

Paper ID	Presentation Start Time	Presentation Date	Session Title	Paper Title	Paper Authors	Author Affiliation
0370.pdf	P384	Tuesday, October 31, 10:30AM-12:10PM	Poster Session 2	Performance Evaluation of a Slotless Permanent Magnet Synchronous Machine with NdFeB/Ferrite Halbach Array under PWM Excitation	Junyeong Jung, Ritvik Chattopadhyay and Iqbal Husain	NC State University, United States; NC state university, United States
0595.pdf	P778	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	A Feedforward-Based Harmonic Current Minimization Method for Six-Phase Permanent Magnet Synchronous Machine Drives	Partha Pratim Das, Subhansu Satpathy, Subhashish Bhattacharya and Victor Veliadis	NCSU, United States
0627.pdf	P356	Tuesday, October 31, 10:30AM-12:10PM	Poster Session 2	Effects of Circulating Current Controllers on MMC-based System Stability	Semih Isik, Vasishta Burugula and Subhashish Bhattacharya	North Carolina State University, United States
0640.pdf	P618	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	Selective Gate Driver Encoded with a Single Digital Signal for the SiC Inverter	Luowei Wen, Wensong Yu, John Geiger and Iqbal Husain	North Carolina State University, United States; Texas Instruments, United States
0681.pdf	9:50AM	Tuesday, October 31, 8:30AM-10:10AM	Converter Stability	Detection and Control of DC Bias Flux in Dual Active Bridge Medium Frequency Transformers	Mark Nations and Subhashish Bhattacharya	North Carolina State University, United States
0715.pdf	P741	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	A Practical Implementation of a Two-Stage 350-W Universal Charger for Power Mobility Device Charging Applications	Muhammad Abdelraziq, Ujjwal Pratik, Zhansen Akhmetov, Stephen Paul, Gabriel Chenevert and Zeljko Pantic	North Carolina State University, United States
0745.pdf	2:00PM	Wednesday, November 1, 2:00PM-3:40PM	Multilevel Converters I	Comparative Study of PWM Modes for GaN-based Three-Level ANPC Inverter	Subhansu Satpathy, Partha Pratim Das, Subhashish Bhattacharya and Victor Veliadis	NC State University, United States
0768.pdf	P516	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	A Decentralized Control for a Triple Active Bridge Converter Integrating PV and ESS	Osamah Aljumah, Shrivatsal Sharma, Shubham Dhiman, Hamdan Alosaimi and Subhashish Bhattacharya	North Carolina State University, United States
0792.pdf	11:10AM	Thursday, November 2, 10:30AM-12:10PM	Magnetics II - Inductors	Magnetolectric Voltage Tunable Inductors for Power Electronics Applications	Mark Nations and Subhashish Bhattacharya	North Carolina State University, United States
0805.pdf	P534	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	Quasi-Static Virtual Admittance for Sequence Decomposed Grid-Forming Control	Ma Awal, Siye Cen, Md Rifat Kaiser Rachi and Iqbal Husain	North Carolina State University, United States
0817.pdf	P115	Monday, October 30, 5:00PM-6:40PM	Poster Session 1	Finite Control Set Model Predictive Control for PV System Operating as a STATCOM	Hamdan Alosaimi, Hadhlul Aladhyani, Osamah Aljumah and Subhashish Bhattacharya	North Carolina State University, United States
0906.pdf	9:30AM	Tuesday, October 31, 8:30AM-10:10AM	Materials, Losses, Thermal and Manufacturing Issues I	Design of Experiments Analysis of Manufacturing Variations on Performance of Halbach Array Slotless Motors	Ritvik Chattopadhyay, Md Sariful Islam and Iqbal Husain	North Carolina State University, United States; Halla Mechatronics, United States
0916.pdf	P202	Monday, October 30, 5:00PM-6:40PM	Poster Session 1	Performance Improvement in Duty-Cycle Based Finite-Set MPC with Double Control Update for Motor Drives	Sodiq Agoro and Iqbal Husain	North Carolina State University, United States
1065.pdf	P745	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	Virtual Converter Based Modeling and Control of Bidirectional Integrated Converters	Michael Kercher and Wensong Yu	North Carolina State University, United States
1068.pdf	12:30PM	Monday, October 30, 12:30PM-2:10PM	Medium Voltage and High-Power Drives	Comparison of a 10 kV SiC Current Switch with two 6.5 kV Series Connected Si SGCTs for Medium Voltage Current Source Inverter Applications	Sneha Narasimhan, Subhashish Bhattacharya and Navid Zargari	North Carolina State University, United States; Rockwell Automation, United States
1199.pdf	2:50PM	Monday, October 30, 2:30PM-4:10PM	Renewable Energy Grid Integration II	A Benchmarking Tool for State-of-the-Art Microgrid Design Approaches	Shweta Meena, Hualong Liu, Hao Tu, Srdjan Lukic and Wenyuan Tang	North Carolina State University, United States
