Ministry of Micro, Small and Medium Enterprises, Government of India

MSME
MICRO, SMALL & MEDIUM ENTERPRISES

SINCE 2007

CERTIFIED ISO 9001:2015 COMPANY

ACADEMIC LIVE PROJECTS 2023-24

takeoff edu®
GROUP

ELECTRICAL

- Power Systems
- Power Electronics
- Electrical Drives
- Control Systems
- Hardware & more

+91 9030 333 433, +91 8776 681 444

NASSCOM

Skill India
कौशल भारत-कुशल भारत

THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS • INDIA •

startupindia

CII
Confederation of Indian Industry

TCOAP

2023 – 2024 EEE POWER SYSTEMS IEEE TITLES

TITLE ID	TITLE	DOMAIN
TEMAPS805, TEMAPS806, TEPGPS805, TEPGPS806, TEMAPE303, TEPGPE275	**An Improved Control Strategy to Reduce Operating Hours of DG Genset in Solar PV-BES-DG Based AC Microgrid** **Objective:** The main objective of this project is to reducing the operating hours of the Dg Genset in Solar PV--BES-DG Based AC Micro grid by an improved control strategy.	Solar Power Generation
TEMAPS771, TEMAPE282, TEPGPS770, TEPGPE252	**A Multilevel Inverter With Minimized Components Featuring Self-Balancing and Boosting Capabilities for PV Applications** **Objective:** The main objective of this project is to propose a multilevel inverter with reduced components and high boosting abilities in Solar PV related applications.	Solar Power Generation
TEMAPS768, TEMAPS767, TEMAPE275, TEPGPS766, TEPGPS767, TEPGPE245	**Soft-Switched Boost–Cuk-Type High Step-Up Converter for Grid-Tied With Half-Bridge Inverter** **Objective:** The main objective of this project is to efficiently convert DC power from a renewable energy source, such as solar panels or wind turbines, into AC power that can be fed back into the power grid.	Solar Power Generation
TEMAPS780, TEMAPS781, TEPGPS779, TEPGPS780	**Small Hydro Based Grid Forming Converter Having Power Sharing and Synchronization Capability With DFIG Based WECS** **Objective:** The main objective of this project is to design and demonstrate a unique hybrid	Solar Power Generation

	microgrid system that combines wind energy, small hydro-solar photovoltaic (SH-PV), and battery energy storage (BES) to provide reliable and uninterrupted power in remote areas.	
TEMAPS760, TEMAPS761, TEMAPE265, TEPGPS759, TEPGPS760, TEPGPE237	**Analysis and Control of a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter using PR-Controller** **Objective**: The main objective of this project is to Control a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter by using PR-Controller.	Solar Power Generation
TEMAPS765, TEMAPS764, TEMAPE267, TEPGPS764, TEPGPS763, TEPGPE239	**Power Quality Assessment of CPUC Based Solar Photovoltaic System With NLMS for Grid-Tied Applications** **Objective:** The main objective of this project is to assess the power quality of CPUC based Solar Photovoltaic system with NLMS in grid-tied applications.	Solar Power Generation
TEMAPS777, TEMAPS778, TEMAPS779, TEPGPS776, TEPGPS777, TEPGPS778	**Rule-Based Power Management and Quality Enhancement in a Standalone Microgrid** **Objective:** The main objective of this project is to develop and implement multi-objective and coordinated control strategies for a solar PV-diesel generator (DG)-battery storage (BS) microgrid in standalone mode.	Solar Power Generation
TEMAPS736, TEMSPS737, TEMAED191, TEPGPS735,	**An Economical Solar Water Pump With Grid and Battery Backup for Continuous Operation**	Solar Power Generation

TEPGPS736, TEPGED185	**Objective:** The main objective of this project is to develop a sustainable and reliable water pumping system that utilizes solar energy as its primary power source. The system should be capable of providing continuous water supply to remote areas with minimal maintenance and operating costs.	
TEMAPS787, TEMAPS788, TEPGPS786, TEPGPS787	**A Novel Single Phase Grid Connected Transformer-Less Solar Micro-Inverter Topology With Power Decoupling Capability** **Objective:** The main objective of this project is to propose a single-phase grid connected transformer-less solar micro converter with power decoupling capability.	Solar Power Generation
TEPGPS784, TEPGPS783, TEMAPS785, TEMAPS784	**Control Strategy for Multiple Residential Solar PV System in Distribution Network with Improved Power Quality** **Objective:** The main objective of this project is to propose a modified power control (MPC) system for an autonomous microgrid that connects multiple solar photovoltaic inverter (SPI) units.	Solar Power Generation
TEMAPS776, TEMAPE286, TEPGPS775, TEPGPE256	**Converter Control during Low Voltage Ride through Operation for Grid-Interfaced Solar PV Battery Assisted System** **Objective:** The main objective of this project is to develop an efficient control technique for grid-interfaced solar PV-based distributed generation systems, allowing the DGS converter to remain connected to the grid during voltage sags and unbalanced power generation.	Solar Power Generation
TEMACS70, TEMAPE228, TEMAPS616,	**A Distributed Multimode Control Strategy for the Cascaded DC–DC Converter Applied to MVAC Grid-Tied PV System**	Solar Power Generation

