***EEE PROJECT TITLES***

|  |  |
| --- | --- |
| **DC TO DC CONVERTER** | |
|  | A Non-Isolated High Step-Up DC-DC Converter Using Voltage Lift Technique: Analysis, Design, and Implementation |
|  | Input Current Ripple Reduction in a Step-Up DC–DC Switched-Capacitor Switched-Inductor Converter |
|  | A Cuk-Based Modular DC–DC Converter For ´Medium Voltage Direct Current (MVDC) Applications |
|  | MMC Based Hybrid Switched Capacitor DC-DC Converter |
|  | High Voltage Gain Switched-Z-Source Bidirectional DC-DC Converter |
|  | A Ring-Connected Dual Active Bridge Based DC-DC Multiport Converter for EV Fast-Charging Stations |
|  | Step-Up DC-DC Switching Converter With Single Switch and Multi-Outputs Based on Luo Topology |
|  | A Novel High Gain Dual Input Single Output Z-Quasi Resonant (ZQR) DC/DC Converter for Off-Board EV Charging |
|  | Single-Switch High-Step-Up DC-DC Converter Employing Coupled Inductor and  Voltage Multiplier Cell |
|  | Multiphase Interleaved Converter Based on Cascaded Non-Inverting Buck-Boost Converter |
|  | Single-Switch Resonant Soft-Switching Ultra-High Gain DC-DC Converter With Continuous Input Current |
|  | Transformerless Quadruple High Step-Up DC/DC Converter Using Coupled Inductors |
|  | A New Multi-Output DC-DC Converter for Electric Vehicle Application |
|  | A High Step-Up PWM Non-Isolated DC-DC Converter With Soft Switching Operation |
|  | Design and Cascade PI Controller-Based Robust Model Reference Adaptive Control of DC-DC Boost Converter |
|  | **RENEWABLE ENERGY SYSTEM** |
|  | An Interleaved High Step-Up DC-DC Converter Based on Integration of Coupled Inductor and Built-in-Transformer With Switched-Capacitor Cells for Renewable Energy Applications |
|  | Two-Stage Converter Standalone PV-Battery System Based on VSG Control |
|  | An SSM-PSO Based MPPT Scheme for Wind Driven DFIG System |
|  | Three-Phase Isolated Multi-Modular Converter in Renewable Energy Distribution Systems |
|  | A Two-stage Single-phase Grid-connected Solar-PV System with Simplified Power Regulation |
|  | A New Six-Level Transformer-Less Grid-Connected Solar Photovoltaic Inverter  With Less Leakage Current |
|  | Design and Analysis of Extendable Switched-Inductor and Capacitor-Divider  Network Based High-Boost DC-DC Converter for Solar PV Application |
|  | Implementation of Exact Linearization Technique for Modeling and Control of DC/DC Converters in Rural PV Microgrid Application |
|  | SINGLE SOURCED DOUBLE STAGE MULTILEVELINVERTER FOR GRID  CONNECTED SOLAR PV SYSTEMS |
|  | Faster Convergence Controller With Distorted Grid Conditions for Photovoltaic Grid  Following Inverter System |
|  | Three-Level T-Type Quasi-Z Source PV Grid-Tied Inverter With Active Power Filter Functionality Under Distorted Grid Voltage |
|  | Control of Single Phase Solar Photovoltaic Supply System |
| **MULTILEVEL INVERTER** | |
|  | Minimization of DC-Link Capacitance and Improved Operational Performance of a  5-Level Hybrid Multilevel DC-Link Inverter |
|  | An Asymmetric Switched-Capacitor Multicell Inverter With Low Number of DC Source and Voltage Stress for Renewable Energy Sources |
|  | Reduced Voltage Stress Asymmetrical Multilevel Inverter With Optimal Components |
|  | A Generalized High Gain Multilevel Inverter for Small Scale Solar Photovoltaic Applications |
|  | A Generalized Multilevel Inverter Topology with Reduction of Total Standing Voltage |
|  | A New Hybrid Cascaded Switched-Capacitor Reduced Switch Multilevel Inverter for  Renewable Sources and Domestic Loads |
|  | Design and Implementation of Asymmetrical Multilevel Inverter With Reduced Components and Low Voltage Stress |
|  | Generalized Switched-Capacitor Step-up Multilevel Inverter Employing Single DC Source |
