, *University of Colorado Boulder, United States*

A Single-Stage 6.78 MHz Transmitter with the Improved Light Load Efficiency for Wireless Power Transfer Applications 3160
Ling Jiang, *University of Tennessee, United States*
Daniel Costinett, *University of Tennessee, United States*

Improved Design Optimization of Efficient Matching Networks for Capacitive Wireless Power Transfer Systems 3167
Sreyam Sinha, *University of Colorado Boulder, United States*
Ashish Kumar, *University of Colorado Boulder, United States*
Khurram K. Afridi, *University of Colorado Boulder, United States*

A Novel Target Detection Algorithm for Capacitive Power Transfer Systems 3174
Chae-Ho Jeong, *University of Ulsan, South Korea*
Phuong-Ha La, *University of Ulsan, South Korea*
Sung-Jin Choi, *University of Ulsan, South Korea*
Hee-Su Choi, *Silicon Mitus Inc., South Korea*

Analysis and Design of an Integrated LCL-S Contactless Resonant Converter 3178
Wei Gao, *Nanjing University of Aeronautics and Astronautics, China*
Lixin Jiang, *Nari Technology Co., Ltd., China*
Qianhong Chen, *Nanjing University of Aeronautics and Astronautics, China*
Xiaoyong Ren, *Nanjing University of Aeronautics and Astronautics, China*
Zhiliang Zhang, *Nanjing University of Aeronautics and Astronautics, China*
Siu-Chung Wong, *Hong Kong Polytechnic University, China*

Saturable Inductors for Superior Reflexive Field Containment in Inductive Power Transfer Systems 3183
Alireza Dayerzadeh, *North Carolina State University, United States*
Srdjan Lukic, *North Carolina State University, United States*

Session D17: Wind And Solar Power
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00

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

A 5-Level High Efficiency Low Cost Hybrid Neutral Point Clamped Transformerless Inverter for Grid Connected Photovoltaic Application 3189
Abhijit Kadam, *Indian Institute of Technology Bombay, India*
Anshuman Shukla, *Indian Institute of Technology Bombay, India*

A Hybrid CHB Multilevel Inverter with Supercapacitor Energy Storage for Grid-Connected Photovoltaic Systems 3195
Lan Xiong, *Hubei University of Technology, China*
Yuan Gui, *Hubei University of Technology, China*
Huimei Liu, *Hubei University of Technology, China*
Wen Yang, *Hubei University of Technology, China*
Jinwu Gong, *Wuhan University, China*

A New Dynamic PV Firing Control Algorithm using Grid-Tied Three-Port Micro-Converter	3200
Mahmood Alharbi, <i>University of Central Florida, United States</i>	
Anirudh Pise, <i>University of Central Florida, United States</i>	
Hu Haibing, <i>University of Central Florida, United States</i>	
Issa Batarseh, <i>University of Central Florida, United States</i>	
A Method for FRT Capacity Enhancement of DFIG based Wind Farm using Saturated Core Fault Current Limiter	N/A
Jiaxin Yuan, <i>Wuhan University, China</i>	
Zehua Huang, <i>Wuhan University, China</i>	
Pengcheng Gan, <i>Wuhan University, China</i>	
Feiran Xiao, <i>Wuhan University, China</i>	
Xin Yan, <i>Wuhan University, China</i>	
Single-Phase Dual-Mode Four-Switch Buck-Boost Transformerless PV Inverter with Inherent Leakage Current Elimination	3211
Qingyun Huang, <i>University of Texas at Austin, United States</i>	
Qingxuan Ma, <i>University of Texas at Austin, United States</i>	
Alex Q. Huang, <i>University of Texas at Austin, United States</i>	
Sensitivity Analysis of the Wind Farm High Frequency Resonance under Transmission Cable Resistance Variation	3218
Yipeng Song, <i>Aalborg University, Denmark</i>	
Esmaeil Ebrahimzadeh, <i>Aalborg University, Denmark</i>	
Frede Blaabjerg, <i>Aalborg University, Denmark</i>	
A Synergistic Modulation Method for Hybrid Cascaded Photovoltaic Inverter with Supercapacitor	3225
Lan Xiong, <i>Hubei University of Technology, China</i>	
Huimei Liu, <i>Hubei University of Technology, China</i>	
Jinwu Gong, <i>Wuhan University, China</i>	
Wen Yang, <i>Hubei University of Technology, China</i>	
Yuan Gui, <i>Hubei University of Technology, China</i>	
Active Gate Driver for SiC MOSFET based PV Inverter with Enhanced Operating Range ...	3230
Sayan Acharya, <i>North Carolina State University, United States</i>	
Xu She, <i>GE Global Research, United States</i>	
Fengfeng Tao, <i>GE Global Research, United States</i>	
Tony Frangieh, <i>GE Global Research, United States</i>	
Maja Harfman Todorovic, <i>GE Global Research, United States</i>	
Rajib Datta, <i>GE Global Research, United States</i>	
Comparative Evaluation of Modulation Strategies for a Single-Phase PV Micro-Inverter with High-Frequency Transformer	3238
Jonatas Rodrigo Kinan, <i>Universidade Federal de Campina Grande, Brazil</i>	
Diego A. Acevedo-Bueno, <i>Universidade Federal de Campina Grande, Brazil</i>	
Gabriel Sales Lins Rodrigues, <i>Universidade Federal de Campina Grande, Brazil</i>	
Montiê Alves Vitorino, <i>Universidade Federal de Campina Grande, Brazil</i>	
Alexandre Cunha Oliveira, <i>Universidade Federal de Campina Grande, Brazil</i>	
Antonio Marcus Nogueira Lima, <i>Universidade Federal de Campina Grande, Brazil</i>	