TEPGPS579, TEPGPE200, TEPGCS64	**Objective:** The main objective of the proposed method is to improve the robustness and applicability of the system by using MPPT control strategy.	
TEMAPS759, TEMAPS758, TEPGPS757, TEPGPS758	**Dynamic Reserve Power Point Tracking in Grid-Connected Photovoltaic Power Plants** **Objective:** The main objective of this project is to improve the efficiency and reliability of grid-connected PV systems. DRPPT technology enables PV systems to dynamically adjust their operating point to maximize the power output under changing weather and grid conditions.	Solar Power Generation
TEMAPS790, TEMAPE288, TEPGPS789, TEPGPE258	**Three-Phase Multiport DC–AC Inverter for Interfacing Photovoltaic and Energy Storage Systems to the Electric Grid** **Objective:** The main objective of this project is to propose three-phase multiport DC-AC inverters connect photovoltaic and energy storage systems to the electric grid, enable the power conversion and grid integration.	Solar Power Generation
TEMAPS738, TEMAPS739, TEMAPS740, TEMAPS741, TEPGPS737, TEPGPS738, TEPGPS739, TEPGPS740	**A Hybrid Compensator for Unbalanced AC Distribution System With Renewable Power** **Objective:** The main objective of this project is to design and implement a hybrid compensator for an unbalanced AC distribution system with renewable power sources and mitigate voltage and current unbalance, harmonics, and reactive power imbalances caused by the intermittent	Solar Power Generation

	nature of renewable power sources.	
TEMAPS770, TEMAPE281, TEPGPS769, TEPGPE251	**Design and Analysis of High Gain DC-DC Boost Converter for Grid Connected Solar Photovoltaic System** **Objective:** The main objective of this project is to propose a high-gain DC-DC converter for a rooftop solar photovoltaic (SPV) system with a multifunctional grid-tied inverter.	**Solar Power Generation**
TEMAPS744, TEMAED194, TEPGPS743, TEPGED188	**High Efficiency Bidirectional LLC+C Resonant Converter With Parallel Transformers for Solar-Charged Electric Vehicles** **Objective:** The main objective of this project is to develop a power conversion system that can efficiently and effectively convert the DC power from a solar panel into AC power that can be used to charge the battery of an electric vehicle.	**Solar Power Generation**
TEMAPS732, TEMAPS733, TEMAPS744, TEPGPS731, TEPGPS732, TEPGPS733	**Reduced Voltage Sensors Based UPQC Tied Solar PV System Enabling Power Quality Improvement** **Objective:** The main objective of this project is to improve the power quality (PQ) indices in the grid by eliminating voltage sensors (grid side) in the overall control.	**Solar Power Generation**
TEPGED189, TEMAED195, TEPGPS752, TEPGPS751, TEMAPS753, TEMAPS752	**Multiport Power Management Method with Partial Power Processing in a MV Solid-State Transformer for PV, Storage, and Fast-Charging EV Integration** **Objective:** The main objective of this project is to develop a multiport power management method that optimizes the power flow between	Solar Power Generation

	the PV system, energy storage system, fast-charging EV station, and the MV SST.	
TEMAPS745, TEMAPS746, TEMAPS747, TEMAPE262, TEPGPS744, TEPGPS745, TEPGPS746, TEPGPE234	**Leakage Current Mitigation Technique in Solar PV Array System Using Passive Filter** **Objective:** The main objective of this project is to mitigate the leakage currents in solar PV systems by using passive filters.	**Solar Power Generation**
TEMACS83, TEMAPS633, TEMAPS634, TEMAPS635, TEPGCS77, TEPGPS596, TEPGPS597, TEPGPS598	**Control of ILC in an Autonomous AC–DC Hybrid Microgrid With Unbalanced Nonlinear AC Loads** **Objective**: The main objective of this project is provide control to a bidirectional interlinking converter in an Autonomous AC–DC Hybrid Microgrid with Unbalanced Nonlinear AC Loads	**Solar Power Generation**
TEMAPS750, TEMAPS751, TEPGPS749, TEPGPS750	**Optimizing Step-Size of Perturb & Observe and Incremental Conductance MPPT Techniques Using PSO for Grid-Tied PV System** **Objective: :** The main objective of this project is to improve the efficiency of a grid-tied PV system by optimizing the MPPT algorithm parameters, such as step-size, in order to increase the accuracy and speed of tracking the maximum power point (MPP) of the PV array under varying environmental conditions	**Solar Power Generation**
TEMAPS729, TEMAPS730, TEMAPS731, TEMAPE259, TEPGPS728, TEPGPS729, TEPGPS730,	**A New Multiport DC-DC Converter for DC Microgrid Applications**	**Solar Power Generation**

TEPGPE231	**Objective**: The main objective of this project is to design and develop a high-performance converter that can efficiently and effectively manage power flow within a DC microgrid system.	
TEMAPS742, TEMAPS743, TEPGPS741, TEPGPS742, TEMAPE261, TEPGPE233	**Performance Analysis of Voltage Multiplier Coupled Cascaded Boost Converter With Solar PV Integration for DC Microgrid Application** **Objective:** The main objective of this project is to analyze the performance of voltage multiplier coupled with cascaded boost converter with solar integrated DC microgrid applications.	**Solar Power Generation**
TEMAPS760, TEPGPS759	**A Permanent Magnet Brushless Doubly Fed Electric Machine for Variable-Speed Constant-Frequency Wind Turbines** **Objective:** The main objective of this project is to develop a Permanent Magnet Brushless Doubly Fed Electric Machine (PM-BDFM) for Variable-Speed Constant-Frequency (VSCF) wind turbines to improve the efficiency and reliability of wind turbines.	Wind Power Generation
TEMAPS780, TEMAPS781, TEPGPS779, TEPGPS780	**Small Hydro Based Grid Forming Converter Having Power Sharing and Synchronization Capability With DFIG Based WECS** **Objective:** The main objective of this project is to design and demonstrate a unique hybrid microgrid system that combines wind energy, small hydro-solar photovoltaic (SH-PV), and battery energy storage (BES) to provide reliable and uninterrupted power in remote areas.	Wind Power Generation

