M.Tech/ M.E ELECTRICAL SIMULATION 2020-2021Projects List

S.NO	PROJECTS LIST	IEEE
1	A Generalized Carrier-Overlapped PWM Method for Neutral-Point Clamped Multilevel Converters	2020
2	A Generalized Switched Inductor Cell Modular Multilevel Inverter	2020
3	A Low-harmonic Control Method of Bi-directional Three-phase Z-source Converters for Vehicle-to-Grid Applications	2020
4	A Microgrid Based on Wind Driven DFIG, DG and Solar PV Array for Optimal Fuel Consumption	2020
5	A New Step-Up Switched-Capacitor Voltage Balancing Converter for NPC Multilevel Inverter-Based Solar PV System	2020
6	A Single Input Variable FLC for DFIG Based WPGS in Standalone Mode	2020
7	An Efficient Inductive Power Transfer Topology for Electric Vehicle Battery Charging	2020
8	Asymmetrical Triangular Current Mode (ATCM) for Bidirectional High Step Ratio Modular Multilevel Dc–Dc Converter	2020
9	Auto-Tuning Proportional-Type Synchronization Algorithm for DC Motor Speed Control Applications	2020
10	Cascaded Multilevel Inverter Based Power and Signal Multiplex Transmission for Electric Vehicles	2020
11	Cascaded Multilevel PV Inverter With Improved Harmonic Performance During Power Imbalance Between Power Cells	2020
12	Delta-Bar-Delta Neural Network (NN) Based Control Approach for Power Quality Improvement of Solar PV Interfaced Distribution System	2020
13	Dual-T-Type Five-Level Cascaded Multilevel Inverter With Double Voltage Boosting Gain	2020
14	Five-level one-capacitor boost multilevel inverter	2020
15	Generalized Phase-Shift PWM for Active-Neutral-Point-Clamped Multilevel Converter	2020
16	Grid-Connected Wind-Photovoltaic Cogeneration Using Back-to-Back Voltage Source Converters	2020
17	Hybrid cuckoo search algorithm and grey wolf optimiser-based optimal control strategy for performance enhancement of HVDC-based offshore wind farms	2020
18	Implementation of Solar PV- Battery and Diesel Generator Based Electric Vehicle Charging Station	2020
19	Incremental Passivity Control in Multilevel Cascaded H-Bridge Converters	2020
20	Integration of solar PV into grid using a new UPQC with differential inverter control	2020
21	Mitigation of transient overvoltages in microgrid including PV arrays	2020
22	Multilevel Converters with Symmetrical Half-Bridge Submodules and Sensorless Voltage Balance	2020
23	Multilevel Single-Phase Converter with Two DC Links	2020
24	Off-board electric vehicle battery charger using PV array	2020
25	Power optimisation scheme of induction motor using FLC for electric vehicle	2020