Flexible High Efficiency Battery-Ready PV Inverter for Rooftop Systems 3244
Namwon Kim, *University of North Carolina at Charlotte, United States*
Mehrdad Biglarbegian, *University of North Carolina at Charlotte, United States*
Babak Parkhideh, *University of North Carolina at Charlotte, United States*

Performance Evaluation of Single-Phase Transformer-Less PV Inverter Topologies 3250
Jinia Roy, *Arizona State University, United States*
Yinglai Xia, *Texas Instruments, Inc., United States*
Raja Ayyanar, *Arizona State University, United States*

A Dual-Active-Bridge-Based High-Frequency Isolated Inverter for Interfacing Multiple PV Modules with Distributed MPPT 3256
Shiladri Chakraborty, *Indian Institute of Technology Kharagpur, India*
Souvik Chattopadhyay, *Indian Institute of Technology Kharagpur, India*

Reliability Evaluation of Power Capacitors in a Wind Turbine System 3264
Dao Zhou, *Aalborg University, Denmark*
Frede Blaabjerg, *Aalborg University, Denmark*

Session D18: Microgrids and Grid Connect
Location: Hemisphere Ballroom C1 & C2
March 8, 2018 11:30 - 14:00
Session Chairs: Yingying Kuai, *Caterpillar Inc.*

A Series-Resonance-Based Three-Port Converter with Unified Autonomous Control Method in DC Microgrids 3270
Panbao Wang, *Harbin Institute of Technology, China*
Shuxin Zhang, *Harbin Institute of Technology, China*
Dianguo Xu, *Harbin Institute of Technology, China*
Xiaonan Lu, *Argonne National Laboratory, United States*

Decoupled Modeling and Control of the Modular Multilevel Converter 3275
Binbin Li, *Harbin Institute of Technology, China*
Zigao Xu, *Harbin Institute of Technology, China*
Jian Ding, *Harbin Institute of Technology, China*
Dianguo Xu, *Harbin Institute of Technology, China*

Control System Design and Stability Analysis for a Three Phase SiC-Based Filter-Less Grid-Connected PV Inverter 3281
YanJun Shi, *Florida State University, United States*
Lu Wang, *Florida State University, United States*
Hui Li, *Florida State University, United States*

A Phase-Lead Compensation Strategy on Enhancing Robustness against Grid Impedance for LCL-Type Grid-Tied Inverters 3287
Chun Huang, *Nanjing University of Aeronautics and Astronautics, China*
Tianzhi Fang, *Nanjing University of Aeronautics and Astronautics, China*
Li Zhang, *Nanjing University of Aeronautics and Astronautics, China*

