Monday, September 19, 1:30PM-4:00PM

- The Modular Embedded Multilevel Converter: A Voltage Source Converter with IGBTs and Thyristors
- Multi-Module-Cascade High-Voltage Composite Switch
- Step-Up MMC with Staircase Modulation: Analysis, Control, and Switching Strategy
- A High Step-Up Ratio Soft-Switching DC-DC Converter for Interconnection of MVDC and HVDC Grids
- Fault Tolerant Cell Design for MMC-based Multiport Power Converters
- HIL Platform Design and Controller Verification for MMC Based HVDC Networks
- Energy Storage Opportunities and Capabilities in a Type 3 Wind Turbine Generator
- Assessment of System Frequency Support Effect of a PMSG-WTG Using Torque-Limit Based Inertial Control
- Improved Efficiency of Local EPS through Variable Switching Frequency Control of Distributed Resources
- Smart EV Charging System for Maximising Power Delivery from Renewable Sources
- Instantaneous Frequency Regulation of Microgrids via Power Shedding of Smart Load and Power Limiting of Renewable Generation
- Modeling and identification of harmonic instability problems in wind farms
- A Method for Improving Stability of LCL-Type Grid-Tied Inverters in Weak Grid with Resonant Feed forward Control
- Passivity Enhancement in RES Based Power Plant with Paralleled Grid-Connected Inverters
- Voltage Stability Analysis Using A Complete Model of Grid-Connected Voltage-Source Converters
- Resonant Control for Power Converters Connected to Weak and Micro Grid Systems with Variant Frequency
- Extended-Horizon Finite-Control-Set Predictive Control of a Multilevel Inverter for Grid-Tie Photovoltaic Systems
- A Novel Seamless Transfer Control Strategy For Wide Range Load
- Hybrid Switched-Capacitor Quadratic Boost Converters with Very High DC Gain and Low Voltage Stress On Their Semiconductor Devices
- Mixed Switched-Capacitor Based High Conversion Ratio Converter and Generalization for Renewable Energy Applications
- A High Step-Up DC-DC Converter with Switched-Capacitor and ZVS Realization
- A Flying Capacitor Multilevel Converter with Sampled Valley-Current Detection for Multi-Mode Operation and Capacitor Voltage Balancing
- Resonant Switched Capacitor Stacked Topology Enabling High DC-DC Voltage Conversion Ratios and Efficient Wide Range Regulation
- Bi-Directional Bridge Modular Switched-Capacitor-Based DC-DC Converter with Phase-Shift Control
- A Review of Electronic Inductor Technique for Power Factor Correction in Three-Phase Adjustable Speed Drives
- The Power-Loss Analysis and Efficiency Maximization of A Silicon-Carbide MOSFET Based Three-phase 10kW Bi-directional EV Charger Using Variable-DC-Bus Control
- Modular Multi-Parallel Rectifiers (MMR) with two DC Link Current Sensors
- Comparison of Three-phase Active Rectifier Solutions for Avionic Applications: Impact of the Avionic Standard DO-160 F and Failure Modes
• MultiLevel Asymmetric Single-Phase Current Source Rectifiers
• Three-Phase Unidirectional Rectifiers with Open-End Source and Cascaded Floating Capacitor H-Bridges
• A Generic Topology Derivation Method for Single-phase Converters with Active Capacitive DC-links
• Power Decoupling Method for Single Phase PV System using Cuk derived micro-inverter
• A Multi-port, Isolated PV Microinverter with Low Decoupling Capacitance and Integrated Battery Charger
• A Single Phase Transformerless String Inverter with Large Voltage Swing of Half Bridge Capacitors for Active Power Decoupling
• A-Source Impedance Network
• A Semi-Two-Stage DC-AC Power Conversion System with Improved Efficiency Based on A Dual-input Inverter
• Single-Input Multiple-Output Synchronous dc-dc Buck Converter
• Dual-Input Dual-Output Single-Switch Dc-Dc Converter for Renewable Energy Applications
• A High Step-Up Interleaved Converter with Coupled Inductor and Voltage-Lift Technique
• Single Resonant Cell Based Multilevel Soft-Switching DC-DC Converter for Medium Voltage Conversion
• Unified Model of High Voltage Gain DC-DC Converter with Multi-cell Diode-Capacitor/Inductor Network
• Comparative Evaluation of a Triangular Current Mode (TCM) and Clamp-Switch TCM DC-DC Boost Converter
• Analytically Constrained ZVS Operation To Reduce Commutation Losses for High Boost Dual-Active Bridge Converters
• Passive Auxilliary Circuit for ZVS Operation of A Wide-DC-Range Dual-Active-Bridge Bidirectional Converter for Transportation Applications
• Charge-Based ZVS Modulation of a 3-5 Level Bidirectional Dual Active Bridge DC-DC Converter
• Parallel-Connected Bidirectional Current-Fed Dual Active Bridge DC-DC Converters with Decentralized Control
• Asymmetrical Duty-Cycle Control of Three-Phase Dual-Active Bridge Converter for Soft-Switching Range Extension
• Proposal of Dual Active Bridge Converter with Auxiliary Circuit for Multiple Pulse Width Modulation
• A Simple Low-Cost Common Mode Active EMI Filter Using a push-pull Amplifier
• Two-capacitor Transformer Winding Capacitance Models for Common-Mode EMI Noise Analysis in Isolated DC-DC Converters
• Performance of Common-Mode-Voltage-Cancellation PWM Strategies with Consideration of Commutation Residues due to Double-Switching Waveforms
• Identification of the Temporal Source of Frequency Domain Characteristics of SiC MOSFET Based Power Converter Waveforms
• Resonance Phenomenon Influencing the Conducted-Mode Emission Test
• Modeling, Analysis and Design of Differential Mode Active EMI Filters with Feedforward and Feedback Configurations for AC-DC Converters
• Compensation for Inverter Nonlinearity Considering Voltage Drops and Switching Delays of Each Leg's Switches
• Small-signal Terminal-Characteristics Modeling of Three-Phase Droop-Controlled Inverters
• Enhancement of Current and Voltage Controllers Performance by Means of Lead Compensation and Anti-Windup for Islanded Microgrids
• DC-Link Current Ripple Component RMS Value Estimation Considering Anti-Parallel Diode Reverse Recovery in Voltage Source Inverters
• Digital Dead-Beat and Repetitive Combined Control for Stand-Alone Four-Leg VSI
• Modeling, Analysis, and Impedance Design of Battery Energy Stored Single-Phase Quasi-Z-Source Photovoltaic Inverter System
• High Torque Density Induction Motor with Integrated Magnetic Gear
• Accurate Determination of Induction Machine Torque and Current versus Speed Characteristics
• The Novel SLIM Method for the Determination of the Iron Core Saturation Level in Induction Motors
• Rotor Design to Reduce Secondary Winding Harmonic Loss for Induction Motor in Hybrid Electric Vehicle Application
• A Novel In Situ Efficiency Estimation Algorithm for Three-Phase Induction Motors Operating with Distorted Unbalanced Voltages
• Development and Efficiency estimation of a Regenerative Test Rig for Induction Motor Testing
• A Voltage Based Approach for Fault Detection and Separation in Permanent Magnet Synchronous Machines
• Permanent Magnet Generator Turn Fault detection Using Kalman Filter Technique
• Influence of Blade Pass Frequency Vibrations on MCSA-based Rotor Fault Detection of Induction Motors
• Stator Insulation Quality Assurance Testing for Appliance Motors with Aluminum Windings
• Robust detection of rotor winding asymmetries in wound rotor induction motors via integral current analysis
• Asynchronous Motors Fault Detection Using ANN and Fuzzy Logic Methods
• Minimizing Torque Ripple of Highly Saturated Salient Pole Synchronous Machines by Applying DB-DTFC
• Using Volt-sec. Sensing to Directly Improve Torque Accuracy and Self-Sensing at Very Low Speeds
• Torque Ripple Reduction for 6-stator/4-rotor-pole Variable Flux Reluctance Machines by Using Harmonic Field Current Injection
• Novel On-Line Optimal Bandwidth Search and Auto Tuning Techniques for Servo Motor Drives
• Open-loop Control for Permanent Magnet Synchronous Motor Driven by Square-wave Voltage and Stabilization Control
• A Robust Current Control Based on Proportional-Integral Observers for Permanent Magnet Synchronous Machines
• A Pumpback Test Bench for IGCT-based 11MW/595Hz Variable-Frequency-Drives with 1.25MW Grid Capability
• Grounding Concept and Common-Mode Filter Design Methodology for Transformerless MV Drives
• Utilisation of Series Connected Transformers for Multiple Active Rectifier Units
• Common-Mode Voltage Limits for the Transformerless Design of MV Drives to Prevent Bearing Current Issues
• A Robust Sensorless Start-up Method using Four Step Sequence for LCI system
• Virtual Voltage Source Control for 2x27 MVA Machine Test Bench
• Performance Comparison of 10 kV-15 kV High Voltage SiC Modules and High Voltage Switch using Series Connected LV SiC MOSFET devices
• Development of an Ultra-high Density Power Chip on Bus (PCoB) Module
• Optimized Power Modules for Silicon Carbide MOSFET
• An Improved Wire-bonded Power Module with Double-End Sourced Structure
• An Initial Consideration of Silicon Carbide Devices in Pressure-Packages
• Effect of Junction Temperature Swing Durations on a Lifetime of a Transfer Molded IGBT Module
• An Inductive and Capacitive Integrated Couper and Its LCL Compensation Circuit Design for Wireless Power Transfer
• Design Procedure of Optimum Self-Inductances of Magnetic Pads in Inductive Power Transfer (IPT) for Electric Vehicles
• Design high power and high efficiency inverter operating at 13.56MHz for wireless power transfer systems
• Improved Design Optimization Approach for High Efficiency Matching Networks
• Efficiency Optimization Method of Wireless Power Transfer System with Multiple Transmitters and Single Receiver
• Maximum Efficiency Tracking in Wireless Power Transfer for Battery Charger: Phase Shift and Frequency Control