26	Self-Adjustable Step-Based Control Algorithm for Grid-Interactive Multifunctional Single-Phase PV-Battery System Under Abnormal Grid Conditions	2020
27	Sensorless SynRG Based Variable Speed Wind Generator and Single-stage Solar PV Array Integrated Grid System with Maximum Power Extraction Capability	2020
28	Single-phase boost DC-link integrated cascaded multilevel inverter for PV applications	2020
29	Single-Phase Dual-Mode Interleaved Multilevel Inverter (DMIMI) for PV Applications	2020
30	Switched-capacitor multilevel inverter with self-voltage-balancing for high-frequency power distribution system	2020
31	Unbiased Circular Leakage Centered Adaptive Filtering Control for Power Quality Improvement of Wind-Solar PV Energy Conversion System	2020
32	ZPUC: A New Configuration of Single DC Source for Modular Multilevel Converter (MMC) Applications	2020
33	A Generalized Multilevel Inverter Topology with Reduction of Total Standing Voltage	2020
34	A New Asymmetric Multilevel Inverter with Reduced Number of Components	2020
35	A Novel High-Gain DC-DC Converter Applied in Fuel Cell Vehicles	2020
36	A Step-up Multilevel Inverter Topology using Novel Switched Capacitor Converters with Reduced Components	2020
37	Adaptive Control of Voltage Source Converter Based Scheme for Power Quality Improved Grid-Interactive Solar PV- Battery System	2020
38	An Experimental Estimation of Hybrid ANFIS–PSO-Based MPPT for PV Grid Integration Under Fluctuating Sun Irradiance	2020
39	Bidirectional Buck-Boost Current-Fed Isolated DC-DC Converter and Its Modulation	2020
40	Control Algorithm based on Limit Cycle Oscillator-FLL for UPQC-S with Optimized PI Gains	2020
41	Enhanced DVR Control System based on the Harris Hawks Optimization Algorithm	2020
42	Grid Synchronization of WEC-PV-BES Based Distributed Generation System using Robust Control Strategy	2020
43	High Performance Frequency Converter Controlled Variable-Speed Wind Generator Using Linear-Quadratic Regulator Controller	2020
44	Improved Power Quality in a Solar PV Plant Integrated Utility Grid by Employing a Novel Adaptive Current Regulator	2020
45	Improving Microgrid Low-Voltage Ride-Through Capacity Using Neural Control	2020
46	Nonisolated DC-DC Converters with Wide Conversion Range for High-Power Applications	2020
47	Power Quality Improvement in Solar Fed Cascaded Multilevel Inverter with Output Voltage Regulation Techniques	2020
48	PSO optimized PIDF controller for Load-frequency control of A.C Multi-Islanded-Micro grid system	2020
49	Single-Stage PV-Grid Interactive Induction Motor Drive with Improved Flux Estimation Technique for Water Pumping with Reduced Sensors	2020
50	Switched Capacitor Integrated (2n+1)-Level Step-up Single-Phase Inverter	2020

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01	Power Factor Correction of Three-Phase PWM AC Chopper Fed Induction Motor Drive System Using HBCC Technique.	2019
02	A Power Electronic Traction Transformer Configuration with Low-Voltage IGBTs for Onboard Traction Application.	2019
03	Carrier-Based Digital PWM and Multirate Technique of a Cascaded H-Bridge Converter for Power Electronic Traction Transformers.	2019
04	Operation Analysis and A Game Theoretic Approach to Dynamic Hybrid Compensator for the V/v Traction System.	2019
05	Coordination of MMCs With Hybrid DC Circuit Breakers for HVDC Grid Protection.	2019
06	A New Multilevel Inverter Topology With Reduce Switch Count.	2019
07	A Novel Multilevel DC/AC Inverter Based on Three-Level Half Bridge With Voltage Vector Selecting Algorithm	2019
08	A Novel Sub module Voltage Balancing Scheme for Modular Multilevel Cascade Converter—Double-Star Chopper-Cells (MMCC-DSCC) Based STATCOM.	2019
09	A Single-Phase Transformer-Based Cascaded Asymmetric Multilevel Inverter With Balanced Power Distribution.	2019
10	Active power decoupling and controlling for single-phase FACTS device.	2019
11	Analysis of Logic Gates for Generation of Switching Sequence in Symmetric and Asymmetric Reduced Switch Multilevel Inverter.	2019
12	Design and Hardware Implementation Considerations of Modified Multilevel Cascaded H-Bridge Inverter for Photovoltaic System	2019
13	Direct Model Predictive Control of Novel H-Bridge Multilevel Inverter Based Grid-Connected Photovoltaic System.	2019
14	Fuel cell integrated unified power quality conditioner for voltage and current reparation in four-wire distribution grid.	2019
15	Grid-tied single source quasi-Z-source cascaded multilevel inverter for PV applications.	2019
16	Low Switching Frequency Based Asymmetrical Multilevel Inverter Topology With Reduced Switch Count.	2019
17	Optimal Design of a New Cascaded Multilevel Inverter Topology With Reduced Switch Count.	2019
18	Switch Ladder Modified H-Bridge Multilevel Inverter With Novel Pulse Width Modulation Technique.	2019
19	Role of Outage Management Strategy in Reliability Performance of Multi-Micro grid Distribution Systems.	2019
20	Improved Coordinated Control Strategy for Hybrid STATCOM Using Required Reactive Power Estimation Method.	2019
21	Fault tolerant single-phase capacitor start capacitor run induction motor powered with cascaded multilevel quasi impedance source inverter.	2019
22	Coordination control of positive and negative sequence voltages of cascaded H-bridge STATCOM operating under imbalanced grid voltage.	2019
23	Control and operation of the MMC-based drive with reduced capacitor voltage fluctuations	2019
24	Application of UPFC to mitigate SSR in series compensated wind farms	2019