Stability Improvement of Microgrids using a Novel Reduced UPFC Structure via Nonlinear Optimal Control 3294
Hossein Saberi, *Louisiana State University, United States*
Shahab Mehraeen, *Louisiana State University, United States*
Boyu Wang, *Louisiana State University, United States*

Stability and Improvement of LCL-Filtered Inverters using only Grid Current Feedback Active Damping for Weak Grid Applications 3301
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 3307
Ahmed Abdelhakim, *Università di Padova, Italy*
Frede Blaabjerg, *Aalborg University, Denmark*
Paolo Mattavelli, *Università di Padova, Italy*

A Phase Feedforward based Virtual Synchronous Generator Control Scheme 3314
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 3319
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 3326
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 3333
Hassan Abdelgaber, *University of Akron, United States*
Ali R. Boynuegri, *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 ... 3340
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	3346
Hongwei Fang, <i>Tianjin University, China</i>	
Yuzhu Feng, <i>Tianjin University, China</i>	
Runan Song, <i>Tianjin University, China</i>	
Ru Jiang, <i>China North Vehicle Research Institute, China</i>	
Circuit Parameters Extraction Algorithm for a Lithium-Ion Battery Charging System Incorporated with Electrochemical Impedance Spectroscopy	3353
S M Rakiul Islam, <i>University of Connecticut, United States</i>	
Sung-Yeul Park, <i>University of Connecticut, United States</i>	
Balakumar Balasingam, <i>University of Windsor, Canada</i>	
An Efficient Voltage Equalization Algorithm for Low-Power Supercapacitor Applications	3359
Yu Song, <i>Central South University, China</i>	
Weirong Liu, <i>Central South University, China</i>	
Hongtao Liao, <i>Central South University, China</i>	
Heng Li, <i>Central South University, China</i>	
Yun Jiao, <i>Central South University, China</i>	
Jun Peng, <i>Central South University, China</i>	
Zhiwu Huang, <i>Central South University, China</i>	
Outlier Mining-Based Fault Diagnosis for Multicell Lithium-Ion Batteries using a Low-Priced Microcontroller	3365
Taesic Kim, <i>Texas A&M University-Kingsville, United States</i>	
Amit Adhikaree, <i>Texas A&M University-Kingsville, United States</i>	
Rajendra Pandey, <i>Texas A&M University-Kingsville, United States</i>	
Daewook Kang, <i>Korea Electrotechnology Research Institute, South Korea</i>	
Myoungho Kim, <i>Korea Electrotechnology Research Institute, South Korea</i>	
Chang-Yeol Oh, <i>Korea Electrotechnology Research Institute, South Korea</i>	
Juwon Back, <i>Korea Electrotechnology Research Institute, South Korea</i>	
Low-Frequency Input Ripple Current Compensation in Single-Phase Fuel Cell Power Systems	3370
Soumya Sinha, <i>University of Houston, United States</i>	
Wajiha Shiren, <i>University of Houston, United States</i>	
Sumit Pramanick, <i>University of Houston, United States</i>	
A Hybrid Flyback LED Driver with Utility Grid and Renewable Energy Interface	3377
Awab Ali, <i>University of Akron, United States</i>	
Jonathan Lange, <i>ESIEE Amiens, France</i>	
Ali Elrayyah, <i>Qatar Environment and Energy Research Institute, Qatar</i>	
Yilmaz Sozer, <i>University of Akron, United States</i>	
J.A. De Abreu-Garcia, <i>University of Akron, United States</i>	
Augustin Mpanda, <i>ESIEE Amiens, France</i>	

Session D20: Transportation Power Electronics

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Somasundaram Essakiappan, *University of North Carolina at Charlotte*
Ralph Taylor, *Delphi Automotive*

- Frozen Leg Operation of a Three-Phase Dual Active Bridge DC/DC Converter at Light Loads** 3385
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** 3392
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** 3398
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** 3405
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** 3411
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** 3418
Xiaoyong Zhang, *Central South University, China*
Yun Jiao, *Central South University, China*
Hongtao Liao, *Central South University, China*
Heng Li, *Central South University, China*
Yanhui Zhou, *Central South University, China*
Zhiwu Huang, *Central South University, China*
- Design and Optimization of a Dielectric-Gas-Based Single-Phase Electrostatic Motor** 3424
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*
Chris Mi, *San Diego State University, United States*