|  | Novel Cascaded Seven-Level Inverter With Embedded Voltage Boosting for Renewable Energy Applications |
|  | Investigation of Highly Efficient Five Level Asymmetrical Inverter Family With  Embedded Buck-Boost Converter |
|  | SINGLE SOURCED DOUBLE STAGE MULTILEVELINVERTER FOR GRID  CONNECTED SOLAR PV SYSTEMS |
|  | Seventeen-Level Inverter Based on Switched-Capacitor and Flying-Capacitor-Fed  T-type Unit |
|  | A New Single-Source Nine-Level Quadruple Boost Inverter (NQBI) for PV Application |
| **Z SOURCE INVERTER** | |
|  | Analysis and Design of Quasi-Z-Source Equivalent DC-DC Boost Converters |
|  | A Low-harmonic Control Method of Bi-directional Three-phase Z-source Converters for Vehicle-to-Grid Applications |
|  | Switched-coupled-inductor Z-source inverter with a high boost inversion capability |
|  | Generalized Cockcroft-Walton Multiplier Voltage ZSource Inverters |
|  | Influence of a Proposed Switching Method on Reliability and Total Harmonic Distortion of the Quasi Z–Source Inverters |
|  | Generalized Space Vector Modulation for Ripple Current Reduction in Quasi-Z-Source Inverters |
|  | Control and management of hybrid AC/DC microgrid based on Γ-Z-source converter |
|  | A Review of Control Methods on Suppression of 2! Ripple for Single-Phase Quasi-Z-Source Inverter |
|  | DC-link voltage control strategy of Z-source inverter for high-speed permanent magnet motor |
|  | Sawtooth-Carrier Based PWM Method for Quasi-ZSI with ZVS Operation to Reduce Harmonic Distortion and Inductor Current Ripple |

|  |  |
| --- | --- |
| **MICRO GRID** | |
|  | Novel Non-isolated Boost-Zeta Interleaved DC-DC Converter for Low Voltage Bipolar DC Micro-grid Application |
|  | Proportional Load Sharing in an Autonomous Hybrid Micro-grid Using Interlinking Converter |
|  | Prediction of solar insolation in a PV based DC Micro Grid to meet the ceaseless energy demand of critical loads |
|  | Design of a Digitally Controlled Two-Phase Interleaved DC-DC Boost Converter for DC Microgrid |
|  | Adaptive Control Algorithm for Two Stage Integrated DC Transformer in DC Micro-Grid Applications |
|  | A New Multi-port DC/DC Converter for PV/battery/DC gird Energy Systems |
|  | Solar PV, PMSG -Wind Energy Conversion System and Battery Based Standalone DC Micro-Grid System |
|  | Ultra-Voltage Gain Step-Up DC-DC Converter for Renewable Energy Micro-Source Applications |
|  | Ultra-Voltage Gain Step-Up DC-DC Converter for Renewable Energy Micro-Source Applications |
|  | Fuzzy Type-II Controller based UPQC for Power Quality Enhancement in Grid Connected Micro Grid System |
|  | Optimal Design of Solid State Transformer-Based Interlink Converter for Hybrid AC/DC Micro-Grid Applications |
|  | DC Micro-grid with Isolated Bi-directional Converter-based Battery Storage System |
| **MOTOR DRIVES** | |
|  | Torque Ripple Reduction for BLDC Permanent Magnet Motor Drive Using DC-Link Voltage and Current Modulation |
|  | Research on a New Adaptive Integral Sliding Mode Controller Based on a Small BLDC |
|  | Pulse Width Modulation Methods for Minimizing Commutation Torque Ripples in Low Inductance Brushless DC Motor Drives |
|  | Online Auto-Tuning Method in Field-Orientation-Controlled Induction Motor Driving Inertial Load |
|  | Predictive Control With Battery Power Sharing Scheme for Dual Open-End-Winding Induction Motor Based Four-Wheel Drive Electric Vehicle |
|  | Direct Torque Control With Constant Switching Frequency for Three-to-Five Phase Direct Matrix Converter Fed Five-Phase Induction Motor Drive |
|  | Induction Machine Sensorless Control Based on Saliency Extraction That Uses One Single SVPWM Active State |
|  | Designing an Energy-Saving Induction Motor Operating in a Wide Frequency Range |
|  | On the Stability of Volts-per-Hertz Control for Induction Motors |