TEMAPS782, TEPGPS781	**Stability Analysis for DFIG-Based Wind Farm Grid-Connected System Under All Wind Speed Conditions** **Objective:** The main objective of this project is to improve the stable operation of a wind farm grid-connected system using doubly-fed induction generators (DFIG-WFGS) and to analyze the system's stability under varying wind speeds.	Wind Power Generation
TEMAPS738, TEMAPS739, TEMAPS740, TEMAPS741, TEPGPS737, TEPGPS738, TEPGPS739, TEPGPS740	**A Hybrid Compensator for Unbalanced AC Distribution System With Renewable Power** **Objective:** The main objective of this project is to design and implement a hybrid compensator for an unbalanced AC distribution system with renewable power sources and mitigate voltage and current unbalance, harmonics, and reactive power imbalances caused by the intermittent nature of renewable power sources.	**Wind Power Generation**
TEMAPS754, TEMAPS755, TEPGPS753, TEPGPS754	**Improved Active Current Control Scheme of Wind Energy Conversion Systems With PLL Synchronization During Grid Faults** **Objective:** The objective of this project is evaluate an improved active current control scheme for Wind Energy Conversion Systems (WECS) during grid faults. The proposed scheme will incorporate a Phase Locked Loop (PLL) synchronization technique to maintain the synchronization of the WECS with the grid during fault conditions.	**Wind Power Generation**
TEMAPS766, TEMAPE272, TEMAPS273,	**Fault Analysis and Clearance in FL-APC DC–AC Converter**	Power Quality

TEPGPS765, TEPGPE242, TEPGPE243	**Objective:** The main objective of this project is to analyze and clear the fault occurred during the operation of FL-APC DC-DC Converter.	
TEMAPS797, TEPGPS796, TEMACS96, TEMACS90	**Sliding Mode Control of a Four-Leg Dynamic Voltage Restorer in a Natural Reference Frame** **Objective:** The main objective of this project is to improve Power Quality in distribution system with using SMC based DVR.	Power Quality
TEMAPS763, TEMAPE266, TEMAED196, TEPGPS761, TEPGPE238, TEPGED190	**Modified Deadbeat Predictive Current Control Method for Single-Phase AC–DC PFC Converter in EV Charging System** **Objective:** The main objective of this project is to propose a modified deadbeat predictive current control method for single phase ac-dc converter used in an EV charging system.	Power Quality
TEMAPS765, TEMAPS764, TEMAPE267, TEPGPS764, TEPGPS763, TEPGPE239	**Power Quality Assessment of CPUC Based Solar Photovoltaic System With NLMS for Grid-Tied Applications** **Objective:** The main objective of this project is to assess the power quality of CPUC based Solar Photovoltaic system with NLMS in grid-tied applications.	Power Quality
TEMAPS786, TEPGPS785, TEMAED205, TEPGED199	**Distributed Energy Resources Based EV Charging Station With Seamless Connection to Grid** **Objective:** The main objective of this project is to propose a system for charging electric vehicles (EVs) using a common DC bus charging	Power Quality

	infrastructure powered by hybrid renewable energy sources, such as solar photovoltaic (PV) and fuel cells.	
TEMAPS777, TEMAPS778, TEMAPS779, TEPGPS776, TEPGPS777, TEPGPS778	**Rule-Based Power Management and Quality Enhancement in a Standalone Microgrid** **Objective:** The main objective of this project is to develop and implement multi-objective and coordinated control strategies for a solar PV-diesel generator (DG)-battery storage (BS) microgrid in standalone mode.	**Power Quality**
TEPGPS784, TEPGPS783, TEMAPS785, TEMAPS784	**Control Strategy for Multiple Residential Solar PV System in Distribution Network With Improved Power Quality** **Objective:** The main objective of this project is to propose a modified power control (MPC) system for an autonomous microgrid that connects multiple solar photovoltaic inverter (SPI) units.	**Power Quality**
TEMAPS757, TEPGPS756	**Super twisting sliding-mode control of grid-tied quasi-z-source inverters under distorted grid Voltage** **Objective:** The main objective of this project is to enhance the performance, stability and robustness of the Quasi-Z Source Inverter (qZSI) in the presence of grid voltage distortions.	Power Quality
TEMACS83, TEMAPS633, TEMAPS634, TEMAPS635, TEPGCS77, TEPGPS596, TEPGPS597, TEPGPS598	**Control of ILC in an Autonomous AC–DC Hybrid Microgrid With Unbalanced Nonlinear AC Loads** **Objective**: The main objective of this project is provide control to a bidirectional interlinking converter in an Autonomous AC–DC Hybrid Microgrid with Unbalanced Nonlinear AC Loads	Power Quality

TEMAPS726, TEMAPS727, TEPGPS725, TEPGPS726	**Improving Voltage Ride-Through Capability of Grid-Tied Microgrid With Harmonics Mitigation** **Objective**: The main objective of this project is to mitigate the harmonic distortions caused by the nonlinear loads.	Power Quality
TEMAPS738, TEMAPS739, TEMAPS740, TEMAPS741, TEPGPS737, TEPGPS738, TEPGPS739, TEPGPS740	**A Hybrid Compensator for Unbalanced AC Distribution System With Renewable Power** **Objective:** The main objective of this project is to design and implement a hybrid compensator for an unbalanced AC distribution system with renewable power sources and mitigate voltage and current unbalance, harmonics, and reactive power imbalances caused by the intermittent nature of renewable power sources.	**Power Quality**
TEMAPS756, TEPGPS755	**Power Quality Compensation Strategy of MMC-UPQC Based on Passive Sliding Mode Control** **Objective:** The objective of this project is to design a Power Quality Compensation Strategy for MMC-UPQC based on Passive Sliding Mode Control. MMC-UPQC (Modular Multilevel Converter - Unified Power Quality Conditioner) is a power electronic device used to mitigate power quality issues in electrical power systems	**Power Quality**