**Monday, September 19, 5:30PM-7:00PM**

• Modeling, Parameterization, and Benchmarking of a Lithium Ion Electric Bicycle Battery
• Performance evaluation of a hybrid thermal-photovoltaic panel
• On-line Wind Speed Estimation in IM Wind Generation Systems by Using Adaptive Direct and Inverse Modelling of the Wind Turbine
• Passivity-Based and Standard PI Controls Application To Wind Energy Conversion System
• Evaluation of Circulating Current Suppression Methods for Parallel Interleaved Inverters
• A Fast Dynamic Unipolar Switching Control Scheme for Single Phase Inverters in DC Microgrids
• A Novel Method of Optimizing Efficiency in Hybrid Photovoltaic-Grid Power System
• A Novel Autonomous Control Scheme for Parallel, LCL-Based UPS Systems
• Harmonic Components Based Protection Strategy for Inverter-Interfaced AC Microgrid
• Adaptive Virtual Inertia Control of Distributed Generator for Dynamic Frequency Support in Microgrid
• Interleaved Hybrid Boost Converter with Simultaneous AC and DC Outputs for Microsource Applications
• Robust Inverter Control Design in Islanded Microgrids Using $\mu$-Synthesis
• Economic Analysis of a Regional Coordinated Microgrids System Considering Optimal PEVs Allocation
• Design of a Cooperative Voltage Harmonic Compensation Strategy for Islanded Microgrids Combining Virtual Admittances and Repetitive Controllers
• EMI Reduction Technology in 85 kHz Band 44 kW Wireless Power Transfer System for Rapid Contactless Charging of Electric Bus
• Design and Characterization of a Meander Type Dynamic Inductively Coupled Power Transfer Coil
• Design of S/P Compensated IPT System Considering Parameter Variations in Consideration of ZVS Achievement
• Coasting Control of EV Motor Considering Cross Coupling Inductance
• Analysis and Comparison of Single Inverter Driven Series Hybrid System
• Control Strategy for a Modified Cascade Multilevel Inverter with Dual DC Source for Enhanced Drivetrain Operation
• An Investigation of DC-Link Voltage and Temperature Variations on EV Traction System Design
• Compact and High Power Inverter for the Cadillac CT6 Rear Wheel Drive PHEV
• Quadratic Boost A-Source Impedance Network
• Analysis and Design of a Switched-Capacitor Step-Up Converter for Renewable Energy Applications
• Non-Isolated High-Step-Up Resonant DC/DC Converter
• Three Level DC-DC Converter Based on Cascaded Dual Half-Bridge Converter for Circulating Loss Reduction
• Current-fed Converters with Switching cells
• Analysis of LCLC Resonant Converters for High-voltage High-frequency Applications
• A Novel Constant Voltage Primary-side Regulator Topology to Eliminate Auxiliary Winding
• Single-Phase-Switch Voltage-Doubler DCM SEPIC Rectifier with High Power Factor and Reduced Voltage Stress on the Semiconductors
• Z-Source Resonant Converter with Power Factor Correction for Wireless Power Transfer Applications
• A High-Power-Density Single-Phase Inverter with Pulse Current Injection Power Decoupling Method
• Hybrid Multilevel Converter based on Flying Capacitor and Extended Commutation Cell
• A Novel Hybrid Five-Level Voltage Source Converter Based on T-Type Topology for High-Efficiency Applications
• Flying-Capacitor-Clamped Five-Level Inverter Based on Switched-Capacitor Topology
• Cascaded Three-phase Quasi-Z Source Photovoltaic Inverter
• Hybrid Three-Phase Four-Wire Inverters Based on Modular Multilevel Cascade Converter
• Hybrid Nine-Level Single-Phase Inverter Based on Modular Multilevel Cascade Converter
• Multilevel Converter Based on Cascaded Three-Leg Converters With Reduced Voltage and Current
• Operation of modular matrix converter with hierarchical control system under cell failure condition
• The Delta-Connected Cascaded H-Bridge Converter Application in Distributed Energy Resources and Fault Ride Through Capability Analysis
• Dual Sequence Current Control Scheme Implemented in DSRF with Decoupling Terms Based on Reference Current Feed-Forward
• Injecting 3rd Harmonic into the Input Current to Improve the Power Factor of DCM Buck PFC Converter
• Investigation of Reducing the Influence of Digital Control Delay to LCL-Type Grid-Connected Inverter
• Repetitive Control for Grid Connected Inverters with LCL Filter under Stationary Frame
• Direct Instantaneous Ripple Power Predictive Control for Active Ripple Decoupling of Single-Phase Inverter
• Input-Output Feedback Linearization Based Control for Quasi-Z-Source Inverter in Photovoltaic Application
• A Novel Neutral Point Potential Control for the Three-Level Neutral-Point-Clamped Converter
• Phase Leading Input Current Compensation for CRM Boost PFC Converter
• Paralleled Inverters with Zero Common-mode Voltage
• A Voltage Clamp Circuit for the Real-Time Measurement of the On-State Voltage of Power Transistors
• Error-Voltage Based Open-Switch Fault Diagnosis Strategy for Matrix Converters with Model Predictive Control Method
• Instrumented Diode Dedicated to Semiconductor Temperature Measurement in Power Electronic Converters
• Reliability Odometer of Power Semiconductor Device Used for high performance high power amplifiers
• Energy and Computational Efficient Estimation of Battery Intrinsic Parameters
• Snubber Capacitors Optimization for Super-Junction MOSFET in the ZVS Full-Bridge Inverter
• A Computational Technique for Iron Losses in Electrical Machines
• Saliency Harmonic Induction Motor Speed Estimation Using Artificial Neural Networks
• Reclosing Transients in Standard and Premium Efficiency Induction Machines in the Presence of Voltage Unbalance
• Parameter sensitivity of large electric machines
• Optimal Winding Arrangement of a Surface-Mounted Permanent Magnet Motor for Torque Ripple Reduction
• Numerical Study of Convective Heat Transfer in the End Region of A Totally Enclosed Permanent Magnet Synchronous Machine
• Torque Improvement of Wound Field Synchronous Motor for Electric Vehicle by PM-assist
• Torque Ripple Reduction of a Variable Flux Motor
• An Analytical Model for a Spoke Type Variable Flux Permanent Magnet Motor on No-load condition
• Sensitivity of Manufacturing Tolerances on Cogging Torque in Interior Permanent Magnet Machines with Different Slot/Pole Number
• Cogging Torque Minimization in Flux-Switching Permanent Magnet Machines by Tooth Chamfering
• Experimental research on the oil cooling of the end winding of the motor
• A Computationally Efficient Method for Calculation of Strand Eddy Current Losses in Electric Machines
• Thermal Analysis of a Three-Phase 24/16 Switched Reluctance Machine Used in HEVs
• Pre-Drive Test of an Implemented Novel Radial-Gap Helical ROTLIN Machine
• Hybrid Excitation Topologies of Synchronous Generator for Direct Drive Wind Turbine
• Resonant Based Backstepping Direct Power Control Strategy for DFIG Under Both Balanced and Unbalanced Grid Conditions
• Design and Analysis of a New Five-Phase Brushless Hybrid-Excitation Fault-Tolerant Motor for Electric Vehicles
• Multi-objective Design Optimisation and Pareto Front Visualisation of Radial-flux Eddy Current Coupler for Wind Generator Drive Train
• Reducing Estimated Parameters of a Synchronous Generator for Microgrid Applications
• Brushless Dual-Electrical-Port, Dual Mechanical Port Machines Based on the Flux Modulation Principle
• An Equivalent Dual Three-phase SVPWM Realization of the Modified 24-Sector SVPWM Strategy for Asymmetrical Dual Stator Induction Machine
• A Speed estimation method for free-running induction motor with high inertia load in the low speed range
• Design Optimization and Performance Investigation of Novel Linear Switched Flux PM Machines
• A Coordinated SVPWM without sector identification for Dual inverter fed Open Winding IPMSM System
• Finite-Control-Set Model Predictive Current Control for PMSM Using Grey Prediction
• The Impact of Triangular Defects on Electrical Characteristics and Switching Performance of 4H-SiC PiN Diodes
• Performance Evaluation of Series Connected 15 kV SiC IGBT Devices for MV Power Conversion Systems
• Comparative Performance Evaluation of Series Connected 15 kV SiC IGBT Devices and 15 kV SiC MOSFET Devices for MV Power Conversion Systems
• Equivalent Circuit Models and Model Validation of SiC MOSFET Oscillation Phenomenon
• Enabling DC Microgrids with MV DAB Converter based on 15 kV SiC IGBT and 15 kV SiC MOSFET
• An LC Compensated Electric Field Repeater for Long Distance Capacitive Power Transfer
• A Selection Method of Mutual Inductance Identification Models Based on Sensitivity Analysis for Wireless Electric Vehicle Charging
• Short-Circuit Protection of Power Converters Using SiC Current Limiters
• Impedance Measurement of Three-Phase Grid-Connected Systems in DQ-Domain: Applying MIMO-Identification Techniques
• A New Design Methodology for a 1-Meter Distance, 6.78MHz Wireless Power Supply System for Telemetries
• Modeling and Investigation of 4-Coil Wireless Power Transfer System with Varying Spatial Scales
• Vehicular Integration of Wireless Power Transfer Systems and Hardware Interoperability Case Studies