|  | Field-Oriented Control of Five-Phase Induction Motor Fed From Space Vector Modulated Matrix Converter |
|  | Leader–Follower-Based Self-Triggered Consensus Control of Industrial Induction Motor Drives |
|  | Enhanced Efficiency of Direct-Drive Switched Reluctance Motor With Reconfigurable Winding Topology |
|  | A Two-Step Control Approach for Torque Ripple and Vibration Reduction in Switched Reluctance Motor Drives |
|  | Torque Ripple Suppression of Switched Reluctance Motor Based on Fuzzy Indirect Instant Torque Control |
| **POWER FACTOR CORRECTION** | |
|  | High Step-Down Bridgeless Sepic/Cuk PFC Rectifiers With Improved Efficiency and Reduced Current Stress |
|  | Design of a GaN Totem-Pole PFC Converter Using DC-Link Voltage Control Strategy for Data Center Applications |
|  | A Two-Stage Interleaved Bridgeless SEPIC based PFC Converter for Electric Vehicle Charging Application |
|  | Current Balancing of Interleaved Boost PFC Converter with Auxiliary Winding Coupled Inductor |
|  | Parallel Fixed Switching Frequency CRM and DCM Boost PFC Converter With High Power Factor |
|  | Design of PFC Boost Converter with Stand-Alone Inverter for Microgrid Applications |
|  | Novel Single-Phase Cuk-Derived Bridgeless PFC Converter for On-Board EV Charger With Reduced Number of Components |
|  | A PFC Based Onboard Battery Charger using Isolated Full-Bridge DC-DC Converter for Electric Vehicle Application |
|  | PFC based Three Stage Interleaved Boost Converter for Renewable Energy System |
|  | A Low Voltage Stress PFC Rectifier Based on Nonoverlapping Strategy Using Resonant Switched-Capacitor Converter |
|  | PFC of SI-SEPIC Converter Cascaded with Flyback Converter for EV Application |
|  | Resonant Bridgeless Buck PFC Converter With Reduced Components and Dead Angle Elimination |
|  | A Modified Zeta Converter fed with HB-LLC Resonant Converter for Power Factor Correction |
|  | Peak and Valley Current Control for Cuk PFC Converter to Reduce Capacitance |
|  | T-type Buck-Boost PFC Rectifier in Discontinuous Conduction Mode |
|  | An Isolated Bridgeless Cuk–SEPIC Converter-Fed Electric Vehicle Charger |
|  | Single-Phase Isolated AC–AC Symmetrical Full-Bridge Converter |
|  | Single-Phase Bridgeless PFC Topology Derivation and Performance Benchmarking |
| **FACTS** | |
|  | Energy-saving superconducting magnetic energy storage (SMES) based interline DC dynamic voltage restorer |
|  | Voltage Profile Enhancement in a PV Connected Hybrid Power System using Dynamic Voltage Restorer |
|  | A Battery-Energy-Storage-Based DC Dynamic Voltage Restorer for DC Renewable Power Protection |
|  | Dynamic Voltage Restorer for Power Quality Enhancement with Improved Efficiency using Artificial Neural Networks |
|  | Single-Inductor Buck–Boost Inverter Based Transformerless Dynamic Voltage Restorer |
|  | A Virtual-Rectifier AC/AC Converter-Based Dynamic Voltage Restorer |
|  | Power Quality Improvement of a Grid Connected Wind Energy Conversion System Using Fuzzy Logic Controlled STATCOM |
|  | Power Quality Enhancement through Reactive Power Compensation Using Hybrid STATCOM |
|  | Power Quality Improvement in Solar Powered Standalone System using D-STATCOM |
|  | Closure to Discussion on “Mitigation of Fault Induced Delayed Voltage Recovery (FIDVR) by PV-STATCOM” |
|  | Power Quality Enhancement by Mitigating Current Harmonics in Power System Network using D-STATCOM |
|  | Power Quality Enhancement of the Distribution Network by Multilevel STATCOM-Compensated Based on Improved One-Cycle Controller |
|  | PV‐STATCOM APPLICATIONS IN DISTRIBUTION SYSTEMS |
|  | A Solar-PV Integrated Novel Reduced-Switch UPQC Device for Power-Quality Improvement |
|  | Double Stage Solar PV Array Integrated UPQC for Three Phase Four Wire Distribution System |
|  | Improvement of Power Quality Using PV with UPQC |