

TECHNICAL SESSION DETAILS

Technical Session 01:

Paper ID Title

- | | |
|----|--|
| 17 | Validation of SRFPI control methodology for voltage SAG compensation with a dynamic voltage restorer to improve power quality. |
| 34 | Solar PV Fed Pumping System Using Improved Zeta Function Based Buck Boost Converter |
| 36 | Cascaded Converter for Large-Scale Solar-BES System with Transformer Isolation |
| 42 | Enhanced ZVS capable Dual Active Bridge Converter for Electric Vehicle Charging Application |
| 57 | Swift Automatic Transfer Switch based on Arduino Mega 2560, Triacs, Bluetooth and GSM |

Technical Session 02:

Paper ID Title

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|----|---|
| 29 | Common Mode Leakage Current Analysis Of 1- Φ Grid-Tied Transformer Less H-Bridge PV Inverter |
| 41 | PIDD controller for AGC of nonlinear system with PEV integration and AC-DC links |
| 47 | Wind speed prediction using hybrid long short-term memory neural network based approach |
| 61 | AGC of Hybrid Power System with Grey Wolf Optimizer Based Conventional Secondary Controllers |
| 72 | SEIG voltage regulation with STATCOM Regulator using Fuzzy logic controller |

Technical Session 03:

Paper ID Title

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| 18 | WEB CONTROLLED RASPBERRY PI ROBOT SURVEILLANCE |
| 86 | Compact Electric Vehicle Charging Station using Open Charge Point Protocol (OCPP) for E-Scooters |
| 144 | Cost and Energy Efficient Distributed Computation: Wireless Sensor Networks on Uniform Grid |
| 194 | Exponential Flare Slot Vivaldi OAM Antenna for Near Field Communication in EVs and HEVs |
| 262 | A Lightweight and Secure Energy Trading Framework for Electric Vehicles |

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Technical Session 04:

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| 43 | Real-Time Control for Charging Discharging of Electric Vehicles in a Charging Station with Renewable Generation and Battery Storage |
| 101 | Battery Management System of Multi-cell Lithium ion Battery used in Electric Vehicle |
| 118 | Design and Selection of Solar Powered Off-Board Domestic Charging Station for Electric Vehicles |
| 137 | Multi-Pulse Converter based Rectification Scheme for Improving Power Quality of EV Charging Station |
| 32 | A Simulation Based Study of using GaN for Switching in Li ion Battery Cell Equalisation Circuits. |

Technical Session 05:

Paper ID Title

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| 66 | Fuzzy Based Health Monitoring of Electric Vehicle Motor using Time Domain Analysis |
| 126 | Q-MRAC Based Online Rotor Resistance Estimation Technique Considering the Saturated Magnetizing Inductance of an Indirect Rotor Flux Oriented Vector Controlled Induction Motor Drive for an Electric Vehicle |
| 155 | A State of Art and Comprehensive Study of Renewable Energy Systems Based on Three-Phase Self Excited Induction Generator Feeding Single-Phase Loads |
| 156 | Stator Inter-turn Fault Modelling and Analysis on Induction Motor based on MCCM |
| 166 | Improving the Saliency of a High Speed SynRel Rotor by using High Strength Martensitic Sleeve |

Technical Session 06:

Paper ID Title

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| 58 | Design and simulation of buck-boost type dual input dc-dc converter for battery charging application in electric vehicle |
| 68 | Switching-capacitor Assisted Buck-Boost Converter |
| 73 | MATLAB Simulation of Space Vector Pulse Width Modulation for 3-level NPC Inverter and 2-level Inverter |
| 79 | AC-DC PFC Converter Fed BLDCM Ceiling Fan |
| 85 | Design and Analysis of a Novel Cascaded 15-Level Asymmetric Inverter Using PSO & Whale Algorithms |

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Technical Session 07:

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| 75 | Experimental Study of Single Core Configurations of Saturated Iron Core Fault Current |
| 76 | DESIGN OF OPTIMAL INTEGRATOR CONTROL ALGORITHM FOR SINGLE-STAGE GRID CONNECTED SOLAR ARRAY SYSTEM |
| 93 | Optimal Sizing and Placement of DGs to Reduce the Fuel Cost and T&D Losses by using GA & PSO Optimization Algorithms |
| 103 | Control of Single-Phase Distributed PV-Battery Microgrid for Smooth Mode Transition with Improved Power Quality |
| 105 | Application of Network Structural Properties of a Power Network for Voltage Stability Assessment in an Electric Power Grid |

Technical Session 08:

Paper ID Title

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| 48 | Low-Frequency Earthing Design under Dynamic soil characteristics using Metaheuristic Technique |
| 60 | A Deep learning approach for Islanding Detection of Integrated DG with CWT and CNN |
| 94 | A Critical Study on Campus Energy Monitoring System and Role of IoT |
| 129 | Cross-Correlation Based Classification of Electrical Appliances for Non-Intrusive Load Monitoring |
| 140 | Wave Height Prediction for Maximum Power Extraction Scheme of Air-turbine of an OWC based Wave Energy Plant |

Technical Session 09:

Paper ID Title

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| 35 | Comparative Study on Silicon Carbide (SiC) Polytypes in High Voltage Devices |
| 16 | Design and Development of Wireless Power Transfer System for UAV |
| 69 | A Handy Wireless Charging Prototype for Bio-medical Implantable Devices |
| 216 | Analytical Study of Magnetic Flux Density for Circular Spiral and Square Spiral Coils |
| 218 | Investigation of Wireless Power Transfer System with Different Coil Structures used in Wireless Capsule Endoscope |
| 219 | Design and Development of Efficient Wireless Power Transfer System for Multiple Loads |

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Technical Session 10:

Paper ID Title

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| 167 | Dynamic psychoanalysis of DC Separately Excited Machine on Laboratory Visualization |
| 185 | A New Modelling Technique for a Switched Reluctance Machine Based on the Mathematical Function for its Inductance Profile |
| 195 | An Intelligence Method for Designing of Multi-Machine Power System Stabiliser |
| 201 | Design and Analysis of Solar PV Fed IMD Water-Pumping System |
| 202 | A Comprehensive Study on Torque ripple Reduction in Sensorless PMBLDCM Drive |
| 281 | Development of a Simulation Model for Electrification of a Conventional Mini Bus. |

Technical Session 11:

Paper ID Title

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| 97 | A Novel Three Phase Induction Motor Drive for Ceiling Fan Application with Improved Dc-link Utilization |
| 98 | A Modified 2-level Three-Phase Inverter Topology with Common Mode Voltage Performance of a 3-level Inverter |
| 102 | Portable Battery Charger for Electric Vehicles |
| 104 | Effect of Active Time Adjustment in Space Vector Pulse Width Modulation Strategy |
| 108 | Investigations on TRIAC Based Speed Controller for a Single-Phase Induction Motor Ceiling Fans |
| 112 | Design and Analysis of Two-switch Semi-quadratic Z-source Type Boost Converter |

Technical Session 12:

Paper ID Title

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| 110 | Control of Low Voltage Grid-Tied Solar PV System |
| 116 | Dual Mode Operation of Wind-Solar with Energy Storage Based Microgrid Integrated to Utility Grid |
| 117 | Optimal Reactive Power Sizing in Distribution Systems to Optimize the Voltage Profile and Power Loss using FBS Based ESA Algorithm |
| 122 | Current Controlled Grid-Interfaced Photovoltaic Boost Inverter with Particle Swarm Optimisation based MPPT Algorithm |
| 123 | Multilevel inverter-based Grid Connected Solar Photovoltaic System with Power Flow Control |
| 288 | NLC and SFO Control Technique Based Multilevel Inverter fed 3- ϕ Induction Motor Drive |

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Technical Session 13:

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- 141 An Economic Feasibility Study of an Automatic Centralised Micro-Grid Controller based hybrid AC/LVDC Microgrid
- 143 Seamless Transition between Grid-Connected and Islanded Operation Modes for Hybrid PV-BESS Combination used in Single-Phase, Critical Load Applications
- 153 A High Precision Cost-effective Ultrasonic Sensor for Detection of Gas Leakage in Gas Insulated Switchgear
- 159 A Novel Single-Phase Switched-Capacitor Based 5-level Inverter Topology Featuring Voltage Boosting Capability and Common Mode Voltage Reduction
- 160 A Novel Single-Phase Switched-Capacitor Transformer-less 5-level Inverter Topology with Voltage Boosting
- 161 Common Mode Voltage Elimination in Single-Phase Multilevel Inverter using a 3rd Leg

Technical Session 14:

Paper ID Title

- 205 Parameter Optimization with Gray Correlation Analysis Based Design of Interior V-Shaped PM Synchronous Motor for SWPS
- 208 State of Art and Comprehensive Study on Charging of Electric Vehicles
- 209 Transient Stability Assessment of Hybrid Power Flow Controller on a Multi-Machine System
- 225 A New BEMF Technique for the Sensorless Control of PMBLDC Motor Drive
- 232 Sensorless PMSM EV Drive using Modified Enhanced PLL Based Sliding Mode Observer

Technical Session 15:

Paper ID Title

- 134 Minimization of Electric Vehicle charging Stations influence on Unbalanced radial distribution system with Optimal Reconfiguration using Particle Swarm Optimization
- 136 Topologies for Interfacing Supercapacitor and Battery in Hybrid Electric Vehicle Applications: An Overview
- 196 Parametric performance analysis of battery operated electric vehicle
- 200 Resonant Control Based Three-phase On-Board EV Charger under Distorted Grid Conditions
- 226 A Multistep Bidirectional Onboard Charger for Light Electric Vehicles Using Interleaved Luo Converter

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Technical Session 16:

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| 115 | A New Single-Phase Five-Level Neutral Point Clamped Cascaded Multilevel Inverter for Minimization of Leakage Current in PV Systems |
| 119 | Reduction of Harmonics using PQ based Hysteresis Controlled Active Filter |
| 142 | A Novel Single-Phase Voltage Boosting Transformerless Inverter Topology for Grid-connected Solar PV Application |
| 152 | A Novel Control Scheme for Symmetric Seven Level Reduced Device Count Multi-Level DC Link (MLDCL) Inverter. |
| 158 | A Comparison of Voltage Stability Indices for Critical Node Identification in a Power System |
| 181 | HARDWARE IMPLEMENTATION OF MULTILEVEL INVERTER USING NR ,GA, BEE ALGORITHMS |

Technical Session 17:

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| 127 | LMI Based Load Frequency Controller Design for a Deregulated Power System with Time Delay |
| 131 | Integration Phenomena of Renewable Energy with Contemplation of Issues from Electricity Distribution Utility and Consumer Perceptive |
| 132 | Voting Technique for Islanding Detection in Microgrid Using Superimposed Angle Variations |
| 133 | Power Quality Control of Small Hydro-PV Array and Battery Storage Based Microgrid for Rural Areas |
| 135 | A Comparative Analysis of Current Control Strategies for a Solar based Single-Phase Grid Connected Inverter |

Technical Session 18:

Paper ID Title

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| 170 | Control of the Sectioned Electrical Network Modes with Renewable Energy Sources |
| 171 | Energy Storage Integrated Solar PV Arrays Based Microgrid Control Unified to 3P4W Grid |
| 179 | HydroPV Hybrid Power System with New Control Strategy to Mitigate the Voltage Disturbances |
| 186 | Load Factor Improvement of Distribution Feeders by Feeder Reconfiguration Using Modified BPSO Considering Losses |
| 190 | Robust Control for PMBLDCG Based WEC System and Seamless Grid Synchronization |
| 287 | Measurement Redundancy constrained Optimal PMU Locations |

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Technical Session 19:

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- 242 Solar PV Array fed PMLDCCM Drive for Blower Applications
- 243 Investigations on PMLDCCG for Micro Hydro Power Generation
- 246 Issues in Hardware Realization of DC-DC Converters Interfaced with SPV System for Beginners
- 278 Impact of Steinmetz Parameters on the Performance of iGSE based Core Loss Prediction
- 279 Analysis of Integration Options for A Two-Stage Synchronous Generator
- 78 Retrofication of ICE driven auto-rickshaw

Technical Session 20:

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- 234 Sensorless PMLDCC Motor Driven Solar-PV Battery Fed EV System With Regenerative Braking Employing Zeta Converter
- 252 Three-port Pulse Width Modulated DC-DC Converter for Vehicular Applications
- 284 New Considerations of Superconductor Bulk and Copper Coil Interactions: Electric Transport Applications
- 74 Amalgamation of Electric Vehicles in An Active Low Voltage Network for Load Management
- 150 A Substantial Modelling and Analysis of Solar Powered e-Rickshaw Drive System
- 227 Design Considerations in the Control of SinglePhase Boost Power Factor Corrected Rectifier forUtility Applications

Technical Session 21:

Paper ID Title

- 197 Design of Compensator For High Gain DC-DC Converter
- 233 Analysis of Three-Phase Grid-Tied Thyristor Based Inverter for Solar PV Applications
- 250 High Efficiency High-frequency-link Single-stage AC-DC Converter
- 256 High PFC Integrated Stage Single Switch AC-DC System for LED Power Driver
- 271 A Novel Implementation of Cascaded T-Type Multilevel Inverter for the Improved Performance with Reduced Switch Count
- 274 A Novel Switched-Capacitor Based Three-phase Five-Level Inverter Fed induction motor for Agricultural Applications

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Technical Session 22:

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- 191 Protection of Microgrid Using Coordinated Directional Overcurrent and Undervoltage Relay
- 198 Machine Learning Based Controlled Filtering for Solar PV Variability Reduction with BESS
- 199 Optimization of Rooftop PV System Deployment for LV Distribution Network
- 204 Day-Ahead Market Self-Scheduling of a Virtual Power Plant under Uncertainties
- 211 A Geometry of the Power Flow and Harmonic Analysis With the Lissajous Figures
- 224 Comparative Analysis of MPPT Algorithms for Small Scale Wind Energy System

Technical Session 23:

Paper ID Title

- 260 Experimental Study on Three Phase Permanent Magnet Synchronous Generator for Pico Hydro Isolated Systems
- 265 Integration of Piezo Energy with Solar Energy
- 266 Vehicle to Grid System Integration for Frequency Regulation of Renewable Based Microgrid
- 275 A Novel Topology for Integrating Wind and Solar Farms to High Voltage DC Grid with FRT Protection
- 276 Control of Seamless Transition between Islanding and Grid Connected Modes in WT Driven Doubly Fed Induction Generator-Based Microgrid

TECHNICAL SESSION DETAILS

Technical Session 24:

Paper ID Title

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| 146 | Organic Waste Sorting Proposed System in Mecca City |
| 187 | Energy Efficient Data Retrieval in Wireless Sensor Networks for Disaster Monitoring Applications |
| 207 | Development of an IoT based solution for Smart Distribution Systems |
| 215 | Polyth-Net: Classification of Polythene Bags for Garbage Segregation Using Deep Learning |
| 237 | Traffic Accidents Analytics in UK Urban Areas using k-means Clustering for Geospatial Mapping |
| 253 | IoT Based Wearable Monitoring structure for detecting Abnormal Heart |

Technical Session 25:

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| 228 | Active Power Management Scheme Based on Ramp Rate Limit Control in a Wind-Solar AC Microgrid |
| 229 | Peak Load Management with Wheeling in a Gas Turbine Station under Availability Based Tariff |
| 230 | Median LMS Control Approach for SPV Grid Integrated Distribution System |
| 236 | Effect of TCSC With Communication Delay Latencies On LQR- Fuzzified LFC-DR Model |
| 247 | Standalone PV-BES Based Synchronous Reluctance Motor Drive for Water Pump |
| 251 | Control Scheme for Single Phase Single Stage Solar PV Energy Conversion System |