Tuesday, September 20, 8:30AM-11:00AM

• Low Power Factor Operation of the PV Inverter with Power Decoupling Function
• Stand-Alone Photovoltaic Asymmetrical Cascade Converter
• Ground Leakage Current Suppression in a 50 kW 5-level T-type Transformerless PV Inverter
• A High Performance T-type Single Phase Double Grounded Transformer-less Photovoltaic Inverter with Active Power Decoupling
• Low Leakage Current Transformerless Three-Phase Photovoltaic Inverter
• Operation of Dual-Input Central Capacitor Photovoltaic Inverter under Unbalanced Grid Voltage Condition
• Impact on Small-Signal dynamics of Using Circulating Currents Instead of AC-Currents to Control the DC Voltage in MMC HVDC Terminals
• Control of VSC-HVDC with Electromechanical Characteristics and Unified Primary Strategy
• A Novel Interline DC Power Flow Controller for Meshed HVDC Grids
• Impedance-based and Eigenvalue based Stability Assessment Compared in VSC-HVDC System
• Performance Analysis of a Triple-Active Bridge Converter for Interconnection of Future DC-Grids
• Dc Fault Protection of Multi-Terminal VSC-HVDC System with Hybrid Dc Circuit Breaker
• Partial Power DC-DC Converter for Photovoltaic String Inverters
• On Reactive Power Injection Control of Distributed Grid-tied AC-stacked PV Inverter Architecture
• A Cost-Effective Power Ramp-Rate Control Strategy for Single-Phase Two-Stage Grid-Connected Photovoltaic Systems
• Delta Power Control Strategy for Multi-String Grid-Connected PV Inverters
• Battery Storage Sizing for a Grid Tied PV System Based on Operating Cost Minimization
• Dynamic Braking System of a Tidal Generator
• Multi-frequency Power Routing for Cascaded H-Bridge Inverters in Smart Transformer Application
• A High Power Medium Voltage Resonant Dual Active Bridge for DC Distribution Networks
• Mu synthesized robust controller for multi-SST islanded smart grid
• Cascaded Open-End Winding Transformer based DVR
• Modeling and Control of Gan Based Multiport Power Converter
• Economic Feasibility Analysis and Operational Testing of a Community Energy Storage System
• Electrical machine acoustic noise reduction based on rotor surface modifications
• Integrated Control of an IPM Motor Drive and Hybrid Energy Storage System for Electric Vehicles
• Investigation and Analysis of Temperature Effects on Interior Permanent Magnet Machines
• A Novel Flux-Switching Permanent Magnet Motor-Compressor with Integrated Airfoil-Shaped Rotor Design
• Novel 6-Slot 4-Pole Dual-Stator Flux-Switching Permanent Magnet Machine Comparison Studies for High-Speed Applications
High-Specific-Power Electric Machines for Electrified Transportation Applications - Technology Options
A Fully FPGA-Based Real-time Simulator for the Cascaded STATCOM
A Broad Range of Speed Control of a Permanent Magnet Synchronous Motor Driven by a Modular Multilevel TSBC Converter
Comparison of SiC and GaN Devices for Front-End Isolation of Quasi-Z-Source Cascaded Multilevel Photovoltaic Inverter
Which is more suitable to a Modular Multilevel SDBC Inverter for Utility-Scale PV Applications, Phase-Shifted PWM or Level-Shifted PWM?
A Symmetrical Hybrid Nine-Level Inverter for High Speed Open-Winding Motor Drive System
Control of Neutral-Point Voltage in Three-Phase Four-Wire Three-Level NPC Inverter Based on the Disassembly of Zero Level
Observer-based Nonlinear Control for Frequency Modulated Dual-Active-Bridge Converter
Novel Control Architecture for Dual Output DC-DC Converter Driving DC-AC Inversion System
Dynamic Bus Voltage Control for Light Load Efficiency Improvement of Two-stage Voltage Regulator
A Novel Large-Signal Stability Analysis Approach Based on Semi-Tensor Product of Matrices With Lyapunov Stability Theorem Using for DC-DC Converters
A Study on the Control Loop Design of Non-Isolated Configurations for Hybrid Storage Systems
Effects of Non-Ideal Compensators for the High-Bandwidth Low-Standby-Power Computer V-Core Converter Applications
A Unified SVM Algorithm for Lifetime Prolongation of Thermally-Overheated Power Devices in Multi-Level Inverters
Pulse-Width Modulation Strategy in Double-Delta Sourced Windings
A Quasi-Periodic Modulation Strategy to Mitigate EMI for a GaN-based Quasi-Z-Source DC-DC Converter
A General Space Vector PWM Scheme for Multilevel Inverters
Suppression of Common Mode Circulating Current for Modular Paralleled Three-phase Converters based on Interleaved Carrier Phase-shift PWM
Modulation Strategies for Three-Phase AC-DC Matrix Converters: a Comparison
Constrained Long-Horizon Direct Model Predictive Control for Power Electronics
Thermal-based Finite Control Set Model Predictive Control for IGBT Power Electronic Converters
Modulated Model Predictive Control for Active Split DC-bus 4-leg Inverters
Computationally Efficient Sphere Decoding for Long-Horizon Direct Model Predictive Control
Fixed Frequency Finite-State Model Predictive Control for Indirect Matrix Converters with Optimal Switching Pattern
Improved Steady State Behavior of Finite Control Set Model Predictive Control applied to a Flying Capacitor Converter
A new application and experimental validation of moulding technology for Ferrite Magnet Assisted Synchronous Reluctance Machine
Magnetic Field Analytical Computation in Synchronous Reluctance Machines Considering the Iron Saturation
Performance Comparison of Short Pitched and Full Pitched Switched Reluctance Machines for Off-Road Vehicle Applications
A Fault Tolerant Machine Drive based on Permanent Magnet Assisted Synchronous Reluctance Machine
A General Approach for the Analysis and Comparison of Hybrid Synchronous Machines With Single-Axis or Bi-Axial Excitation
Flux Modulation Principles of DC-Biased Sinusoidal Current Vernier Reluctance Machines
Stator Lamination Geometry Influence on the Building Factor of Synchronous Reluctance Motor Cores
Influence of PM Coating on PM Magnetization State Estimation Methods Based on Magnetoresistance Effect
Investigation of the Impact of Production Processes on Iron Losses of Laminated Stator Cores for Electric Machines
Influence of Manufacturing Tolerances on Cogging Torque in Interior Permanent Magnet Machines with Eccentric and Sinusoidal Rotor Contours
A Practical Approach of Electromagnetic Analysis with the Effect of the Residual Strain due to Manufacturing Processes
Investigation of Emerging Magnetic Materials for Application in Axial-Flux PM Machines
A Compact Active Filter to Eliminate Common-Mode Voltage in a SiC-based Motor Drive
• Stator Inter-Turn Fault Detection for Seamless Fault-Tolerant Operation of Five-Phase Induction Motors
• Rotor Temperature Estimation in Doubly-Fed Induction Machines Using Rotating High Frequency Signal Injection
• Maximum Torque Output for Volts/Hz Controlled Induction Machines in Flux-weakening Region
• Performance Investigation of Selected Prediction Vectors Based FS-PTC for 3L-NPC Inverter Fed Motor Drive
• Inverter-fed Drive Stator Insulation Monitoring based on Reflection Phenomena Stimulated by Voltage Step Excitation
• Maximum torque per ampere control in stator flux linkage synchronous frame for DTC-based PMSM drives without using q-axis inductance
• A Novel Direct Torque Control Strategy for Interior Permanent Magnet Synchronous Motors Driven by a Three-level Simplified Neutral Point Clamped Inverter
• Fault Tolerant Capability of Deadbeat - Direct Torque and Flux Control for Three-Phase PMSM Drives
• Online MTPA Control for Salient-Pole PMSMs Using Square-Wave Current Injection
• Automatic MTPA Tracking in IPMSM Drives: Loop Dynamics, Design and Auto-Tuning
• Comparative Evaluation of 15 kV SiC IGBT and 15 kV SiC MOSFET for 3-Phase Medium Voltage High Power Grid Connected Converter Applications
• Comparison between SiC and GaN devices in 6.78 MHz 2.2 kW resonant inverters for wireless power transfer
• Comparison of GaN FET and Si MOSFET Based Vienna Rectifiers
• Comparison of GaN and SiC Power Devices in Application to MW-scale Quasi-Z-Source Cascaded Multilevel Inverters
• Comparison of deadtime effects on the performance of dc-dc converters with GaN FETs and Silicon MOSFETs
• Characterization and Comparison of Latest Generation 900-V and 1.2-kV SiC MOSFETs
• High Speed Optical Gate Driver for Wide Band Gap Power Transistors
• Reduction of oscillations in a GaN bridge leg using active gate driving with sub-ns resolution, arbitrary gate-impedance patterns
• Design Considerations and Comparison of High-speed Gate Drivers for Si IGBT and SiC MOSFET Modules
• Active Gate Driving Technique for a 1200 V SiC MOSFET to Minimize Detrimental Effects of Parasitic Inductance in the Converter Layout
• Comprehensive Evaluation of Gate Boost Driver for SiC-MOSFETs
• Gate Driver for the Active Thermal Control of a DCDC GaN based Converter
• A Mistuning-Tolerant and Controllable Power Supply for Roadway Wireless Power Systems
• Power Converter with Novel Transformer Structure for Wireless Power Transfer Using a DD2Q Power Receiver Coil Set
• A Wireless Power Transfer System with a Double Current Rectifier for EVs
• Hybrid Control of Inductive Power Transfer Charger for Electric Vehicles using LCCL-S Resonant Network in Limited Operating Frequency Range
• Research on Seamless Transfer from CC to CV Modes for IPT EV Charging System Based on Double-sided LCC Compensation Network
• Closed-Loop Control Design for WPT System Using Power and Data Frequency Division Multiplexing Technique

**Tuesday, September 20, 11:00AM-12:30PM**

• Power Balance Control and Circulating Current Suppression for MMC based EV Integration System Considering Users Requirement
• Optimal Sizing of Energy Storage for PV Power Ramp Rate Regulation
• Model-Based Adaptive Control of a Hydraulic Wind Power System
• Sensorless speed control of a small wind turbine using the rectifier voltage ripple
• Maximum Power Point Tracking (MPPT) of Sensorless PMSG Wind Power System
• Current/Voltage Sensor Fault Detection and Isolation in Wind Energy Conversion Systems Based on Power Balance
• Quasi-Z-Source-Based Multilevel Inverter for Single-Phase Photo Voltaic Applications
• Dual Buck Based Power Decoupling Circuit for Single Phase Inverter/Rectifier
• Design and Development of a True Decentralized Control Architecture for Microgrid
• Modeling and Control of a Synchronous Generator in an AC Microgrid Environment
• State Estimation of Power Systems with Interphase Power Controllers Using the WLS Algorithm
• A Novel T-Type Half-Bridge Cell for Modular Multilevel Converter with DC Fault Blocking Capability
• A Distributed Control Method for Power Module Voltage Balancing of Modular Multilevel Converters
• Control Method of Single-phase Inverter Based Grounding System in Distribution Networks
• A Novel Energy Balanced Variable Frequency Control for Input-Series-Output-Parallel Modular EV Fast Charging Stations
• An Adaptive Charging Control Strategy For Ultracapacitor Light Rail Vehicles
• A High Power Density Drivetrain-Integrated Electric Vehicle Charger
• Railway Power Conditioner Based on Delta-connected Modular Multilevel Converter
• Dynamic Study of Electromechanical Interaction in Marine Propulsion
• Model-based Control Design for a Battery/Ultracapacitor DC-DC Converter System
• Sliding Model Control Based On Estimation Of Optimal Slip Ratio For Railway Wheel Slide Protection Using Extremum Seeking
• Evaluation of Negative-Sequence-Current Compensators for High-Speed Electric Railways
• A ZVS Integrated Single-Input-Dual-Output DC/DC Converter for High Step-up Applications
• A Survey on Voltage Boosting Techniques for Step-Up DC-DC Converters
• Analysis and Design of a Current fed Non-isolated Buck-Boost DC-DC Converter
• Impulse Commutated Current-fed Three-phase Modular DC/DC Converter for Low Voltage High Current Applications
• Comparative evaluation of capacitor-coupled and transformer-coupled dual active bridge converters
• Planar Transformer Winding Technique for Reduced Capacitance in LLC Power Converters
• Topology and Controller of an Isolated Bi-Directional AC-DC Converter for Electric Vehicle
• High Efficiency LLC DCX Battery Chargers with Sinusoidal Power Decoupling Control
• PWM Strategies with Duality between Current and Voltage Source AC/DC Converters for Suppressing AC Harmonics or DC Ripples
• Analytical Expression for Harmonic Spectrum of Regular Sampled Space Vector Modulated Rectifier Connected to IPM Generator
• A Systematic Topology Generation Method for Dual-Buck Inverters
• Analysis and Control of Decentralized PV Cascaded Multilevel Modular Integrated Converters
• Experimental Study of a SiC MOSFET based Single Phase Inverter in UPS Applications
• Performance Analysis of a flexible multi-level converter for high voltage photovoltaic grid-connected power system
• Circulating Current Control for Carrier-Based Discontinuous Modulation in Inverters with Parallel Legs
• A Phase-Shift PWM-Controlled ZVS Boost Full-Bridge AC-AC Converter for High-Frequency Induction Heating Applications
• Control Approach for a Class of Modular Multilevel Converter Topologies
• Digital Autotuning Controller for Point-of-Load Converter Based on Non-Intrusive Start-up Transient Observer
• Control of D-STATCOM During Unbalanced Grid Faults Based on DC Voltage Oscillation and Peak Current Limitations
• Staircase Modulation of Modular Multilevel Converters with Minimal Total Harmonic Distortion and Maximal Number of Output Voltage Levels
• FPGA Implementation of Model Predictive Direct Current Control
• Active Damping of LC Resonance for Paralleled Indirect Matrix Converter Based on Cascaded Control
• Virtual Circuit Design of Grid-Connected Half-Bridge Converters with Higher-Order Filters
• Commutation Technique for High Frequency Link Inverter without Operational Limitations and Dead Time
• Research on the Current Control method of N-paralleled Converter System for the High-Power Inductor Tester
• Modeling and Bifurcation Analysis of Converters with Power Semiconductor Filter
• Suppression of Circulating Current in Paralleled Inverters with Isolated DC-link
• Small-Signal Model for the ISOP DC-DC Converters in the 5-Level T-Rectifier
• DC Bus Splitting Voltage Feedforward Injection Method for Virtually-Grounded Three-Phase Inverter
• High Performance SiC Power Block for Industry Applications
• Switching Angles Generation for Selective Harmonic Elimination by Using Artificial Neural Networks and Quasi-Newton Algorithm
• Minimum RMS Current Operation of the Dual-Active Half-Bridge Converter using Three Degree of Freedom Control
• Comparison of Torque Characteristics in Permanent Magnet Synchronous Machine with Conventional and Herringbone Rotor Step Skewing Techniques
• Six-Leg Dc-Link Rectifier/Inverter for Two-Phase Machines
• RSM-DE-ANN Method for Sensitivity Analysis of Active Material Cost in PM Motors
• Modeling, simulation and performance evaluation of caged permanent magnet motors fed by variable speed drives (VSDs)
• An Improved Conformal Mapping Aided Field Reconstruction Method for Modeling of Interior Permanent Magnet Synchronous Machines
• Hybrid Excited Vernier PM Machines with Novel DC-Biased Sinusoidal Armature Current
• Calculating the Electromagnetic Field and Losses in the End Region of Large Synchronous Generators under Different Operating Conditions with Three-Dimensional Transient Finite Element Analysis
• Electrical Propulsion System Design of Chevrolet Bolt Battery Electric Vehicle
• Optimizing PM Coverage Ratio in Flux Concentrating Axial Flux Machine
• Detailed Analytical Modelling of Fractional-Slot Concentrated-Wound Interior Permanent Magnet Machines for Prediction of Torque Ripple
• A compact and light-weight generator for backpack energy harvesting
• Suspension Loss Measurement and its Reduction in Single-Drive Bearingless Motor
• A Compact Single-Phase Adjustable-Voltage-Ratio Magnetoelectric Transformer
• Analysis of Common Mode Circuit of BDFG-Based Ship Shaft Power Generation System
• Replacing SPM by PMAREl machines in low-speed high-torque applications
• Rotor Eddy-Current Loss Minimization in High-Speed PMSMs
• Design and Analysis of Rotating Diode Rectifier for Wound-Rotor Synchronous Starter/Generator
• Stator Tooth and Rotor Pole Shaping for Low Pole Flux Switching Permanent Magnet Machines to Reduce Even Order Harmonics in Flux linkage
• Optimization of PM Volume in a PM-assisted Claw-Pole Motor for ISG Applications
• Improved Model Predictive Current Control of Permanent Magnet Synchronous Machines with Fuzzy Based Duty Cycle Control
• A Universal Restart Strategy for Induction Machines
• Active Disturbance Rejection Control of Linear Induction Motor
• Super-Twisting Algorithm Based Sliding-Mode Observer with Online Parameter Estimation for Sensorless Control of Permanent Magnet Synchronous Machine
• High Dynamic Sensorless Control for PMSMs Based on Decoupling Adaptive Observer
• Position Sensorless Control of Switched Reluctance Motor Based on a Numerical Method
• Operating-Envelop-Expandable Control Strategy for Switched Flux Hybrid Magnet Memory Machine
• Modelling the closely coupled cascode switching process
• A 700-V Class Reverse-Blocking IGBT for Large Capacity Power Supply Applications
• Efficiency and Electromagnetic Interference Analysis of Wireless Power Transfer for High Voltage Gate Driver Application
• Single Chip Enabled High Frequency Link based Isolated Bias Supply for Silicon Carbide MOSFET Six-Pack Power Module Gate Drives
• Reliability Assessment of SiC Power MOSFETs From The End Users Perspective
• Investigation of Collector Emitter Voltage Characteristics in Thermally Stressed Discrete IGBT Devices
• Transmission Characteristics Analysis of a Three-Phase Magnetically Coupled Resonant Wireless Power Transfer System
• Synthesis of Buck Converter Based Current Sources
• A Model for Coupling Under Coil Misalignment for DD Pads and Circular Pads of WPT Systems
• Comprehensive Dynamic Modeling of a Solid-state Transformer Based Power Distribution System
• Capability, Compatibility, and Usability Evaluation of Hardware-in-the-Loop Platforms for DC-DC Converter
• A Single Stage AC/DC Converter for Low Voltage Energy Harvesting