A Finite-Set Model-Based Predictive Battery Thermal Management in Connected and Automated Hybrid Electric Vehicles	3428
Chong Zhu, <i>San Diego State University, United States</i>	
Fei Lu, <i>San Diego State University, United States</i>	
Hua Zhang, <i>San Diego State University, United States</i>	
Kangxi Zhu, <i>San Diego State University, United States</i>	
Chris Mi, <i>San Diego State University, United States</i>	

Single-Phase Multifunctional Onboard Battery Chargers with Active Power Decoupling Capability	3434
Hoang Vu Nguyen, <i>Yeungnam University, South Korea</i>	
Dong-Choon Lee, <i>Yeungnam University, South Korea</i>	

A Fast-Speed Heater with Internal and External Heating for Lithium-Ion Batteries at Low Temperatures	3440
Yunlong Shang, <i>Shandong University and San Diego State University, China</i>	
Chenghui Zhang, <i>Shandong University, China</i>	
Naxin Cui, <i>Shandong University, China</i>	
Chris Mi, <i>San Diego State University, United States</i>	

Session D21: LED Applications

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Jim Spangler, *Spangler Prototype Inc.*

Cascode Switching Modeling and Improvement in Flyback Converter for LED Lighting Applications	3444
Liang Jia, <i>Queen's University and Google Inc., Canada</i>	
Srikanth Lakshmikanthan, <i>Google Inc., United States</i>	
Yan-Fei Liu, <i>Queen's University, Canada</i>	

Controlling the Input Impedance of Constant Power Loads	3452
Manuel Gutierrez, <i>Massachusetts Institute of Technology, United States</i>	
Peter Lindahl, <i>Massachusetts Institute of Technology, United States</i>	
Arijit Banerjee, <i>University of Illinois at Urbana-Champaign, United States</i>	
Steven B. Leeb, <i>Massachusetts Institute of Technology, United States</i>	

380V Digital Isolated Quasi-Resonant Multiphase Converter for High Power LED Application	3459
Stefano Saggini, <i>Università degli Studi di Udine, Italy</i>	
Roberto Rizzolatti, <i>Università degli Studi di Udine, Italy</i>	
Mario Ursino, <i>Università degli Studi di Udine, Italy</i>	
Osvaldo Zambetti, <i>STMicroelectronics, Italy</i>	

Developing Highly Reliable LED Luminaires for High Temperature Applications using AC-Direct Driving LED Technology	3466
Hui Zhang, <i>State University of New York at Oswego, United States</i>	

Active Pulse Shaping Circuit for Bandwidth Enhancement of High-Brightness LEDs using GaN Devices 3471
Kumar Modepalli, *Rensselaer Polytechnic Institute, United States*
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 N/A
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 3481
Ahmed Aldhaferi, *George Washington University, United States*
Amir Etemadi, *George Washington University, United States*

Load Adaptive Modulation Method for All-Metal Induction Heating Application 3486
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 3491
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 3497
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 3505
H. Sarnago, *Universidad de Zaragoza, Spain*
O. Lucía, *Universidad de Zaragoza, Spain*
J.M. Burdío, *Universidad de Zaragoza, Spain*