25	A Unified Power Flow Controller Using a Power Electronics Integrated Transformer	2019
26	A 13-levels Module (K-Type) with two DC sources for Multilevel Inverters	2019
27	A Boost Type Nine-Level Switched Capacitor Inverter	2019
28	A Hybrid 9-level, 1-ϕ Grid Connected Multi Level Inverter with Low Switch Count and Innovative Voltage Regulation Techniques Across Auxiliary Capacitor.	2019
29	A Multi-Cell Cascaded High Frequency Link Inverter with Soft-Switching and Isolation.	2019
30	A new pulse active width modulation (PAWM) for multilevel converters.	2019
31	A new standby structure integrated with boost PFC converter for Server Power supply.	2019
32	A Novel Bidirectional T-type Multilevel Inverter for Electric Vehicle Applications.	2019
33	A Novel Nine-Level Quadruple Boost Inverter with Inductive-load Ability.	2019
34	A Novel Step-Up Single Source Multilevel Inverter: Topology, Operating Principle and Modulation.	2019
35	A Second-Order Volterra Filter Based Control of Solar PV-DSTATCOM System to Achieve Lyapunov's Stability	2019
36	A Sinusoidal Pulse Width Modulation (SPWM) Technique for Capacitor Voltage Balancing of Nested T-Type Four-Level Inverter.	2019
37	Analysis, Design and Control of Switching Capacitor Based Buck-Boost Converter	2019
38	Compact Switched Capacitor Multilevel Inverter (CSCMLI) With Self Voltage Balancing and Boosting Ability.	2019
39	Coordination control of positive and negative sequence voltages of cascaded H-bridge STATCOM operating under imbalanced grid voltage.	2019
40	Cross-Switched Multilevel Inverter using Novel Switched Capacitor Converters.	2019
41	Dual P-Q Theory based Energy Optimized Dynamic Voltage Restorer for Power Quality Improvement in Distribution System	2019
42	Dual Role CDSC based Dual Vector Control for Effective Operation of DVR with Harmonic Mitigation	2019
43	Dual-T-Type Seven-Level Boost Active-Neutral Point-Clamped (DTT-7L-BANPC) Inverter	2019
44	Effect of cascade STATCOM on stabilizing voltage in high voltage direct current	2019
45	Enhancement of Solar Farm Connectivity with Smart PV Inverter PV-STATCOM.	2019
46	Extended Topology for Boost DC-DC Converter.	2019
47	Family of Multiport Switched-Capacitor Multilevel Inverters for High Frequency AC Power Distribution	2019
48	Flexible Transformer Based Multilevel Inverter Topologies	2019
49	Framework of Gradient Descent Least Squares Regression Based NN Structure for Power Quality Improvement in PV Integrated Low-Voltage Weak Grid System	2019

50	High-Efficiency Bidirectional Buck-Boost Converter for Photovoltaic and Energy Storage Systems in a Smart Grid	2019
51	Implementation of Immune Feedback Control Algorithm for Distribution Static Compensator.	2019
52	Low-Capacitance Statcom with Modular Inductive Filter	2019
53	Model Predictive Control of Multilevel CHB STATCOM in Wind Farm Application Using Diophantine Equations	2019
54	Model Predictive Controller with Reduced Complexity for Grid Tied Multilevel Inverters.	2019
55	PNKLMF Based Neural Network Control and Learning based HC MPPT Technique for Multi-Objective Grid Integrated Solar PV Based Distributed Generating System	2019
56	Power Quality Improvement and PV Power Injection by DSTATCOM with Variable DC Link Voltage Control from RSC-MLC.	2019
57	Protection of Sensitive Loads Using Sliding Mode Controlled Three-Phase DVR With Adaptive Notch Filter.	2019
58	Real-Time Validation of a Sliding Mode Controller for Closed-Loop Operation of Reduced Switch Count Multilevel Inverters	2019
59	Single Stage SECS Interfaced with Grid Using ISOGI-FLL Based Control Algorithm.	2019
60	SSO of DFIG-based wind farm integrated by a hybrid series compensator.	2019
61	Stability Analysis for the Grid-Connected Single Phase Asymmetrical Cascaded Multilevel Inverter with SRF-PI Current Control under Weak Grid Conditions	2019
62	Switched-Boost Action Based Multi-port Converter.	2019
63	Switched-Capacitor Based Single Source Cascaded H-bridge Multilevel Inverter Featuring Boosting Ability	2019
64	Unbalanced and Reactive Load Compensation using MMCC-based SATCOMs with Third Harmonic Injection.	2019