**Tuesday, September 20, 3:00PM-4:30PM**

• Dynamic Battery Operational Cost Modeling for Energy Dispatch
• A Low Voltage Ride Through Control Strategy for Energy Storage Systems
• Experimental Validation of the Solid State Substation with Embedded Energy Storage Concept
• Understanding Dynamic Model Validation of a Wind Turbine Generator and a Wind Power Plant
• A Brushless Doubly-fed Generator Based on Permanent Magnet Field Modulation for Wind Power Generation
• Robust Sliding Mode Control for Permanent Magnet Synchronous Generator-Based Wind Energy Conversion Systems
• A Partially-Rated Active Filter Enabled Power Architecture to Generate Oscillating Power From Wave Energy Converter
• Hybrid Energy Storage System Comprising of Battery and Ultra-capacitor For Smoothing of Oscillating Wave Energy
• A Series-LC-Filtered Active Trap Filter for High Power Voltage Source Inverter
• Constant DC-Capacitor Voltage-Control-Based Strategy for Harmonics Compensation of Smart Charger for Electric Vehicles in Single-Phase Three-Wire Distribution Feeders With Reactive Power Control
• A Series Active Damper with Closed-loop Control for Stabilizing Single-phase Power-Electronics-Based Power System
• A Grid-Interfaced Test System for Modeling of NiMH Batteries in a Battery-Buffered Smart Load Application
• Impedance-Based Stability Analysis of DFIG
• Online Variation of Wind Turbine Controller Parameters for Mitigation of SSR in DFIG based Wind Farms
• Three-Phase Single Stage Boost Inverter for Direct Drive Wind Turbines
• Secondary Side Modulation of a Single-stage Isolated High-frequency Link Microinverter with a Regenerative Flyback Snubber
• Frequency Characterization of Type-IV Wind Turbine Systems
• Reliability Assessment of Fuel Cell System - A Framework for Quantitative Approach
• New Soft-Switched Multi-Input Converters with Integrated Active Power Factor Correction for Hybrid Renewable Energy Applications
• FPGA Based Implementation of Control for Series Input Boost Pre-regulator Under Unequal Loading
• Separating Key Less Well-Known Properties of Drive Profiles that Affect Lithium-ion Battery Aging by Applying the Statistical Design of Experiments
• Performance Degradation of Thermal Parameters during Cycle Ageing of NMC-based Lithium Ion Battery Cells
• Investigation of Current Sharing and Heat Dissipation in Parallel-Connected Lithium-Ion Battery Packs
• A Cooperative Charging Strategy for Onboard Supercapacitors of Catenary-Free Trams
• A High Frequency Zero-Voltage-Transition (ZVT) Synchronous Buck Converter for Automotive Applications
• The Dual-Channel Magnetically Integrated Converters for Plug-in Electric Vehicles
• Power-Line Impedance Modeling of Tractor-Trailer System
• An Interleaved 1-to-6 Step-Up Resonant Switched-Capacitor Converter Utilizing Split-Phase Control
• Boost Composite Converter Design Based On Drive Cycle Weighted Losses in Electric Vehicle Powertrain Applications
• Design of a Four-Phase Interleaved Boost Circuit with Closed-Coupled Inductors
• Hybrid DC-DC Buck Converter with Active Switched Capacitor Cell and Low Voltage Gain
• High Gain Resonant Boost Converter For PV Micro-Converter System
• Design of Two-Switch Flyback Power Supply Using 1.7 kV SiC Devices for Ultra-Wide Input-Voltage Range Applications
• A Single-Stage Interleaved LLC PFC Converter
• Medium Voltage AC-DC Rectifier for Solid State Transformer (SST) Based on an Improved Rectifier Topology
• Microcontroller-Based MHz Totem-Pole PFC with Critical Mode Control
• Three-Phase Isolated DCM SEPIC Converter for High Voltage Applications
• Single Phase Precharge Control Method for Active Front End Rectifier
• Adaptive Controlled-type Zero-voltage-switching Inverters with Bandwidth Limitation
• Half Bridge NPC Inverter and Its Three Phase Application with Constant Common Mode Voltage
• Interleaved Auxiliary Resonant Snubber for High-Power, High-Density Applications
• Three-Phase Four-Wire Inverters Based on Cascaded Three-Phase Converters with Four and Three Legs
• Optimal Switching Counts Modulation of H7 Current Source Inverter
• Cuk-Based Universal Converters in Discontinuous Conduction Mode of Operation
• Neutral Points Voltage Balancing Control of a Four-level pi-type Converter
• A Novel Three-Phase Multilevel Diode-Clamped Inverter Topology with Reduced Device Count
• Maximum Boost Space Vector Modulated Three-Phase Three-Level Neutral-Point-Clamped Quasi-Z-Source Inverter
• High Dynamic and Static Performance FCS-MPC Strategy for Static Power Converters
• New Logic-Form-Equation Based Active Voltage Control for Four-Level Flying Capacitor Multicell (FCM) Converter
• Experimental Evaluations of Thinned-Out and PDM Controlled Class-E Rectifier
• Variable Slope External Ramp to Improve the Transient Performance in Constant On-Time Current Mode Control
• PWM Methods for High Frequency Voltage Link Inverter Commutation
• Switching Pattern of a Modular Voltage Balancing Circuit for Battery Cells
• Steady State Impedance Estimation of a Weak Grid to Assist Optimal Current Injection for Minimal Power Losses
• A Single-phase Unified Power Quality Conditioner with An Enhanced Repetitive Controller
• Single-Phase Universal Active Power Filter Based on AC/AC Converters
• Circulating Resonant Current Between Integrated Half-Bridge Modules with Capacitor for Inverter Circuit Using SiC-MOSFET
• Computationally Efficient Event-Based Simulation of Switched Power Systems and AC Machinery
• Design Optimisation and Trade-offs in Multi-kW DC-DC Converters
• Switching frequency optimization for a Solid State Transformer with Energy Storage Capabilities
• Lag-Free Terminal Voltage Sensing in Low-Pass Filtered PWM Converters
• Cogging Torque Minimization with Rotor Tooth Shaping in Axial Flux-Switching Permanent Magnet Machine
• A 3D Printed Fluid Filled Variable Elastance Electrostatic Machine Optimized with Conformal Mapping
• Effects of External Field Orientation on Permanent Magnet Demagnetization
• Analytical Approach for Determining Inductance Matrix, Harmonic Voltage and Torque Ripple of Slotted PM Motors
• Cogging Torque Minimization in Transverse Flux Machines
• Torque Ripple Reduction in a Flux-Switching Permanent Magnet Machine Targeted at Elevator Door Applications by Minimizing Space Harmonics
• On Saliency Enhancement of Salient Pole Wound Field Synchronous Machines
• Fast and Accurate Analytical Calculation of the Unsaturated Phase Inductance Profile of 6/4 Switched Reluctance Machines
• An Analytical Approach for Determining Harmonic Cusps and Torque Dips in Line Start Synchronous Reluctance Motors
• Multi-Objective Design and Optimization of Generalized Switched Reluctance Machines with Particle Swarm Intelligence
• Design and Comparison of Concentrated and Distributed Winding Synchronous Reluctance Machines
• Reduction in Torque and Suspension Force Ripples of an Axial-Gap Single-Drive Bearingless Motor
• Advancements in High Power High Frequency Transformer Design for Resonant Converter Circuits
• Active Damping of Ultra-fast Mechanical Switches for Hybrid AC and DC Circuit Breakers
• A Diagnosis Procedure in Standalone Mode for Inter Turn Short Circuit Fault of PMSMs through Modified Self-Commissioning
• Improved Condition Monitoring of the Faulty Blower Wheel Driven by Brushless DC Motor in Air Handler Unit (AHU)
• Mitigation Method of the Shaft Voltage according to parasitic capacitances of the PMSM
• 3-D Equivalent Magnetic Circuit Network for Precise and Fast Analysis of PM-assisted Claw-Pole Synchronous Motor
• Superconducting and Conventional Electromagnetic Launch System for Civil Aircraft Assisted Take-off
• Design of Integrated Radial and Dual Axial-Flux Ferrite Magnet Synchronous Machine
• Comprehensive Evaluation of a Silicon-WBG Hybrid Switch
• Characterization of Power Capacitors on Practical Current Condition Using Capacitor Loss Analyzer
• A Practical Liquid-Cooling Design Method for Magnetic Components of EMI Filter in High Power Motor Drives
• Efficiency Modeling of Wireless Power Transfer ASICs Accounting for Layout Parasitics
• Direct Voltage Balancing for Series Connected IGBTs
• Mitigation of Harmonics in Drilling Rigs using Shunt Active Power Filters
• Variable Switching Frequency Algorithm for Optimal Tradeoff between Switching Losses and Total Demand Distortion in Grid-Tied Three-Phase Voltage-Source Inverters
• A Hybrid Model Predictive Charging Control Strategy for Ultracapacitors of Urban Rail Vehicles
• A Universal-Input Single-stage AC-DC Converter for Twin-Bus Type High-Power LED applications
• Control IC for TRIAC Dimming LED Driver with Quasi-Resonant Flyback Converter
• Mutual Inductance Measurement for Power Device Package Using Time Domain Reflectometry
• Synchronized triple bias-flip circuit for piezoelectric energy harvesting enhancement: operation principle and experimental validation
• Approaching Repetitive Short Circuit Tests on MW-Scale Power Modules by means of an Automatic Testing Setup
• Cascaded Operation of SiC JFETs in Medium Voltage Solid State Circuit Breakers
• Hybrid Algorithm for Fault Locating in Looped Microgrids