TEMAPS732, TEMAPS733, TEMAPS744, TEPGPS731, TEPGPS732, TEPGPS733	**Reduced Voltage Sensors Based UPQC Tied Solar PV System Enabling Power Quality Improvement** **Objective:** The main objective of this project is to improve the power quality (PQ) indices in the grid by eliminating voltage sensors (grid side) in the overall control.	**Power Quality**
TEMAPS745, TEMAPS746, TEMAPS747, TEMAPE262, TEPGPS744, TEPGPS745, TEPGPS746, TEPGPE234	**Leakage Current Mitigation Technique in Solar PV Array System Using Passive Filter** **Objective:** The main objective of this project is to mitigate the leakage currents in solar PV systems by using passive filters.	**Power Quality**
TEMAPS754, TEMAPS755, TEPGPS753, TEPGPS754	**Improved Active Current Control Scheme of Wind Energy Conversion Systems With PLL Synchronization During Grid Faults** **Objective:** The objective of this project is evaluate an improved active current control scheme for Wind Energy Conversion Systems (WECS) during grid faults. The proposed scheme will incorporate a Phase Locked Loop (PLL) synchronization technique to maintain the synchronization of the WECS with the grid during fault conditions.	**Power Quality**
TEMAPS789, TEPGPS788	**Energy Management and Power Quality Improvement of Hybrid Renewable Energy Generation System Using Coordinated Control Scheme** **Objective:** The main objective of this project is to improve power quality in hybrid renewable	Hybrid Systems

	energy generation system by using coordinated control scheme.	
TEMAPS729, TEMAPS730, TEMAPS731, TEMAPE259, TEPGPS728, TEPGPS729, TEPGPS730, TEPGPE231	**A New Multiport DC-DC Converter for DC Microgrid Applications** **Objective**: The main objective of this project is to design and develop a high-performance converter that can efficiently and effectively manage power flow within a DC microgrid system.	Hybrid System
TEMAPS693, TEPGPS692	**A New Model Predictive Current Control Strategy for Hybrid Energy Storage System Considering the SOC of the Supercapacitor** **Objective:** The main objective of this project is to propose a new model predictive current control strategy for HESS by considering the SOC of the supercapacitor.	Hybrid System
TEMAPS750, TEMAPS751, TEPGPS749, TEPGPS750	**Optimizing Step-Size of Perturb & Observe and Incremental Conductance MPPT Techniques Using PSO for Grid-Tied PV System** **Objective: :** The main objective of this project is to improve the efficiency of a grid-tied PV system by optimizing the MPPT algorithm parameters, such as step-size, in order to increase the accuracy and speed of tracking the maximum power point (MPP) of the PV	Hybrid System

	array under varying environmental conditions	
TEMAPS738, TEMAPS739, TEMAPS740, TEMAPS741, TEPGPS737, TEPGPS738, TEPGPS739, TEPGPS740	**A Hybrid Compensator for Unbalanced AC Distribution System With Renewable Power** **Objective:** The main objective of this project is to design and implement a hybrid compensator for an unbalanced AC distribution system with renewable power sources and mitigate voltage and current unbalance, harmonics, and reactive power imbalances caused by the intermittent nature of renewable power sources.	Distribution System
TEMAPS732, TEMAPS733, TEMAPS744, TEPGPS731, TEPGPS732, TEPGPS733	**Reduced Voltage Sensors Based UPQC Tied Solar PV System Enabling Power Quality Improvement** **Objective:** The main objective of this project is to improve the power quality (PQ) indices in the grid by eliminating voltage sensors (grid side) in the overall control.	Distribution System
TEMAPS735, TEMAED189, TEMAED190, TEMAPE260, TEPGPS734, TEPGPE232, TEPGED183, TEPGED184	**A Single Inductor Multi-Port Power Converter for Electric Vehicle Applications** **Objective:** The main objective of this project is to propose a single inductor multi-port power converter for Electric Vehicle applications	Distribution System

TEMAPS805, TEMAPS806, TEPGPS805, TEPGPS806, TEMAPE303, TEPGPE275	**An Improved Control Strategy to Reduce Operating Hours of DG Genset in Solar PV-BES-DG Based AC Microgrid** **Objective:** The main objective of this project is to reducing the operating hours of the Dg Genset in Solar PV--BES-DG Based AC Micro grid by an improved control strategy.	Microgrid
TEMAPS769, TEMAPE278, TEPGPS768, TEPGPE248,	**A Partial Power Processing Structure Embedding Renewable Energy Source and Energy Storage Element for Islanded DC Microgrid** **Objective:** The main objective of this project, implemented a partial power processing structure for PV based and energy storage system based islanded DC microgrid.	Microgrid
TEMAPS736, TEMSPS737, TEMAED191, TEPGPS735, TEPGPS736, TEPGED185	**An Economical Solar Water Pump With Grid and Battery Backup for Continuous Operation** **Objective:** The main objective of this project is to develop a sustainable and reliable water pumping system that utilizes solar energy as its primary power source. The system should be capable of providing continuous water supply to remote areas with minimal maintenance and operating costs.	Microgrid

TEMAPS789, TEPGPS788	**Energy Management and Power Quality Improvement of Hybrid Renewable Energy Generation System Using Coordinated Control Scheme** **Objective:** The main objective of this project is to improve power quality in hybrid renewable energy generation system by using coordinated control scheme.	Hybrid Systems
TEMAPS768, TEMAPS767, TEMAPE275, TEPGPS766, TEPGPS767, TEPGPE245	**Soft-Switched Boost–Cuk-Type High Step-Up Converter for Grid-Tied With Half-Bridge Inverter** **Objective:** The main objective of this project is to efficiently convert DC power from a renewable energy source, such as solar panels or wind turbines, into AC power that can be fed back into the power grid.	Microgrid
TEMAPS760, TEMAPS761, TEMAPE265, TEPGPS759, TEPGPS760, TEPGPE237	**Analysis and Control of a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter using PR-Controller** **Objective**: The main objective of this project is to Control a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter by using PR-Controller.	Microgrid
TEMAPS777, TEMAPS778, TEMAPS779, TEPGPS776, TEPGPS777, TEPGPS778	**Rule-Based Power Management and Quality Enhancement in a Standalone Microgrid** **Objective:** The main objective of this project is to develop and implement multi-objective and coordinated control strategies for a solar PV-diesel generator (DG)-battery storage (BS) microgrid in standalone mode.	Microgrid