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	3510
Khalil Algarny, <i>University of Ontario Institute of Technology, Canada</i>	
Ahmed S. Abdelrahman, <i>University of Ontario Institute of Technology, Canada</i>	
Mohamed Youssef, <i>University of Ontario Institute of Technology, Canada</i>	
A New Control Method for Series Resonant Inverter with Inherently Phase-Locked Coil Current with Induction Cookware Applications	3517
Jong-Woo Kim, <i>Virginia Polytechnic Institute and State University, United States</i>	
Moonhyun Lee, <i>Virginia Polytechnic Institute and State University, United States</i>	
Jih-Sheng Lai, <i>Virginia Polytechnic Institute and State University, United States</i>	
Lifetime-Based Power Routing of Smart Transformer with CHB and DAB Converters	3523
Vivek Raveendran, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Markus Andresen, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Marco Liserre, <i>Christian-Albrechts-Universität zu Kiel, Germany</i>	
Giampaolo Buticchi, <i>University of Nottingham Ningbo China, China</i>	
Soft-Transient Modulation Strategy for Improved Efficiency and EMC Performance of PFC Converters Applied to Flexible Induction Heating Appliances	3530
Mario Pérez-Tarragona, <i>Universidad de Zaragoza, Spain</i>	
Héctor Sarnago, <i>Universidad de Zaragoza, Spain</i>	
Óscar Lucía, <i>Universidad de Zaragoza, Spain</i>	
José M. Burdío, <i>Universidad de Zaragoza, Spain</i>	
Single-Phase to Two-Phase Power Converter	3535
Bruna S. Gehrke, <i>Universidade Federal de Campina Grande, Brazil</i>	
Cursino B. Jacobina, <i>Universidade Federal de Campina Grande, Brazil</i>	
Nayara B. de Freitas, <i>Universidade Federal de Campina Grande, Brazil</i>	
Antonio de P.D. Queiroz, <i>Universidade Federal de Campina Grande and Federal Institute of Paraiba, Brazil</i>	
Power Rectifier based on Open-End Converter with Floating Capacitor under Non-Sinusoidal and Unbalanced Input	3542
Alan S. Felinto, <i>Universidade Federal de Campina Grande, Brazil</i>	
Cursino B. Jacobina, <i>Universidade Federal de Campina Grande, Brazil</i>	
João P.R.A. Mélo, <i>Universidade Federal de Campina Grande, Brazil</i>	
Gregory A.A. Carlos, <i>Federal Institute of Alagoas, Brazil</i>	
Ivan da Silva, <i>Universidade Federal de Campina Grande, Brazil</i>	
Doubly-Fed Machine with Wireless Power Transfer Ability	3550
Jun Lee, <i>Seoul National University, South Korea</i>	
Jung-Ik Ha, <i>Seoul National University, South Korea</i>	

Session D23: Switchmode Power Supply & Battery Applications

Location: Hemisphere Ballroom C1 & C2

March 8, 2018 11:30 - 14:00

Session Chairs: Sombuddha Chakraborty, *Texas Instruments, Inc.*

A Battery Management System Adapted for an Energy Harvester with a Low-Power State of Charge Monitoring Method and a 24 Microwatt Intermittently Enabled Coulomb Counter 3556

Jun-ichi Nagata, *Fujitsu Laboratories Ltd., Japan*
Kenichi Kawasaki, *Fujitsu Laboratories Ltd., Japan*
Hiroyuki Nakamoto, *Fujitsu Laboratories Ltd., Japan*

Control Method of Input-Parallel and Output-Series Connected Inverters for Plasma Generator 3563

Hyo Min Ahn, *Sungkyunkwan University, South Korea*
Won-Yong Sung, *Sungkyunkwan University, South Korea*
Minkook Kim, *Sungkyunkwan University, South Korea*
Byoung Kuk Lee, *Sungkyunkwan University, South Korea*
Seung-Hee Ryu, *New Power Plasma Co., Ltd., South Korea*
Chang-Seop Lim, *New Power Plasma Co., Ltd., South Korea*

Optimized Modulation Scheme for Dual Active Bridge DC-DC Converter 3569

Chaochao Song, *Shandong University, China*
Alian Chen, *Shandong University, China*
Jie Chen, *Shandong University, China*
Chunshui Du, *Shandong University, China*
Chenghui Zhang, *Shandong University, China*

Two-Phase Three-Dimension Common Inductor LLC Resonant Converter with Automatic Current Sharing 3575

Hongliang Wang, *Queen's University, Canada*
Yang Chen, *Queen's University, Canada*
Bo Sheng, *Queen's University, Canada*
Yan-Fei Liu, *Queen's University, Canada*
P.C. Sen, *Queen's University, Canada*

Design of Fast Charging Technique for Electrical Vehicle Charging Stations with Grid-Tied Cascaded H-Bridge Multilevel Converters 3583

Amirhossein Moeini, *University of Florida, United States*
Shuo Wang, *University of Florida, United States*

Enhanced SOH Balancing Method of MMC Battery Energy Storage System with Cell Equalization Capability 3591

Zhan Ma, *Shandong University, China*
Tianqu Hao, *Shandong University, China*
Feng Gao, *Shandong University, China*
Nan Li, *Shandong University, China*
Xin Gu, *Shandong University, China*