Wednesday, September 21, 8:30AM-10:10AM

• A 50kW High Power Density Paralleled-five-level PV Converter based on SiC T-type MOSFET Modules
• PV Array Voltage Range Extension for Photovoltaic Inverters Using a Mini-Boost
• Submodule Integrated Boost DC-DC Converters with No External Input Capacitor or Input Inductor for Low Power Photovoltaic Applications
• Effective Control Approach for Multi-PVs Based Resonant Converter through Cross-switched Structure
• Control Scheme for the Wide Operation Range of Induction Generator with a Vienna Rectifier in Wind Turbine Systems
• GaN Based High Gain Non-Isolated DC-DC Stage of Microinverter with Extended-Duty-Ratio Boost
• High-Efficiency Three-Level SEPIC for Grid-Tied PV Systems
• A Novel Zero-voltage-switched Multi-resonant DC-DC Converter
• Seamless Transfer Strategy Considering Power Balance in Parallel Operation
• Robust Control for Parallel Operated L-Converters with Uncertainty and Disturbance Estimator
• Active and Reactive Power Operational Region for Grid-Interactive Cascaded H-Bridge Multilevel Converters
- Harmonic Stability Analysis and Controller Parameter Design of Three-Phase Inverter-Based Multi-Bus Ac Systems Based on Sequence Impedances
- Full-ZVS Modulation for All-SiC ISOP-Type Isolated Front End (IFE) Solid-State Transformer
- Stability issues in reverse power flow limitation in a Smart Transformer-fed distribution grid
- Smart Transformer-Based Hybrid Grid Loads Support in Partial Disconnection of MV/HV Power System
- Soft-Switching Solid State Transformer (S4T)
- Hierarchical Coordination of a Hybrid AC/DC SmartGrid with Central/Distributed Energy Storage
- Dynamic Optimal Power Flow for DC Microgrids with Distributed Battery Energy Storage Systems
- DC Electric Springs with Modified Droop Control for Storage Reduction in DC Microgrids
- Optimal Droop Surface Control of DC Microgrids Based on Battery State of Charge
- A Modified Z-source Converter based Single Phase PV/Grid Inter-connected DC Charging Converter for Future Transportation Electrification
- Comprehensive design comparison of using different order harmonics as the power carrier in wireless power transfer for PHEV and EV Wireless Charging
- A New Inductive Wireless Power Transfer Topology Using Current-Fed Half-Bridge CLC Transmitter LC Receiver Configuration
- Reduction on Radiation Noise Level for Inductive Power Transfer Systems with Spread Spectrum focusing on Combined Impedance of Coils and Capacitors
- A New High-Frequency Simulation Model for Multi-Winding Transformers used in Switched-Mode Power Supplies
- Multi-Phase Sliding Mode Control for Chattering Suppression in a DC-DC Converter
- Gradient-reference-current Control of Tri-state Buck Converter to Improve Dynamic Response over Wide Load Range
- A Control Strategy for Paralleled Bi-Directional DC-DC Converters Used in Energy Storage Systems
- Steady-State Analysis of the Phase Shift Modulated LLC Resonant Converter
- Practical Implementation of Global Synchronous Pulse Width Modulation with Time Delay Compensation and Distributed Calculation Capabilities
- Research on Zero-Sequence Circulating Currents in Parallel Three-Level Grid-Tied Photovoltaic inverters
- Modified Pulse Energy Modulation Technique of a Three-Switch Buck-Boost Inverter
- MMC-HVDC: Simulation and Control Strategy
- Hybrid Railway Power Conditioner Based on Half-Bridge Modular Multilevel Converter
- A PWM Method Reducing Harmonics of Two Interleaved Converters
- DC Impedance Modeling and Stability Analysis of Modular Multilevel Converter for MVDC Application
- Segmented Rotor Design of Concentrated Wound Switched Reluctance Motor (SRM) for Torque Ripple Minimization
- Extending the Speed Range of a Switched Reluctance Motor using a Fast Demagnetizing Technique
- Development and Analysis of U-core Switched Reluctance Machine
- Torque Ripple and Acoustic Noise of Current Modulations of a Pseudo-Sinusoidal Switched Reluctance Motor
- Proposal of Electrically Reversal Magnetic Pole Type Variable Magnetic Flux PM Motor
- Torque and Core Loss Characterization of a Variable-Flux Permanent-Magnet Machine
- Examination to Enhance Efficiency of V-shaped IPMSM Using Concentrated Winding Structure at High Speed and High Torque Area
- Advanced High Torque Density Non-overlapping Winding PM Vernier Machines
- Synchronous Switching of Non-Line-Start Permanent Magnet Synchronous Machines between Inverter and Grid Drives
- Instability Detection and Protection Scheme for Efficiency Optimized V/f Driven Synchronous Reluctance Motors (SynRM)
- Power-Quality-Oriented Optimization in Multiple Three-Phase Adjustable Speed Drives
- A Four-Quadrant Permanent Magnet Synchronous Machine Drive with a Tiny DC Link Capacitor
Effect of Position Sensor error on the Performance of IPMSM drives
Signal-Injection-Aided Position and Speed Estimation for PMSM Drives with Low-Resolution Position Sensors
Integrated Switch Current Sensor for Shortcircuit Protection and Current Control of 1.7-kV SiC MOSFET Modules
Current Reconstruction Method for PMSM Drive System with a DC Link Shunt Resistor
PSpice Modeling Platform for SiC Power MOSFET Modules with Extensive Experimental Validation
Development of Simulink-Based SiC MOSFET Modeling Platform for Series Connected Devices
An Accurate Subcircuit Model of SiC Half Bridge Module for Switching Loss Optimization
Spatial Electro-Thermal Modeling and Simulation of Power Electronic Modules
Automatic Optimization of IGBT Gate Driving Waveform Using Simulated Annealing for Programmable Gate Driver IC
Active dv/dt Control of 600V GaN Transistors
Commutation Strategies for Single-Chip Dual-Gate Bidirectional IGBTs in Matrix Converters
Two Comparison-Alternative High Temperature PCB-Embedded Transformer Designs for a 2 W Gate Driver Power Supply
Performance Analysis of Magnetic Power Pads for Inductive Power Transfer Systems with Ferrite Structure Variation
Analysis of Mutually Decoupled Primary Coils for IPT Systems for EV Charging
Dynamic Matching System for Radio-Frequency Plasma Generation
A Loosely Coupled Capacitive Power Transfer System with LC Compensation Circuit Topology

Wednesday, September 21, 10:30AM-12:10PM

A Variable Step-Size MPPT for Sensorless Current Model Predictive Control for Photovoltaic Systems
Study on the Unbalanced Current Injection Capability of Grid-Connected Photovoltaic Neutral-Point-Clamped Inverter
Adaptive Dc Link Voltage Control Scheme for Single Phase Inverters with Dynamic Power Decoupling
ZVS Analysis and Power Flow Control for Three Limb Transformer Enabled SiC Mosfet Based Three Port DAB Integrating PV and Energy Storage(ES)
A Rapid I-V Curve Generation for PV Model-based Solar Array Simulators
Photovoltaic Panel Simulation Based on Individual Cell Condition
Development and implementation of a PV performance monitoring system based on inverter measurements
Characterization of Silicon Based Photovoltaic Cells Using Broadband Impedance Spectroscopy
DC Solid State Transformer Based on Input-Series-Output-Parallel Dual-Active-Bridge for MVDC Power Distribution
Six-Leg Single-Phase to Three-Phase Converter
Flexible Transformers for Distribution Grid Control
Comparative Analysis of Modular Multiport Power Electronic Transformer Topologies
Advanced Control of a High Power Converter Connected to Weak Grids
A Power Density Optimization Method for a Power Pulsation Decoupling Buffer in Single-Phase DC-AC Converters
Control Design in $\mu$synthesis Framework for Grid-Connected Inverters with Higher Order Filters
Sensorless Current Model Predictive Control for Maximum Power Point Tracking of Single-Phase subMultilevel Inverter for Photovoltaic Systems
An Adaptive Power Distributed Control Method to Ensure Proportional Load Power Sharing in DC Microgrid Considering Equivalent Line Impedances
The Performance of Polytopic Models in Smart DC Microgrids
Study on DC Arc Faults in Ring-Bus DC Microgrids with Constant Power Loads
Stability Analysis and Improvement of a Dual Active Bridge (DAB) Converter Enabled DC Microgrid based on a Reduced-order Low Frequency Model
Soft-Switching Operation of Edge-Resonant Output-Inductor-Less Full-Bridge Converter
High Efficiency Two-Stage 48V VRM with PCB Winding Matrix Transformer
Hierarchical Protection Architecture for 380V DC Data Center Application
Device Loss Comparison of GaN Device Based LLC, Dual Active Bridge and Phase Shift Quasi Switched Capacitor Circuit
Loss Optimizing Control of a Multiphase Interleaving DC-DC Converter for Use in a Hybrid Electric Vehicle Drivetrain
Traction Inverter Evaluation Method Based on Driving Cycles for Electric and Hybrid Electric Vehicles
Model Predictive Control based Field-weakening Strategy for Traction EV used Induction Motor
Design Optimization and Development of Electric Traction Machines for Cadillac CT6 PHEV
Active Virtual Ground - Bridgeless PFC Topology
A 500 kHz, 3 kW power factor correction circuit with low loss auxiliary ZVT circuit
A Two-Switch Buck-Boost PFC Rectifier With Automatic AC Power Decoupling Capability
High Efficiency Bridgeless Power Factor Correction Buck Converter for High Frequency AC Systems
An Improved Proportional Pulse Compensation Strategy for DC Voltage Balance of Cascaded H-Bridge Rectifier
Cost effective Capacitor Voltage Balancing Control for Five-level Grid-tied Inverters
A Single Phase T-type Inverter Operating in Boundary Conduction Mode
Three-Phase Four-Wire AC-DC-AC Multilevel Topologies Obtained from an Interconnection of Three-leg Converters
Extreme Start-Up Response of LLC Converters Using Average Geometric Control
Optimized Resonant Pulsed Power Supplies with Deadbeat - Repetitive Regulation
Control and Operation of Medium-voltage High-power Bi-directional Resonant DC-DC Converters in Shipboard DC Distribution Systems
Inductance Cancellation in RF Resonant Power Converters
Retrospective of Electric Machines for EV and HEV Traction Applications at General Motors
High-Performance Partitioned-Stator Switched Flux Memory Machines with Hybrid Magnets on External Stator for Automotive Traction Applications
Test Results for a High Temperature Non-Permanent Magnet Traction Motor
Vehicular Suspension and Propulsion Using Double Sided Linear Induction Machines
Experimental Verification of Rotor Demagnetization in a Fractional-Slot Concentrated-Winding PM Synchronous Machine under Drive Fault Conditions
Influence of Stator Configuration on High Frequency Signal Injection Based Permanent Magnet Temperature Estimation in PMSMs
Analysis and Design Guidelines to Mitigate Demagnetization Vulnerability in PM Synchronous Machines
The Nature of the Torque Ripple in Fractional-slot Synchronous PMAREL Machines
A Fault-Tolerant T-Type Multilevel Inverter Topology with Soft-Switching Capability Based on Si and SiC Hybrid Phase Legs
An On-Line Diagnostic Method for Open-Circuit Switch Faults in NPC Multilevel Converters
Analysis of Neutral Point Deviation in 3-level NPC Converter under Unbalanced 3-phase AC Grid
A Modulation Technique of Neutral Point Clamped Converters with Common-Mode Voltage Reduction and Neutral-Point Potential Balance
Magnet Temperature Effects on the Useful Properties of Variable Flux PM Synchronous Machines and a Mitigating Method for Magnetization Changes
Nonintrusive Online Rotor Permanent Magnet Temperature Tracking for Permanent Magnet Synchronous Machine Based on Third Harmonic Voltage
Permanent Magnet Temperature Estimation in PMSM Using Low Cost Hall Effect Sensors
Analysis and Suppression of Zero Sequence Circulating Current in Open Winding Permanent Magnet Synchronous Machine Drives with Common DC Bus
Compact 100-A, 850-V, Silicon Carbide Solid-State DC Circuit Breaker
Matrix Converter with Sinusoidal Input-Output Filter and Filter Downsizing Using SiC Devices
• H-Bridge Building Block with SiC Power MOSFETs for Pulsed Power Application
• Three-phase active front-end rectifier efficiency improvement with silicon carbide power semiconductor devices
• Precise and Full-Range Dimming Control for An Off-Line Single-Inductor-Multiple-Output LED Driver
• Design and Implementation of a Retrofit LED Lamp for AC Mains and Ballasts
• A Current Compensator for Mitigating the Influence of Long Cable Inductance between the LED Driver and the Light Source
• Investigation into the Use of Single Inductor for Driving Multiple Series-Connected LED Channels