TEMAPS787, TEMAPS788, TEPGPS786, TEPGPS787	**A Novel Single Phase Grid Connected Transformer-Less Solar Micro-Inverter Topology With Power Decoupling Capability** **Objective:** The main objective of this project is to propose a single-phase grid connected transformer-less solar micro converter with power decoupling capability.	Microgrid
TEMAPS759, TEMAPS758, TEPGPS757, TEPGPS758	**Dynamic Reserve Power Point Tracking in Grid-Connected Photovoltaic Power Plants** **Objective:** The main objective of this project is to improve the efficiency and reliability of grid-connected PV systems. DRPPT technology enables PV systems to dynamically adjust their operating point to maximize the power output under changing weather and grid conditions.	Microgrid
TEPGED189, TEMAED195, TEPGPS752, TEPGPS751, TEMAPS753, TEMAPS752	**Multiport Power Management Method with Partial Power Processing in a MV Solid-State Transformer for PV, Storage, and Fast-Charging EV Integration** **Objective:** The main objective of this project is to develop a multiport power management method that optimizes the power flow between the PV system, energy storage system, fast-	Microgrid

	charging EV station, and the MV SST.	
TEMACS83, TEMAPS633, TEMAPS634, TEMAPS635, TEPGCS77, TEPGPS596, TEPGPS597, TEPGPS598	**Control of ILC in an Autonomous AC–DC Hybrid Microgrid With Unbalanced Nonlinear AC Loads** **Objective**: The main objective of this project is provide control to a bidirectional interlinking converter in an Autonomous AC–DC Hybrid Microgrid with Unbalanced Nonlinear AC Loads	Microgrid
TEMAPS726, TEMAPS727, TEPGPS725, TEPGPS726	**Improving Voltage Ride-Through Capability of Grid-Tied Microgrid With Harmonics Mitigation** **Objective**: The main objective of this project is to mitigate the harmonic distortions caused by the nonlinear loads.	Microgrid
TEMAPS729, TEMAPS730, TEMAPS731, TEMAPE259, TEPGPS728, TEPGPS729, TEPGPS730, TEPGPE231	**A New Multiport DC-DC Converter for DC Microgrid Applications** **Objective**: The main objective of this project is to design and develop a high-performance converter that can efficiently and effectively manage power flow within a DC microgrid system.	Microgrid
TEMAPS728, TEPGPS727	**Power Sharing in Three-Level NPC Inverter Based Three-Phase Four-Wire Islanding Microgrids With Unbalanced Loads** **Objective:** The main objective three-level Neutral Point Clamped (NPC) inverter-based three-phase four-wire islanding microgrid with unbalanced loads is to ensure that the	Microgrid

	available power is distributed among the loads in an efficient and equitable manner.	
TEMAPS742, TEMAPS743, TEPGPS741, TEPGPS742, TEMAPE261, TEPGPE233	**Performance Analysis of Voltage Multiplier Coupled Cascaded Boost Converter With Solar PV Integration for DC Microgrid Application** **Objective:** The main objective of this project is to analyze the performance of voltage multiplier coupled with cascaded boost converter with solar integrated DC microgrid applications.	Microgrid
TEMAPS745, TEMAPS746, TEMAPS747, TEMAPE262, TEPGPS744, TEPGPS745, TEPGPS746, TEPGPE234	**Leakage Current Mitigation Technique in Solar PV Array System Using Passive Filter** **Objective:** The main objective of this project is to mitigate the leakage currents in solar PV systems by using passive filters.	Microgrid

2023-2024 EEE CONTROL SYSTEMS IEEE TITLES

S.NO	TITLE	DOMAIN
TEMAPE274, TEMACS94, TEPGPE244, TEPGCS88	**Single-Stage Isolated DC/AC Converter With Continuous Dynamic Model and Controller Design** **Objective**: The main objective of this project is to propose a Single-Stage Isolated DC/AC Converter with Continuous Dynamic Model and Controller Design for photovoltaic grid connected applications.	**CONTROL SYSTEMS**
TEMACS70, TEMAPE228, TEMAPS616, TEPGPS579, TEPGPE200,	**A Distributed Multimode Control Strategy for the Cascaded DC–DC Converter Applied to MVAC Grid-Tied PV System**	**CONTROL SYSTEMS**

TEPGCS64	**Objective:** The main objective of the proposed method is to improve the robustness and applicability of the system by using MPPT control strategy.	
TEMAPS797, TEPGPS796, TEMACS96, TEMACS90	**Sliding Mode Control of a Four-Leg Dynamic Voltage Restorer in a Natural Reference Frame** **Objective:** The main objective of this project is to improve Power Quality in distribution system with using SMC based DVR.	**CONTROL SYSTEMS**
TEMACS83, TEMAPS633, TEMAPS634, TEMAPS635, TEPGCS77, TEPGPS596, TEPGPS597, TEPGPS598	**Control of ILC in an Autonomous AC–DC Hybrid Microgrid With Unbalanced Nonlinear AC Loads** **Objective**: The main objective of this project is provide control to a bidirectional interlinking converter in an Autonomous AC–DC Hybrid Microgrid with Unbalanced Nonlinear AC Loads	**CONTROL SYSTEMS**

2023 – 2024 EEE POWER ELECTRONICS IEEE TITLES

S.NO	TITLE	DOMAIN
TEMAPS763, TEMAPE266, TEMAED196, TEPGPS761, TEPGPE238, TEPGED190	**Modified Deadbeat Predictive Current Control Method for Single-Phase AC–DC PFC Converter in EV Charging System** **Objective:** The main objective of this project is to propose a modified deadbeat predictive current control method for single phase ac-dc converter used in an EV charging system.	**AC-DC Converters**
TEMAPE299, TEPGPE271, TEMAED214,	**Universal Bridgeless Non isolated battery charger with wide output voltage range**	**AC-DC Converters**