1235.pdf	10:50AM	Wednesday, November 1, 10:30AM-12:10PM	DC-AC Multi-phase Inverter	Design algorithms for Dynamic Voltage Balancing across series connected 10kV SiC MOSFETs and 10kV SiC JBS diodes in 3L-NPC soft switched power converter with minimized snubber losses and DC Offset Voltage	Sanket Parashar, Nithin Kolli, Raj Kumar Kokkonda and Subhashish Bhattacharya	North Carolina State University, United States
1264.pdf	3:50PM	Monday, October 30, 2:30PM-4:10PM	Distributed Energy Integration	Utilizing Smart Inverter Virtual-Sensor Nodes for Enhanced Behind-the-Meter Visibility in high PV penetration distribution feeders	Mehrnaz Madadi, Subhashish Bhattacharya, Richard Beddingfield and Paul Ohodnicki	North Carolina State University, United States; General Electric, United States; University of Pittsburgh, United States
1345.pdf	P561	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	Design and Optimization of High-frequency Transformer for Isolated Single-Stage Three-Phase AC/DC Converter using Bidirectional Switches	Isaac Wong, Ramandeep Narwal, Subhashish Bhattacharya, B. Jayant Baliga and Douglas C. Hopkins	North Carolina State University, United States
1348.pdf	P578	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	Comparison and performance evaluation of the mid-point voltage balance modulation schemes for a three-phase 2L-3L DAB	Apoorv Agarwal, Shrivatsal Sharma and Subhashish Bhattacharya	North Carolina State University, United States

1349.pdf	P567	Tuesday, October 31, 2:30PM-4:10PM	Poster Session 3	Hierarchical Failure Mode Effect Analysis for the Protection Design of a MV AC-DC Solid State Transformer based EV Extreme Fast Charging Station	Md Rashed Hassan Bipu, Oscar Montes, Srdjan Lukic and Iqbal Husain	North Carolina State University, United States
1350.pdf	3:10PM	Monday, October 30, 2:30PM-4:10PM	Multiphase AC-DC Converters	Isolated Single-stage Three-phase AC/DC Converter using Bidirectional Switches	Ramandeep Narwal, Isaac Wong, Subhashish Bhattacharya, B. Jayant Baliga and Douglas C. Hopkins	North Carolina State University, United States
1437.pdf	P735	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	Development of an Autonomous Wireless Charging System for Unmanned Aerial Vehicles	Stephen Paul, Muhammad Abdelraziq, Ujjwal Pratik and Zeljko Pantic	North Carolina State University, United States
1439.pdf	1:30PM	Monday, October 30, 12:30PM-2:10PM	Medium Voltage and High-Power Drives	A 6.5 kV SiC MOSFET based Inverter for Medium Voltage (2.3 kV) High-Speed Motor Drive Applications	Raj Kumar Kokkonda, Sanket Parashar, Partha Pratim Das and Subhashish Bhattacharya	North Carolina State University, United States
1459.pdf	P327	Tuesday, October 31, 10:30AM-12:10PM	Poster Session 2	Operating Mode Analysis and Controller Design for Medium Voltage Asynchronous Microgrid Power Conditioning System	Nithin Kolli, Harshit Nath, Sanket Parashar, Raj Kumar Kokkonda, Subhashish Bhattacharya and Victor Veliadis	North Carolina State University, United States
1618.pdf	3:00PM	Wednesday, November 1, 2:00PM-3:40PM	Wound Field and PM Machines I	Winding Embedded Liquid Cooling for Slotless Motors in Transportation Applications	Ritvik Chattopadhyay, Md Sariful Islam and Iqbal Husain	North Carolina State University, United States; Halla Mechatronics, United States
1652.pdf	P211	Monday, October 30, 5:00PM-6:40PM	Poster Session 1	Model-Free Predictive Current and Disturbance Rejection Control of Dual Three-Phase PMSM Drives Using Optimal Virtual Vector Modulation	Sodiq Agoro and Iqbal Husain	NC State University, United States; NC state university, United States
1655.pdf	1:50PM	Monday, October 30, 12:30PM-2:10PM	DC-DC Isolated I	Mode Analysis, Transformer Saturation, and Fault Diagnosis Technique for an Open-Circuit Fault in a Three-Phase DAB Converter	Sagar Rastogi, Brij Singh, Subhashish Bhattacharya and Suyash Sushilkumar Shah	North Carolina State University, United States; John Deere, United States
1695.pdf	P843	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	Efficiency and Common-Mode EMI Considerations of a DAB-Fed Variable DC-Link Motor Drive	Harish Pulakhandam and Subhashish Bhattacharya	North Carolina State University, United States
1710.pdf	P721	Thursday, November 2, 2:00PM-3:40PM	Poster Session 4	Distributed Hierarchical Sensing and Analytics for Grid-Edge Behind the Meter Visibility and Grid Resilience	Mehrnaz Madadi, Subhashish Bhattacharya, Paul Ohodnicki, Yang-Duan Su, Dolendra Karki, Meredith Miller, Emma Stewart, Ganapathi Subramania, Honggang Wang, Todd Monson, Richard Beddingfield and Arvind Tiwari	North Carolina State University, United States; University of Pittsburgh, United States; National Rural Electric Cooperative Association, United States; Sandia National Laboratory, United States; General Electric Global Research, United States