Wednesday, September 21, 1:30PM-3:10PM

• Using Markov Switching Model for Solar Irradiance Forecasting in Remote Microgrids
• Determining Maximum MPP-Tracking Sampling Frequency for Input-Voltage-Controlled PV-Interfacing Converter
• Real-time Emulation of a Pressure Retarded Osmosis Power Generation System
• Efficient FCTV Provision considering DWT and DWPT-based Noise Suppression for Overcoming the Noise-Induced Voltage Loss in PEM Fuel Cell
• Field Test Results for a 12.47 kV 3-Phase 1 MVA Power Router
• DC Capacitor Voltage Balancing Control for Delta-Connected Cascaded H-Bridge STATCOM Considering the Unbalanced Grid and Load Conditions
• Advanced Grid Simulator for Multi-Megawatt Power Converter Testing and Certification
• Experimental Verification of Capacitance Reduction in MMC-Based STATCOM
• A Comparative Study of Methods for Estimating Virtual Flux at the Point of Common Coupling in Grid Connected Voltage Source Converters With LCL Filter
• A Novel Model Predictive Sliding Mode Control for AC/DC Converters with Output Voltage and Load Resistance Variations
• A Novel Virtual Synchronous Generator Control Strategy Based on Improved Swing Equation Emulating and Power Decoupling Method
• Virtual Impedance-Based Active Damping for LCL Resonance in Grid-Connected Voltage Source Inverters with Grid Current Feedback
• Component Design and Implementation of a 60 kW Full SiC Traction Inverter with Boost Converter
• Design Methodology for a Planarized High Power Density EV/HEV Traction Drive using SiC Power Modules
• A SiC-Based High-Performance Medium-Voltage Fast Charger for Plug-in Electric Vehicles
• An Integrated Onboard Charger and Accessory Power Converter for Traction Drive Systems with a Boost Converter
• Current-stress Reduction of the Neutral Inductor in a Rectifier with Two Outputs
• Single-stage AC/DC Dual Inductor BCM Current-Fed Push-Pull for HB-LED lighting applications
• Asymmetric Single-Phase Current Source Rectifiers
• A Bridgeless Controlled Rectifier for Single Split-Phase Systems
• Modulation Method for Single-Phase Six-Switch Five-Level ANPC Inverter
• Modified SVPWM to Eliminate Common-Mode Voltages for Five-Level ANPC Inverters
• THD and Efficiency improvement in Multi-Level Inverters through an Open End Winding Configuration
• A Source-Type Harmonic Energy Unbalance Suppression Method Based on Carrier Frequency Optimization for Cascaded Multilevel APF
• Small-Signal Model and Control of the Interleaved Two-Phase Coupled-Inductor Boost Converter
• A Robust Design Framework for Stable Digital Peak Current-Mode Control Under Uniform Sampling
• Modeling and Decoupled Control of a Non-isolated High Step-up/down Bidirectional DC-DC Converter
• Non-Isolated High-Gain Three-Port Converter for Hybrid Storage Systems
• System-level Reliability Assessment of Power Stage in Fuel Cell Application
• A Novel Online ESR and C Identification Method for Output Capacitor of Flyback Converter
• Fault Ride-Through Capability for Grid-Supporting Inverters
• Analysis of Hybrid Energy Storage Systems with DC Link Fault Ride-Through Capability
• Optimisation of the Torque Quality of a Combined Phase Transverse Flux Machine for Traction Applications
• An Examination for Improvement of Constant Output Characteristics at High-Speed Region in a Spoke-Type IPMSM using Ferrite Permanent Magnet by Changing the Shape of Rotor Surface
• Variable Flux Permanent Magnet Synchronous Machine (VF-PMSM) Design to Meet Electric Vehicle Traction Requirements with Reduced Losses
• Comparison of Traction Motors that Reduce or Eliminate Rare-Earth Materials
• Active Voltage Regulation of Partitioned Stator Switched Flux Permanent Magnet Generator Supplying Isolated Passive Load
• Coupled and Simplified Model of the Symmetrical and Asymmetrical Triple Star Nine-Phase Interior Permanent Magnet Machines
• Design and Analysis of a Novel Three-phase Flux Reversal Machine
• Design, Control and Implementation of a Non-Rare-Earth Flux Switching Permanent Magnet Machine
• A New Normal Mode dv/dt Filter With Resistor Failure Detection Circuit
• Simulation of Cable Charging Current and Its Effects on Operation of Low Power AC Drives
• Systematic Modeling for a Three Phase Inverter with Motor and Long Cable using Optimization Method
• Performance Evaluation of SiC MOSFETs with Long Power Cable and Induction Motor
• Design consideration of interior permanent magnet machine position sensorless drive using square-wave voltage injection
• A Synchro-Perspective-Based High-Frequency Signal Injection Method for Position-Sensorless Vector Control of Doubly-Fed Induction Machines
• Enhancing Estimation Accuracy by Applying Cross-Correlation Image Tracking to Self-Sensing Including Evaluation on a Low Saliency Ratio Machine
• The Crowded Axis of the Frequency: Optimal Pole/Zero Allocation for a Full Speed Sensorless Synchronous Motor Drives
• An IGBT Junction Temperature Measurement Method via Combined TSEPs For Eliminating Impact of Collector Current
• DeltaTj Control of Switching Power Devices at Thermal Boundaries via Physics-Based Loss Manipulation
• Online Junction Temperature Monitoring Using Turn-Off Delay Time for Silicon Carbide Power Devices
• Simple Analog Detection of Turn-off Delay Time for IGBT Junction Temperature Estimation
• Design of a 10 kW GaN-based High Power Density Three Phase Inverter
• High-frequency DC-DC Converter in Electric Vehicle Based on GaN Transistors
• A GaN-based Flying-Capacitor Multilevel Boost Converter for High Step-up Conversion
• A GaN based High Frequency Active-clamp Buck Converter for Automotive Applications
• Energy Storage Size and Fuel Consumption Reduction in a Microgrid Using Virtual Droop Control Framework
• Seamless Black Start and Reconnection of LCL-filtered Solid State Transformer Based On Droop Control
• A Circulating Current Suppression Method for Parallel Connected Voltage-Source-Inverters (VSI) with Common DC and AC Buses
• Decentralized Method for Load Sharing and Power Management in a Hybrid Single/Three-Phase Islanded Microgrid Consisting of Hybrid Source PV/Battery Units
• A New Secondary Control Approach for Voltage Regulation in DC Microgrids
• CERTS Microgrids with Photovoltaic Microsources and Feeder Flow Control
• Combined Optimization of SSCB Snubber and Freewheeling Path for Surgeless and Quick Bus Fault Interruption In Low-Voltage DC Microgrid
• Symmetric Droop Control for Improved Hybrid AC/DC Microgrid Transient Performance
Wednesday, September 21, 3:30PM-5:10PM