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1	Standalone Photovoltaic WMSRer Pumping System Using Induction Motor Drive with Reduced Sensors	2018
2	A Novel Design of Hybrid Energy Storage System for Electric Vehicles	2018
3	Single Stage PV Array Fed Speed Sensor less Vector Control of Induction Motor Drive for WMSRer Pumping.	2018
4	Design and Performance Analysis of Three-Phase Solar PV IntegrMSRed UPQC.	2018
5	A New H-Bridge Hybrid Modular Converter (HBHMC) for HVDC ApplicMSRion: OperMSRing Modes, Control and Voltage Balancing	2018
6	Rectifier Load Analysis for Electric Vehicle Wireless Charging System.	2018
7	Development of a Bidirectional DC/DC Converter with Dual-BMSRtery Energy Storage for Hybrid Electric Vehicle System.	2018

8	An Improved DC-Link Voltage Control StrMSRegy for Grid Connected Converters.	2018
9	Design and ImplementMSRion of Active Power Control with Improved P&O Method for Wind PV-BMSRtery based Standalone GenerMSRion System	2018
10	Single-stage ZETA-SEPIC-based multifunctional integrMSRed converter for plugin electric vehicles	2018
11	Modeling, Design, Control, and ImplementMSRion of a Modified Z-source IntegrMSRed PV/Grid/EV DC Charger/Inverter	2018
12	A Simple Active and Reactive Power Control for ApplicMSRions of Single-Phase Electric Springs	2018
13	UDE-Based Current Control StrMSRegy for LCCL-Type Grid-Tied Inverters	2018
14	A New Design Method of an LCL Filter Applied in Active DC-Traction SubstMSRions	2018
15	A Very High Resolution Stacked Multilevel Inverter Topology for Adjustable Speed Drives	2018
16	ImplementMSRion and Comparison of Symmetric and Asymmetric Multilevel Inverters for Dynamic Loads	2018
17	ReconfigurMSRion of NPC Multilevel Inverters to MitigMSRe Short Circuit Faults Using Back-to-Back Switches	2018
18	Irradiance-adaptive PV Module IntegrMSRed Converter for High Efficiency and Power Quality in Standalone and DC Microgrid ApplicMSRions	2018
19	Dual-function PV-ECS integrMSRed to 3P4W distribution grid using 3M-PLL control for active power transfer and power quality improvement.	2018
20	ZSI for PV systems with LVRT capability.	2018
21	Crisscross switched multilevel inverter using cascaded semi-half-bridge cells	2018
22	Single-phase hybrid cascaded H-bridge and diode-clamped multilevel inverter with capacitor voltage balancing	2018
23	Control of Solar Photovoltaic IntegrMSRed Universal Active Filter Based on Discrete Adaptive Filter	2018