TEPGED208	**Objective:** The main objective of this project is to design a Universal Bridgeless Non isolated battery charger with wide output voltage range aimed to efficiently charge batteries from various sources.	
TEMAPS760, TEMAPS761, TEMAPE265, TEPGPS759, TEPGPS760, TEPGPE237	**Analysis and Control of a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter using PR-Controller** **Objective**: The main objective of this project is to Control a Novel Transformer-less Grid-Connected Single-Stage Solar-Inverter by using PR-Controller.	**AC-DC Converters**
TEMAPE264, TEPGPE236	**A Three-Phase Single-Stage ac/dc Converter Based on Swiss Rectifier and Three-Level LLC Topology** **Objective:** The main objective of this project is to propose a three phase single stage ac-dc converter based on Swiss rectifier and three level LLC topology for grid connected applications.	**AC-DC Converters**
TEMAPS765, TEMAPS764, TEMAPE267, TEPGPS764, TEPGPS763, TEPGPE239	**Power Quality Assessment of CPUC Based Solar Photovoltaic System With NLMS for Grid-Tied Applications** **Objective:** The main objective of this project is to assess the power quality of CPUC based Solar Photovoltaic system with NLMS in grid-tied applications.	AC-DC Converter
TEMAPE271, TEMAED198, TEPGPE240, TEPGPE241, TEPGED191,	**Single-Phase H-Bridge Rectifier Fed High-Speed SRM System Based on Integrated Power Control**	AC-DC Converter

TEMAPE268, TEMAPE269, TEMAPE270	**Objective:** The main objective of this project is to achieve high efficiency and precise control of Single-Phase H-Bridge Rectifier Fed High-Speed SRM System based on Integrated Power Control.	
TEMAPE279, TEMAPE280, TEMAED199, TEPGPE249, TEPGPE250, TEPGED192	**An Isolated Single Input-Multiple Output DC–DC Modular Multilevel Converter for Fast Electric Vehicle Charging** **Objective:** The main objective of this project is to propose an Isolated Single Input-Multiple Output DC-DC Modular Multilevel Converter for Fast Electric Vehicle Charging related applications.	DC-DC Converters
TEMAPE290, TEPGPE260, TEMAED207, TEPGED201	**A Modified PI-Controller Based High Current Density DC–DC Converter for EV Charging Applications** **Objective:** The main objective of this project is to propose a DC-DC converter with a modified PI controller to achieve the required output voltage and high current density.	DC-DC Converters
TEMAPE276, TEMAPE277, TEPGPE246, TEPGPE247	**A New Single DC Source Five-Level Boost Inverter Applicable to Grid-Tied Systems** **Objective:** The main objective of this project, to implement a new single DC source five-level boost inverter for grid connected applications.	DC-DC Converters
TEMAPS729, TEMAPS730, TEMAPS731, TEMAPE259, TEPGPS728, TEPGPS729, TEPGPS730, TEPGPE231	**A New Multiport DC-DC Converter for DC Microgrid Applications** **Objective**: The main objective of this project is to design and develop a high-performance converter that can efficiently and effectively manage power flow within a DC microgrid	DC-DC Converters

	system.	
TEMAPS770, TEMAPE281, TEPGPS769, TEPGPE251	**Design and Analysis of High Gain DC-DC Boost Converter for Grid Connected Solar Photovoltaic System** **Objective:** The main objective of this project is to propose a high-gain DC-DC converter for a rooftop solar photovoltaic (SPV) system with a multifunctional grid-tied inverter.	DC-DC Converters
TEMACS70, TEMAPE228, TEMAPS616, TEPGPS579, TEPGPE200, TEPGCS64	**A Distributed Multimode Control Strategy for the Cascaded DC–DC Converter Applied to MVAC Grid-Tied PV System** **Objective:** The main objective of the proposed method is to improve the robustness and applicability of the system by using MPPT control strategy.	DC-DC Converters
TEMAPS742, TEMAPS743, TEPGPS741, TEPGPS742, TEMAPE261, TEPGPE233	**Performance Analysis of Voltage Multiplier Coupled Cascaded Boost Converter With Solar PV Integration for DC Microgrid Application** **Objective:** The main objective of this project is to analyze the performance of voltage multiplier coupled with cascaded boost converter with solar integrated DC microgrid applications.	DC-DC Converters
TEMAPS735, TEMAED189, TEMAED190, TEMAPE260, TEPGPS734, TEPGPE232, TEPGED183, TEPGED184	**A Single Inductor Multi-Port Power Converter for Electric Vehicle Applications** **Objective:** The main objective of this project is to propose a single inductor multi-port power converter for Electric Vehicle	DC-DC Converters

	applications	
TEMAPE281, TEMAPE282, TEPGPE253, TEPGPE254	**A Single-Inductor Multi-Input Multilevel High Step-Up DC–DC Converter Based on Switched-Diode-Capacitor Cells for PV Applications** **Objective:** The main objective of this project is to propose a Single-Inductor Multi-Input Multilevel High Step-Up DC–DC Converter Based on Switched-Diode-Capacitor Cells for PV related Applications.	DC-DC Converters
TEMAPS805, TEMAPS806, TEPGPS805, TEPGPS806, TEMAPE303, TEPGPE275	**An Improved Control Strategy to Reduce Operating Hours of DG Genset in Solar PV-BES-DG Based AC Microgrid** **Objective:** The main objective of this project is to reducing the operating hours of the Dg Genset in Solar PV--BES-DG Based AC Micro grid by an improved control strategy.	DC-AC Converter
TEMAPE274, TEMACS94, TEPGPE244, TEPGCS88	**Single-Stage Isolated DC/AC Converter With Continuous Dynamic Model and Controller Design** **Objective**: The main objective of this project is to propose a Single-Stage Isolated DC/AC Converter with Continuous Dynamic Model and Controller Design for photovoltaic grid connected applications.	DC-AC Converter
TEMAPS766, TEMAPE272, TEMAPS273, TEPGPS765, TEPGPE242, TEPGPE243	**Fault Analysis and Clearance in FL-APC DC–AC Converter** **Objective:** The main objective of this project is to analyze and clear the fault occurred during the operation of FL-APC DC-DC Converter.	DC-AC Converter
TEMAPS769,	**A Partial Power Processing Structure**	DC-AC