- Small Scale Reluctance Synchronous Generator Wind-Turbine System with DC Transmission Linked Inverters
- Short-Term Forecasting of Inertial Response from a Wind Power Plant
- A 3.0MW Case Study of the Influence of PM Cost on Wind Turbine Cost of Energy
- Direct Power Control of a Doubly Fed Induction Generator Wind Power System in Stand-Alone and Grid-Connected Modes with Seamless Transition
- Temperature Dependence of Efficiency in Renewable Magnetohydrodynamic Power Generation Systems
- Modeling, Analysis and Design of An Undersea Storage System
- The Joint Design of a Compressed Air and Wind Energy System for Mechanical Spillage Recovery
- Experimental Control of a Hydraulic Wind Power Transfer System under Wind and Load Disturbances
- Field Upgradeable Transformer: A Fractionally-Rated Voltage Regulator for the Distribution System
- New Configuration of Multi-Functional Grid-Connected Inverter to Improve Both Current-Based and Voltage-Based Power Quality
- Model Predictive Control of A Matrix-Converter Based Solid State Transformer for Utility Grid Interaction
- A Triple Port Active Bridge Converter based Power Electronic Transformer
- Evaluation of Active Islanding Detection Based Methods Under Non-Liner-loads Scenarios
- Decentralized Adaptive Control for Interconnected Boost Converters based on backstepping approach
- Impedance Synthesis by Inverter Control for Active Loads in Anti-Islanding Testbenches
- A Unified Impedance Model of Voltage-Source Converters with Phase-Locked Loop Effect
- An Induction Generator based Auxiliary Power Unit for Power Generation and Management System for More Electric Aircraft
- Design and Optimization of a High Performance Isolated Three Phase AC/DC Converter for Aircraft Applications
- Taking into account interactions between converters in the design of aircraft power networks
- Stability Assessment of A Droop-Controlled Multi-Generator System in the More Electric Aircraft Using Parameter Space Approach
- A GaN-Based Partial Power Converter with MHz Reconfigurable Switched-Capacitor and RF SEPIC
- Monolithic Multilevel GaN Converter for Envelope Tracking in RF Power Amplifiers
- An Improved PDM Control Method for a High Frequency Quasi-Resonant Converter
- Automotive LED Driver Based On High Frequency Zero Voltage Switching Integrated Magnetics Cuk Converter
- Dynamic Response Optimization for Three-phase VIENNA Rectifier with Load Feedforward Control
- A Compensation Scheme to Reduce Input Current Distortion in GaN Based 450 kHz Three-Phase Vienna Type PFC
- Modeling and Analysis for Input Characteristics of Line-Frequency Rectifiers
- Hybrid Damping for Active Front End Converter
- A Feed-forward Based Harmonic Compensation Approach for Low Switching Frequency Grid Interfacing VSI
- An Embedded Voltage Harmonic Compensation Strategy for Current-Controlled DG Interfacing Converters
- Analysis and Damping of harmonic propagation in DG-Penetrated distribution networks
- Voltage and Current Regulators Design of Power Converters in Islanded Microgrids based on State Feedback Decoupling
- Computation and Analysis of Dielectric Losses in MV Power Electronic Converter Insulation
- Computational Light Junction Temperature Estimator for Active Thermal Control
- Fast Fault Diagnosis and identification Method for Boost Converter Based on Inductor Current Emulator
- Modeling and Improvement of Thermal Cycling in Power Electronics for Motor Drive Applications
- Highly Reliable Transformerless Neutral Point Clamped Inverter with Separated Inductors
- Fault Detection and Tolerant Control of Open-circuit Failure in MMC with Full-bridge Sub-modules
- Control Strategy of Single Phase Back-to-back Converter for Medium Voltage Drive under Cell Fault Condition
• Fault Tolerance Analysis for the 5-Level Unidirectional T-Rectifier
• Design of a Wound Field Synchronous Machine for Electric Vehicle Traction with Brushless Capacitive Field Excitation
• Design and Development of a MLS Based Compact Active Suspension System, Featuring Air Spring and Energy Harvesting Capabilities
• A Simple Design Method for Surface-mounted PM machines for Traction Application
• Design Optimization of Spoke-Type PM Motors for Formula E Racing Cars
• Tolerance Study to Forecast Performances of Permanent Magnet Synchronous Machines Using Segmented Stator for Mass Production
• Permanent Magnet Material and Pulsating Torque Minimization in Spoke Type Interior PM Machines
• Mechanical Design Method for a High-Speed Surface Permanent Magnet Rotor
• Analysis and Design of Triple-Rotor Axial-Flux Spoke-Array Vernier Permanent Magnet Machines
• Electrical Loss Minimization Technique for Wind Generators based on a Comprehensive Dynamic Modelling of Induction Machines
• Maximum Efficiency Control Method in 7-phase BLDC Motor by Changing the Number of the Excited Phase Windings
• Control Strategy for Dual Three-Phase PMSMs With Minimum Losses in the Full Torque Operation Range Under Single Open-Phase Fault
• A Multi-Pulse Front-End Rectifier System with Electronic Phase-Shifting for Harmonic Mitigation in Motor Drive Applications
• A Robust Magnetic Polarity Self-Sensing Method for Start-Up of PM Synchronous Machine in Fan-Like System
• Universal Sensorless Vector Control Applicable to Line-Start Permanent Magnet Synchronous Motors with Damper Winding
• Improvement of Back-EMF Self-Sensing for Induction Machines when using Deadbeat-Direct Torque and Flux Control (DB-DTFC)
• Sensorless Position Control of PMSM Operating at Low Switching Frequency for High Efficiency Climate Control Systems
• SuperJunction Cascode, a Configuration to Break the Silicon Switching Frequency Limit
• Maximizing the Performance of 650 V p-GaN Gate HEMTs: Dynamic Ron Characterization and Gate-Drive Design Considerations
• 15kV/40A FREEDM Super-Cascode: A Cost Effective SiC High Voltage and High Frequency Power Switch
• A Study of Dynamic High Voltage Output Charge Measurement for 15 kV SiC MOSFET
• Unbalanced Voltage Compensation in LV Residential AC Grids
• The Hierarchical Energy Management Control for Residential Energy Harvesting System
• Reactive Power Distribution Strategy using Power Factor Correction Converters for Smart Home Application
• Active Voltage Balancing Control for Multi HV-IGBTs in Series Connection

Thursday, September 22, 8:30AM-10:10AM

• The DOE Next-Generation Drivetrain for Wind Turbine Applications: Gearbox, Generator, and Advanced Si/SiC Hybrid Inverter System
• Inductorless Boost Rectifier for Small Power Wind Energy Converters
• High-frequency Isolated DC-DC Converter for Offshore Wind Energy Systems
• A New Three-phase AC/DC High Power Factor Soft-switched Step-up Converter with High Gain Rectifier Modules for Medium Voltage Grid in Wind Systems
• A Comparison of Broadband Impedance Measurement Techniques for Lithium-Ion Batteries
• Evaluation of Lithium-ion Battery Second Life Performance and Degradation
• A Distributed ESO based Cooperative Current-Sharing Strategy for Parallel Charging Systems Under Disturbances
• A Comprehensive Study on the Degradation of Lithium-Ion Batteries during Calendar Ageing: The Internal Resistance Increase
• Enhanced Power Quality and Minimized Peak Current Control in An Inverter based Microgrid under Unbalanced Grid Faults
• Parallel Interfacing Converters under Unbalanced Voltage: Active Power Oscillation Cancellation with Peak Current Sharing
• The Reverse Zero-Sequence Current Compensation Strategy for Back-to-Back Active Power Conditioners
• Harmonic Mitigation in Interphase Power Controllers Using Passive Filter-Based Phase Shifting Transformer
• Modeling and Stability Analysis of the Small-AC-Signal Droop Based Secondary Control for Islanded Microgrids
• A Small-AC-Signal Injection Based Harmonic Power Sharing Method for Islanded Microgrids
• Improvement of Transient Stability in Inverter-Based AC Microgrid via Adaptive Virtual Inertia
• Frequency Support Properties of the Synchronous Power Control for Grid-Connected Converters
• A Pack-to-Cell-to-Pack Battery Equalizer with Soft-Switching Based on Buck-Boost and Bidirectional LC Resonant Converters
• A New Perspective on Battery Cell Balancing: Thermal Balancing and Relative Temperature Control
• Advanced Cell-level Control for Extending Electric Vehicle Battery Pack Lifetime
• A Battery Cell Balancing Control Scheme with Minimum Charge Transfer
• Double Line Frequency Ripple Cancelling for Single-Phase Quasi-Z-Source Inverter
• Hybrid control scheme for the current loop of a grid connected inverter operating with highly distorted grid voltage
• Single-Phase LLC-Filter-based Grid-Tied Inverter with Low-Pass Filter Based Capacitor Current Feedback Active damper
• A single-phase tri-state integrated Buck-Boost inverter suitable to operate in grid-connected and island modes
• DC Fault Ride Through of Multilevel Converters
• Reverse Blocking Sub-Module Based Modular Multilevel Converter with DC Fault Ride-Through Capability
• Closed-loop Control of the DC-DC Modular Multilevel Converter
• New MMC Capacitor Voltage Balancing using Sorting-less Strategy in Nearest Level Control
• A New Tightly Regulated Dual Output LLC Resonant Converter with PFM plus Phase-shift Control
• Analytical Model for LLC Resonant Converter With Variable Duty-Cycle Control
• Three-Phase LLC Resonant Converter with Integrated Magnetics
• Accurate ZVS Boundary in High Switching Frequency LLC Converter
• A Unified Control of Back-to-Back Converter
• Control of an Islanded Power-Electronic Converter as an Oscillator
• Power control for Grid-connected Converter to Comply with Safety Operation Limits during Grid Faults
• An online measurement method for common-mode impedance in three-phase grid-connected converters
• Remaining Useful Lifetime Estimation For Thermally Aged Power Mosfets With Ransac Denoising Algorithm
• An Analytical Model for False Turn-On Evaluation of GaN Transistor in Bridge-Leg Configuration
• Advanced Condition Monitoring System Based on On-Line Semiconductor Loss Measurements
• A Comprehensive Study on Variations of Discrete IGBT Characteristics Due to Package Degradation Triggered by Thermal Stress
• Experimental Calibration in Thermal Analysis of PM Electrical Machines
• Thermal Conductivity Evaluation of Fractional-Slot Concentrated-Winding Machines
• Thermal Performance Modeling of Foil Wound Concentrated Coils in Electric Machines
• Experimental Validation in Operative Conditions of Winding Thermal Model for Short-Time Transient
• A Hybrid-Excited Axial Transverse Flux Permanent Magnet Machine
• Reduction of Cogging Torque in Transverse Flux Machines by Stator and Rotor Pole Shaping
• Design Considerations of a Transverse Flux Machine for Direct Drive Wind Turbine Applications
• Analytical Model Based Design Optimization of a Transverse Flux Machine
• A Novel Six-Phase Inverter System for High-Power Synchronous Motor Drives
• State-Space Flux-Linkage Control of Bearingless Synchronous Reluctance Motors
• Current Harmonic Compensation for n-Phase Machines With Asymmetrical Winding Arrangement
• Post-fault operation strategy for single switch open circuit faults in electric drives
• A Quasi-online Method of Thermal Network Parameter Identification of IGBT Module
• Direct-cooled power module with a thick Cu heat spreader featuring a stress-suppressed structure for EV/HEV inverters
• Impact of Poly-Crystalline Diamond within Power Semiconductor Device Modules in a Converter
• A Novel 3D Structure for Synchronous Buck Converter Based on Nitride Gallium Transistors
• NiCuZn Ferrite Cores by Gelcasting: Processing and Properties
• Low-Capacitance Planar Spiral Windings Employing Inverse Track-Width-Ratio
• On-Chip Transformers with Shielding Structures for High dV/dt Immunity Isolated Gate Drive
• Additive Manufacturing of Toroid Inductor for Power Electronics Applications
• A New Phase-Locked Loop Method for Three-Phase System
• A New Second-Order Generalized Integrator Based Quadrature Signal Generator With Enhanced Performance
• A Modified SRF-PLL for Phase and Frequency Measurement of Single-Phase Systems
• Influence Of Double-Line Frequency Power Oscillation In Photovoltaic Generator Efficiency And H-Bridge VSI Performance