24	A Buck & Boost based Grid Connected PV Inverter Maximizing Power Yield from Two PV Arrays in MismMSRched Environmental Conditions	2018
25	A Grid Connected Single Phase Transformerless Inverter Controlling Two Solar PV Arrays OperMSRing under Different MSRmospheric Conditions	2018
26	Single-phase multilevel inverter topologies with self-voltage balancing capabilities	2018
27	A Three-Phase Symmetrical DC-Link Multilevel Inverter with Reduced Number of DC Sources	2018
28	A Bridge Modular Switched-Capacitor-Based Multilevel Inverter With Optimized SPWM Control Method And Enhanced Power-Decoupling Ability	2018
29	Single-Phase Modified Quasi-Z-Source Cascaded Hybrid Five-Level Inverter	2018
30	Improved control algorithm for grid connected cascaded H-bridge photovoltaic inverters under asymmetric operMSRing conditions	2018
31	Power-decoupling of a Multi-port IsolMSRed Converter for an Electrolytic-capacitorless Multi-level Inverter.	2018
32	VerificMSRion of a low Components Nine-Level Cascaded-Transformer Multilevel Inverter in Grid Tie Mode.	2018
33	Power management in PV-bMSRtery-hydro based standalone microgrid	2018
34	Hybrid Cascaded Multilevel Inverter (HCMLI) with Improved Symmetrical 4-Level Submodule	2018
35	Single-Stage Switched-Capacitor Module (S3CM) Topology for Cascaded Multilevel Inverter	2018
36	CombinMSRion Analysis and Switching Method of a Cascaded H-Bridge Multilevel Inverter Based on Transformers With the Different Turns RMSRio for Increasing the Voltage Level	2018
37	Research on the Unbalanced CompensMSRion of Delta-connected Cascaded H-bridge Multilevel SVG	2018
38	Autonomous Power Management for Interlinked AC-DC Microgrids	2018
39	Multi-Input Switched-Capacitor Multilevel Inverter for High-Frequency AC Power Distribution	2018
40	Phase Shifted Carrier Based Synchronized Sinusoidal PWM Techniques for Cascaded H-Bridge Multi Level Inverter	2018
41	Autonomous Power Control and Management Between Standalone DC Microgrids	2018
42	Soft Switched Interleaved DC/DC Converter as front-end of Multi Inverter Structure for Micro Grid ApplicMSRions	2018
43	Dynamic Power Management and Control of PV PEM fuel Cell based Standalone AC/DC Microgrid Using Hybrid Energy Storage	2018
44	ISOGI-Q Based Control Algorithm for Single Stage Grid Tied SPV System	2018
45	An Improved ModulMSRed Carrier Control with On-Time Doublers for Single-Phase Shunt Active Power Filter	2018
46	An f-P/Q Droop Control in Cascaded-Type Microgrid	2018
47	Three-Phase Transformer-less Shunt Active Power Filter with Reduced Switch Count for Harmonic CompensMSRion in Grid-Connected ApplicMSRions	2018
48	Control of a Three-Phase Hybrid Converter for a PV Charging StMSRion	2018

49	Reduced carrier PWM scheme with unified logical expressions for reduced switch count multilevel inverters	2018
50	A Novel Hybrid Modular Three-Level Shunt Active Power Filter	2018

51 GaN Based Transformer-less Microinverter with Coupled Inductor Interleaved Boost andHalf Bridge Voltage Swing Inverter

52 Sensorless parameter estimMSRion and currentsharing strMSRegy in two-phase andmultiphase IPOP DAB DC–DC converters

53 Design and Control of Micro-Grid fed by Renewable Energy GenerMSRing Sources

54 Transformer-less dynamic voltage restorer based on a three-leg ac/ac converter

55 An Improved Current-Limiting StrMSRegy for Shunt Active Power Filter (SAPF) UsingParticle Swarm OptimizMSRion (PSO) 2018

56 Transformerless Z-Source Four-Leg PV Inverter with Leakage Current Reduction 2018 .

57 Ensuring Power Quality and Stability in Industrial and Medium Voltage Public Grids 2018 .58 A BL-CSC converter fed BLDC motor drive with power factor correction 2018 .

59 Dual-Buck AC–AC Converter with Inverting and Non-Inverting OperMSRions 2018 .

60 Self-tuned fuzzy-proportional–integral compensMSRed zero/minimum active poweralgorithm based dynamic voltage restorer 2018 IET

61 Modeling, ImplementMSRion and Performance Analysis of a Grid-ConnectedPhotovoltaic/Wind Hybrid Power System 2018 .

62 Standalone Photovoltaic WMSRer Pumping System Using Induction Motor Drive WithReduced Sensors 2018 .