TEMAPE278, TEPGPS768, TEPGPE248,	**Embedding Renewable Energy Source and Energy Storage Element for Islanded DC Microgrid** **Objective:** The main objective of this project, implemented a partial power processing structure for PV based and energy storage system based islanded DC microgrid.	Converter
TEMAPS768, TEMAPS767, TEMAPE275, TEPGPS766, TEPGPS767, TEPGPE245	**Soft-Switched Boost–Cuk-Type High Step-Up Converter for Grid-Tied With Half-Bridge Inverter** **Objective:** The main objective of this project is to efficiently convert DC power from a renewable energy source, such as solar panels or wind turbines, into AC power that can be fed back into the power grid.	DC-AC Converter
TEMAPS776, TEMAPE286, TEPGPS775, TEPGPE256	**Converter Control during Low Voltage Ride through Operation for Grid-Interfaced Solar PV Battery Assisted System** **Objective:** The main objective of this project is to develop an efficient control technique for grid-interfaced solar PV-based distributed generation systems, allowing the DGS converter to remain connected to the grid during voltage sags and unbalanced power generation.	DC-AC Converter
TEMAPE291, TEPGPE261	**Design and Implementation Bidirectional DC–AC Converter for Energy Storage System** **Objective:** The main objective of this project is to propose a bidirectional single-phase dc–ac converter with triple port converter (T-PC) for energy storage systems.	DC-AC Converters
TEMAPS790, TEMAPE288,	**Three-Phase Multiport DC–AC Inverter for Interfacing Photovoltaic and Energy**	DC-AC Converter

TEPGPS789, TEPGPE258	**Storage Systems to the Electric Grid** **Objective:** The main objective of this project is to propose three-phase multiport DC-AC inverters connect photovoltaic and energy storage systems to the electric grid, enable the power conversion and grid integration.	
TEMAPE271, TEMAED198, TEPGPE240, TEPGPE241, TEPGED191, TEMAPE268, TEMAPE269, TEMAPE270	**Single-Phase H-Bridge Rectifier Fed High-Speed SRM System Based on Integrated Power Control** **Objective:** The main objective of this project is to achieve high efficiency and precise control of Single-Phase H-Bridge Rectifier Fed High-Speed SRM System based on Integrated Power Control.	DC-AC Converter
TEMAPS745, TEMAPS746, TEMAPS747, TEMAPE262, TEPGPS744, TEPGPS745, TEPGPS746, TEPGPE234	**Leakage Current Mitigation Technique in Solar PV Array System Using Passive Filter** **Objective:** The main objective of this project is to mitigate the leakage currents in solar PV systems by using passive filters.	DC-AC Converters
TEMAPE289, TEMAED206, TEPGPE259, TEPGED200	**Electric Vehicle-to-Vehicle Energy Transfer Using On-Board Converters** **Objective:** The main objective of this project is to transfer Energy from electric vehicle to vehicle by using on-board converters.	AC-AC Converters
TEMAPS766, TEMAPE272, TEMAPS273, TEPGPS765, TEPGPE242, TEPGPE243	**Fault Analysis and Clearance in FL-APC DC–AC Converter** **Objective:** The main objective of this project is to analyze and clear the fault occurred during the operation of FL-APC DC-DC Converter.	Multilevel Inverters

TEMAPS771, TEMAPE282, TEPGPS770, TEPGPE252	**A Multilevel Inverter With Minimized Components Featuring Self-Balancing and Boosting Capabilities for PV Applications** **Objective:** The main objective of this project is to propose a multilevel inverter with reduced components and high boosting abilities in Solar PV related applications.	Multilevel Inverters
TEPGPE262, TEPGPE263, TEMAED208, TEPGED202	**Battery Connected Multi-level Inverter Fed PMSM for Electric Vehicle Applications** **Objective:** The main objective of this project is to design and simulate the cascaded H-bridge five-level inverter using Sinusoidal Pulse Width Modulation (SPWM) technique.	Multilevel Inverters
TEMAPE276, TEMAPE277, TEPGPE246, TEPGPE247	**A New Single DC Source Five-Level Boost Inverter Applicable to Grid-Tied Systems** **Objective:** The main objective of this project, to implement a new single DC source five-level boost inverter for grid connected applications.	MULTILEVEL INVERTERS
TEMAPE279, TEMAPE280, TEMAED199, TEPGPE249, TEPGPE250, TEPGED192	**An Isolated Single Input-Multiple Output DC–DC Modular Multilevel Converter for Fast Electric Vehicle Charging** **Objective:** The main objective of this project is to propose an Isolated Single Input-Multiple Output DC-DC Modular Multilevel Converter for Fast Electric Vehicle Charging related applications.	MULTILEVEL INVERTERS
TEMAPE281, TEMAPE282, TEPGPE253, TEPGPE254	**A Single-Inductor Multi-Input Multilevel High Step-Up DC–DC Converter Based on Switched-Diode-Capacitor Cells for PV Applications**	MULTILEVEL INVERTERS

	Objective: The main objective of this project is to propose a Single-Inductor Multi-Input Multilevel High Step-Up DC–DC Converter Based on Switched-Diode-Capacitor Cells for PV related Applications.	