Thursday, September 22, 10:30AM-12:10PM

• Comparison Analysis of PM Transverse Flux Outer Rotor Machines with and without Magnetic Shunts
• A Generator-Converter Design for Direct Drive Wind Turbines
• Gearbox Fault Diagnosis Using Vibration and Current Information Fusion
• Bearing Fault Diagnosis of Direct-Drive Wind Turbines Using Multiscale Filtering Spectrum
• Design Considerations of an Isolated GaN Bidirectional DC-DC Converter
• Flexbattery - Merging Multilevel Power Conversion and Energy Storage
• A Novel Modular Dual Active Bridge (DAB) DC-DC Converter with DC Fault Ride-Through Capability for Battery Energy Storage Systems
• A High Current Bidirectional DC-DC Converter for Concept Demonstration of Grid-Scale SMES Systems
• Harmonic power sharing with Voltage Distortion Compensation of Droop Controlled Islanded Microgrids
• Novel Active Synchronization Strategy for Multi-Bus Microgrid with Distributed Cooperation Control
• An Inverter-Current-Feedback based Reactive Power Sharing Method for Parallel Inverters in Microgrid
• Distributed Voltage Control and Load Sharing for Inverter-Interfaced Microgrid with Resistive Lines
• Accurate Battery Parameter Estimation with Improved Continuous Time System Identification Methods
• A Real World Technology Testbed for Electric Vehicle Smart Charging Systems and PEV-EVSE Interoperability Evaluation
• Modeling of Low-Temperature Operation of a Hybrid Energy Storage System with a Butler-Volmer Equation Based Battery Model
• Voltage and Current Signals De-noising with Wavelet Transform Matrix for Improved SOC Estimation of Lithium-ion Battery
• Improved r-Z-Source Inverter
• High-Frequency Six Pulse DC Link Based Bidirectional Three-Phase Inverter without Intermediate Decoupling Capacitor
• Closed-Form Equations for Analytical Exploration and Comparison of Switching Power Losses in Flying Capacitor Multicell and Active Neutral-Point-Clamped Multilevel Converters
• Advanced Three Level Active Neutral Point Converter with Fault Tolerant Capabilities
• A Novel Highly Reliable Three Phase Buck-Boost AC-AC Converter
• Hybrid Bidirectional AC/AC Multilevel Converter
• A Reliable Cascaded AC-AC Converter
• Parallel AC-AC Three-Phase with Shared-Leg Converters
• A Series HVDC Power Tapping Using Modular Multilevel Converters
• A Zero-sequence Voltage Injection Control Scheme for Modular Multilevel Converter Under Submodule Failure
• An Interconnected Observer for Modular Multilevel Converter
• DC Bus Balancing Control Techniques for the Cascaded Neutral Point Clamped Modular Converter
• Step-Down Impedance Control Network Resonant DC-DC Converter Utilizing an Enhanced Phase-Shift Control for Wide-Input-Range Operation
• Soft-Switching Push-Pull Converter with Parallel Resonant Link and Buck-Boost Capability
• Bidirectional Series-Resonant DC-DC Converter with Fault-Tolerance Capability for Smart Transformer
• Analysis and Design of Planar Inductor and Transformer for Resonant Converter
• Combined DC Voltage Control Scheme for Three-port Energy Router Based on Instantaneous Energy Balance
• Grid-Voltage Sensorless Control of a Converter Under Unbalanced Conditions: On the Design of a State Observer
• Current-Mode Boundary Controller with Reduced Number of Current Sensors for a Three-Phase Inverter
• Positive- and Negative-Sequence Current Controller for Grid-Tied Converters With LCL Filters
• Realization of Quadrature Signal Generator Using Accurate Magnitude Integrator
• A New Instantaneous Point on Wave Voltage Sag Detection Algorithm and Validation
• Voltage Quality Enhancement with Minimum Power Injection
• A Universal Variable On-time Compensation to improve THD of High-frequency CRM Boost PFC Converter
• On Impedance Modeling of Single-Phase Voltage Source Converters
• Design Consideration of Volt-VAR Controllers in Distribution Systems with Multiple PV Inverters
• Extended Stable Boundary of LCL-Filtered Grid-Connected Inverter Based on Grid-Voltage Feedforward Control
• Allowable Bus Impedance Region for MVDC Distribution Systems and Stabilizing Controller Design Using Positive Feed-Forward Control
• A Novel Stator-Consequent-Pole Memory Machine
• A Novel Variable Flux Memory Machine with Series Hybrid Magnets
• On the Feasibility of Carbon Nanotube Windings for Electrical Machines - Case Study for a Coreless Axial Flux Motor
• A Novel Simplified Structure for Single-Drive Bearingless Motor
• Stator Vibration and Acoustic Noise Analysis of FSPM for a Low-Noise Design
• Current Waveform for Noise Reduction of Switched Reluctance Motor in Magnetically Saturated Condition
• Torque Ripple Reduction Techniques for Stator DC Winding Excited Vernier Reluctance Machines
• On the cross coupling effects in structural response of Switched Reluctance Motor Drives
• Asymmetrical Twelve-Phase Induction Starter/Generator for More Electric Engine in Aircraft
• Axial Position Estimation of Conical Shaped Motor for Green Taxiing Application
• Closed-form approach for predicting overvoltage transients in cable-fed PWM motor drives for MEA
• An open problem for More Electrical Aircraft (MEA): how insulation systems of actuators can be qualified?
• High Power Density Impedance Control Network DC-DC Converter Utilizing an Integrated Magnetic Structure
• Time-Domain Homogenization of Litz-Wire Bundles in FE Calculations
• High Frequency Core Coefficient for Transformer Size Selection
• Very High Frequency Integrated Voltage Regulator for Small Portable Devices
• Robustness in Short-Circuit Mode: Benchmarking of 600V GaN HEMTs with Power Si and SiC MOSFETs
• Investigation on the Short Circuit Safe Operation Area of SiC MOSFET Power Modules
• Short-Circuit Protection of 1200V SiC MOSFET T-type Module in PV Inverter Application
• Prediction of Short-Circuit-Related Thermal Stress in Aged IGBT Modules
Thursday, September 22, 2:00PM-3:40PM

- Flexible PCC Voltage Unbalance Compensation Strategy for Autonomous Operation of Parallel DFIGs
- Analysis and Comparison of Super-Synchronous Resonance in Small and Large Scale DFIG System
- A Super-synchronous Doubly Fed Induction Generator Option for Wind Turbine Applications
- Fault Diagnosis of Wind Turbine Gearbox Using DFIG Stator Current Analysis
- Controller for Combined Peak-Load Shaving and Capacity Firming Utilizing Multiple Energy Storage Units in a Microgrid
- Energy Storage Configuration Strategy for Virtual Synchronous Machine
- Control of Energy Storage System integrating electrochemical batteries and SC for grid-connected applications
- A Novel Approach towards Energy Storage System Sizing Considering Battery Degradation
- Robust Decentralized Voltage and Frequency Control of Generators in Islanded Microgrids Using $\mu$-Synthesis
- Thyristor Based Short Circuit Current Injection in Isolated Grids
- Optimized Energy Management System to Reduce Fuel Consumption in Remote Military Microgrids
- Analysis and Improvement of the Energy Management of an Isolated Microgrid in Lencois Island based on a Linear Optimization Approach
- A Primary Full-Integrated Active Filter Auxiliary Power Module in Electrified Vehicle Applications with Single-Phase Onboard Chargers
- Sensitivity Analysis of a Wireless Power Transfer (WPT) System for Electric Vehicle Application
- Design of a Dual-Loop Controller for In-motion Wireless Charging of an Electric Bus
- Design of CRM AC/DC Converter for Very High-Frequency High-Density WBG-Based 6.6kW Bidirectional On-Board Battery Charger
- SiC MOSFET Zero-Voltage-Switching SVM controlled Three-phase Grid Inverter
- A Novel Soft-switching Modulation Scheme for Isolated DC-to-three-phase-AC Matrix-based Converter Using SiC Device
- New PWM Technique for Grid-Tie Isolated Bidirectional DC-AC Inverter Based High Frequency Transformer
- Reduction of Input Current Harmonics based on Space Vector Modulation for Three-phase VSI with varied Power Factor
- A Comparison of Indirect Matrix Converter Based Open-End Winding Drives Against State-of-the-Art
- Common Mode Voltage Reduction in Open-End Multi-phase Load System fed Through Matrix Converter
- Experimental Comparison of Devices Thermal Cycling in Direct Matrix Converters (DMC) and Indirect Matrix Converters (IMC) using SiC MOSFETs
- Design and Implementation of Finite State Machine Decoders for Phase Disposition Pulse Width Modulation of Modular Multilevel Converters
- Control of the AC-AC Modular Multilevel Converter under Submodule Failure
- Control of a Modular Multilevel Converter with Pulsed DC Load
- Short circuit output protection of MMC in Voltage Source Control Mode
- An Isolated Three-Port DC-DC Converter with High Power Density in 10 cm X 5 cm X 0.8 cm Card Size for Flexible Automotive Systems
- Auxiliary power supply based on a modular ISOP Flyback configuration with very high input voltage
- Design Considerations for Series Resonant Converters with Constant Current Input
- Galvanically Isolated Switched-Boost-Based DC-DC Converter
- A Triangle Phase-Shift Control Strategy for Interleaved Critical-Mode Power Converters
- Seamless Transition Control between Motoring and Generating Modes of a Bidirectional Multi-Port Power Converter Used in Automotive SRM Drive
- Three-Phase Inverter Modeling using Multifrequency Averaging with Third Harmonic Injection
• Transformation Based Tracking Controller for a GaN Microinverter
• Source-side Series-virtual-impedance Control Strategy to Stabilize the Cascaded System with Improved Performance
• Bifurcation Analysis of Photovoltaic-Battery Hybrid Power System with Constant Power Load
• Measurement technique to determine the impedance of automotive energy nets for stability analysis purpose based on a floating capacitor H-bridge converter
• Harmonic Suppression and Stability Improvement for Aggregated Current-Controlled Inverters
• Efficiency-wise Optimal Design Methodology of LCLC Converter for Wide Input Voltage Range Applications
• Reliability-Oriented Design of LC Filter in Buck DC-DC Converter with Multi-Objective Optimization
• Optimal Design of Output LC Filter and Cooling for Three-Phase Voltage-Source Inverters Using Teaching-Learning-Based Optimization
• Using design by optimization for reducing the weight of a SiC switching cell
• Multilevel Nine-Leg Converter Universal Active Power Filter
• Central Control and Distributed Protection of the DSBC and DSCC Modular Multilevel Converters
• Mitigating the Effect of Series Capacitance Unbalance on the Voltage Reduction Capability of an Auxiliary CSI used as Switching Ripple Active Filter
• A New Control Method of Suppressing DC-Capacitor Voltage Ripples Caused by Third-Order Harmonic Compensation in Three-Phase Active Power Filters
• Design of Dual Purpose No Voltage Combined Windings for Bearingless Motors
• Synchronous Generator Field Excitation Via Capacitive Coupling Through a Journal Bearing
• Development of Stator-Magnetless Linear Synchronous Motor for Sensorless Control
• Ultralightweight Motor Design Using Electromagnetic Resonance Coupling
• A Novel Reluctance Magnetic Gear for High Speed Motor
• Analysis of a Magnetically Geared Lead Screw
• Design Comparison of NdFeB and Ferrite Radial Flux Magnetic Gears
• Power Transferring of Magnetic-Geared Permanent Magnet Machines
• Robust Control of an Open-Ended Induction Motor Drive With a Floating Capacitor Bridge over a Wide Speed Range
• High speed operation of permanent magnet machine position sensorless drive using discretized EMF estimator
• DC Voltage Regulated PWM Inverter for High-Speed Electrical Drives
• Variable Time Step Control with Synchronous PWM in Low Frequency Modulation Index for AC Machine Drive
• Implementation and Performance of a Current Sensor for Laminated Bus Bar
• Busbar Design for SiC-Based H-Bridge PEBB using 1.7 kV, 400 A SiC MOSFETs Operating at 100 kHz
• Ultra-low Inductance Design for a GaN HEMT Based 3L-ANPC Inverter
• Layout Study of Contactless Magnetoresistor Current Sensor for High Frequency Converters