2023 – 2024 EEE ELECTRICAL DRIVES IEEE TITLES

S.NO	TITLE	DOMAIN
TEMAPE271, TEMAED198, TEPGPE240, TEPGPE241, TEPGED191, TEMAPE268, TEMAPE269, TEMAPE270	**Single-Phase H-Bridge Rectifier Fed High-Speed SRM System Based on Integrated Power Control** **Objective:** The main objective of this project is to achieve high efficiency and precise control of Single-Phase H-Bridge Rectifier Fed High-Speed SRM System based on Integrated Power Control.	AC Drives
TEMAPS736, TEMSPS737, TEMAED191, TEPGPS735, TEPGPS736, TEPGED185	**An Economical Solar Water Pump With Grid and Battery Backup for Continuous Operation** **Objective:** The main objective of this project is to develop a sustainable and reliable water pumping system that utilizes solar energy as its primary power source. The system should be capable of providing continuous water supply to remote areas with minimal maintenance and operating costs.	AC Drives
TEMAPS735, TEMAED189, TEMAED190, TEMAPE260, TEPGPS734, TEPGPE232, TEPGED183, TEPGED184	**A Single Inductor Multi-Port Power Converter for Electric Vehicle Applications** **Objective:** The main objective of this project is to propose a single inductor multi-port power converter for Electric Vehicle applications	DC Drives
TEMAED209,	**Modified Adaptive Filter Based UPQC for**	DC Drives

TEPGED203	**Battery Supported Hydro Driven PMSG System** **Objective:** The main objective of this project is to propose the modified adaptive filter based UPQC for Battery Supported hydro turbine driven PMSG system.	
TEMAED204, TEPGED197	**A Self-Tuning LCC/LCC System Based on Switch-Controlled Capacitors for Constant-Power Wireless Electric Vehicle Charging** **Objective:** The main objective of this project is to provide a high-efficiency wireless charging system for electric vehicles that maintains a constant power output during charging.	Electric Vehicles
TEMAPE299, TEPGPE271, TEMAED214, TEPGED208	**Universal Bridgeless Non isolated battery charger with wide output voltage range** **Objective:** The main objective of this project is to design a Universal Bridgeless Non isolated battery charger with wide output voltage range aimed to efficiently charge batteries from various sources.	Electric Vehicles
TEMAPS763, TEMAPE266, TEMAED196, TEPGPS761, TEPGPE238, TEPGED190	**Modified Deadbeat Predictive Current Control Method for Single-Phase AC–DC PFC Converter in EV Charging System** **Objective:** The main objective of this project is to propose a modified deadbeat predictive current control method for single phase ac-dc converter used in an EV charging system.	Electric Vehicles
TEMAPS786, TEPGPS785, TEMAED205,	**Distributed Energy Resources Based EV Charging Station With Seamless Connection to Grid**	Electric Vehicles

TEPGED199	**Objective:** The main objective of this project is to propose a system for charging electric vehicles (EVs) using a common DC bus charging infrastructure powered by hybrid renewable energy sources, such as solar photovoltaic (PV) and fuel cells.	
TEMAPE289, TEMAED206, TEPGPE259, TEPGED200	**Electric Vehicle-to-Vehicle Energy Transfer Using On-Board Converters** **Objective:** The main objective of this project is to transfer Energy from electric vehicle to vehicle by using on-board converters.	Electric Vehicles
TEMAPE290, TEPGPE260, TEMAED207, TEPGED201	**A Modified PI-Controller Based High Current Density DC–DC Converter for EV Charging Applications** **Objective:** The main objective of this project is to propose a DC-DC converter with a modified PI controller to achieve the required output voltage and high current density.	Electric Vehicles
TEMAPE279, TEMAPE280, TEMAED199, TEPGPE249, TEPGPE250, TEPGED192	**An Isolated Single Input-Multiple Output DC–DC Modular Multilevel Converter for Fast Electric Vehicle Charging** **Objective:** The main objective of this project is to propose an Isolated Single Input-Multiple Output DC-DC Modular Multilevel Converter for Fast Electric Vehicle Charging related applications.	Electric Vehicles
TEMAPS744, TEMAED194, TEPGPS743, TEPGED188	**High Efficiency Bidirectional LLC+C Resonant Converter With Parallel Transformers for Solar-Charged Electric Vehicles** **Objective:** The main objective of this project is to develop a power conversion system that can efficiently and effectively convert the DC power from a solar panel into AC power that can be used to charge the battery of an electric vehicle.	Electric Vehicles

TEPGED189, TEMAED195, TEPGPS752, TEPGPS751, TEMAPS753, TEMAPS752	**Multiport Power Management Method with Partial Power Processing in a MV Solid-State Transformer for PV, Storage, and Fast-Charging EV Integration** **Objective:** The main objective of this project is to develop a multiport power management method that optimizes the power flow between the PV system, energy storage system, fast-charging EV station, and the MV SST.	Electric Vehicles
TEMAPS735, TEMAED189, TEMAED190, TEMAPE260, TEPGPS734, TEPGPE232, TEPGED183, TEPGED184	**A Single Inductor Multi-Port Power Converter for Electric Vehicle Applications** **Objective:** The main objective of this project is to propose a single inductor multi-port power converter for Electric Vehicle applications	Electric Vehicles

PROJECT SUPPORTS FOR STUDENTS:

- PROJECT ABSTRACT
- PROJECT IEEE BASE PAPER/ REFERENCE PAPER
- PROJECT PRESENTATION IN PPT FORMAT
- PROJECT REVIEW ASSISTANCE FOR VIVA
- PROJECT DIAGRAMS
- PROJECT SOURCE CODE
- PROJECT REPORT
- PROJECT SCREEN SHOTS
- PROJECT DEMO
- PROJECT EXPLANATION
- PLAGARISM DOCUMENTATION
- INTERNATIONAL JOURNAL/CONFERENCE PUBLISHING
- PROJECT ACCEPTANCE LETTER
- PROJECT COMPLETION CERTIFICATE

The #1 Academic Projects Company

Google reviews for Takeoff Projects

The most Creative Company for the B.Tech and M.Tech Projects, PhD Guidance & International Assignments

Surekha

5.0 ★★★★★

5 star to the company for its outstanding support, new technology & support

Shahed

4.5 ★★★★½

Very nice project support, the explanation with the kit were very useful and easy to understand...

Madhu Sudan Reddy

5.0 ★★★★★

You guys always come up with exciting new technologies...impressive!!! Keep it up...

Our Customer Base

SPMVV TIRUPATI

BITS Pilani

KALIKIRI

takeoff edu GROUP

1-5-558, 1st Floor, 2nd Streat, Balaji Colony,
Tirupati, Andhra Pradesh-517502.

+91 90303 33433 | 0877-2261612

www.takeoffprojects.com | info@takeoffprojects.com /TakeoffEduGroup