

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 1-Power Converter Topologies, Components and Devices	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. M. Raghuram, NIT Calicut	Track Chair 2: Dr. Shelas Sathyan, NIT Trichy
Student In-charge: Ashwin Bhaskar	Contact Number: 8547071001
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
20	DSP-Based HIL Emulator for Power Converters	Kavin Mathalai; Linda Mary Zacharia ; Nabivullah Syed ; Farhan Ahmad Khan ; Harish Sudhakaran Nair *
26	Efficient control system design of isolated bidirectional DC/DC Series Resonant Converter in traction application	Sandeep Chowdhury *; Peeyoosh Gupta
38	Design and Implementation of a Double Pulse Test Setup for Accurate SiC MOSFET Characterization	Ravi Teja Pogulaguntla*; Arun Karuppaswamy Balasubramaniam
55	Advanced Adaptive Riccati MPC with Integrated Riccati Solvers for Enhanced Buck Converter Stability	Muzammil Ahmed*; Shyamantak Raj Barman
58	A Novel DC-DC-AC Converter Based on A Dual Active Bridge Integrated Switched Capacitor Voltage Doubler Interfacing Low Voltage Battery	Shyam Kumawat *; Faraz Ahmad ; Arpan Hota ; Santanu Kapat
64	Comparative Study on Power Converter Topologies for Multilevel Converter-Based Sonar Power Amplifiers	Aswini Narayanan *; V N Panchalai

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 2-Power Electronics for Renewable Energy Systems	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. M Sanjay, NIT Calicut	Track Chair 2: Dr. Chandan Kumar, IIT Gauhati
Student In-charge: Lakshmi A	Contact Number: 7306907993
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
57	Performance Comparison of Interleaved Bidirectional Flyback and Buck-Boost Converters in High-Power Renewable Energy Systems	Ninitha Ashwini*; Ila Rai
60	Design of Hybrid Nonlinear Controller for Dual Active Bridge DC-DC Converter used for Hydrogen Electrolyzer Load	Tejaswi Timsani ; Satish Kumar ; Dharmpreet Kundlas ; Animesh Sahoo*
80	Hybrid Mode of Operation for a Grid-Integrated Dual Voltage Source Inverter	Nimitha Muraleedharan *; Mahesh K. Mishra
83	Solar PV Based Air Cooler with MPPT and Speed Control	Jeet Dutta *; Hari Nath Pathak; Bastab Borah; Himanshu Rabha; Ranjay Das; Prakash Kumar Nayak
84	Real-Time Controller Implementation Using dSPACE RTI1202 and MATLAB/Simulink: Architecture, Integration, and Applications	Ashok Kumar *; Praveen Tripathy; Sreenath J.G.; Ravindranath Adda
129	A Generalized Look-Up Table Approach for the Fast Simulation of a Photovoltaic Array under Partial Shading and Dynamically Varying Environmental Conditions	Sadhana Anantha*; Aditya Anantha; Vaskar Sarkar

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 3- Power Flow Control and Power Quality	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Sandeep J, NIT Calicut	Track Chair 2: Dr. Srinivas Bhaskar Karanki, IIT Bhubaneswar
Student In-charge: Divya R. Nambiar	Contact Number: 8289808846
Venue: Hall C, NLHC	

Paper ID	Paper Title	Authors
21	Real Time Analysis of DVR under the condition of Voltage Disturbances	Rakeshwari Agrawal*; Deepak Agrawal; Sushma Gupta ; Vishal Rathore
101	Ten and Nine-Switch VSI-Based UPQC with ALMS Control for Voltage and Current Compensation	Rishikesh Sreepathi *; Mrutyunjaya Mangaraj
128	A Novel Approach for DC Balancing in Three-Level Neutral Point Clamped Inverter Based STATCOM	Ajindu S *; Manju A S ; Aby Joseph
188	Design and Techno-Economic Analysis of Customized Micro Grid System for a Rural Area in Andhra Pradesh	Bhargavi.G; Shravani Kanaka Kumari.P; Mohana Rao.K; V. L. N. Sastry
162	Hybrid Differential and Adaptive Overcurrent Relay Strategy for Enhanced Fault Protection in Grid-Connected and Islanded Microgrids	Mrunali Kite*; Ganesh Wakte ; Vaishali Malekar ; Ritesh Banpurkar ; Pritesh Mhaiskar ; Praful Ghadge
209	MPC based Six-Switch MFC using Novel Bobcat Optimized Cascaded Control in a Grid-Interactive Micro Grid Operation	Imran MD*; Jyoti Prakash Mishra; Ravi Kumar Majji; Ashish A Dongre
218	Theoretical Estimation of Positive-Sequence Reactive Current Limits during Asymmetrical Grid Faults for Cascaded Delta-connected STATCOM	Aarthi A; Saranya S R; Debdeep Samajdar*; Subhrasankha Ghosh; Shashidhar Mathapati

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 4 - Electrical Machines, Drives and Control	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Shreelakshmi M P, NIT Calicut	Track Chair 2: Dr. Praveen Kumar N, Amrita Vishwa Vidyapeetham
Student In-charge: Soumya P. S.	Contact Number: 8078513954
Venue: Hall D, NLHC	

Paper ID	Paper Title	Authors
29	Improved Control Accuracy Through Offset Compensation for Induction Motor Drives Over Extended Speed Range	Rinki Chowdhury *; Koperundevi G ; Bitan Koley
36	Performance Analysis of Permanent Magnet Synchronous Motor Using Combined FOC-MTPA and Conventional FOC: A Comparative Study	Kumaravel S *; Amitesh Kumar
66	Automatic Dusk Flipper Machine (ADFM): A Mechatronic Solution for Enhancing Poultry Farm Health and Efficiency	Nibha Shamuktha T *; Gobinath V K ; Raja G ; Ritharshanaa G T ; Narmatha V; Varshana G.
76	A Hybrid Regenerative Braking strategy in BLDC Motor Driven Electrical Vehicles	Pandule Vishal Prakash; Abhaya Kumar Sahoo *; V. Sankaranarayanan
113	Design & Analysis of High-Speed Induction Motor	Shruti Pagare, Tabin Qadri, Prathamesh Yadav, Sahil Trimbakk, and Ruchi Harchandani
213	Field Oriented Control of Three Phase Induction Motor Using Hybrid Pulse Width Modulation	Joseph Peter*; Nmisha K

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 5 - Energy Storage Systems	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Ashiq Muhammed P E, NIT Calicut	Track Chair 2: Mukul Chandorkar, IITB
Student In-charge: Vinu Varshath	Contact Number: 9952458909
Venue: Hall E, NLHC	

Paper ID	Paper Title	Authors
61	Performance Benchmarking of DC-DC Converter Controllers for Hydrogen Electrolyzer Load	Tejaswi Timsani; Animesh Sahoo *; Pratyasa Bhui
77	A new approach to joint SoC and SoH estimation for Li-ion batteries with experimental validation	Avanesh Kumar, Supriyo Samanta, Rahul Radhakrishnan, and Hiren Kumar G. Patel
82	Ant Colony Optimization-Based Identification of Optimal Configuration for Loss Minimization in DC Microgrids with RESs and Energy Storage	Dinto Mathew *; Prajof Prabhakaran
92	Adaptive Prediction-Based State Estimation in Edge-Enabled Active Distribution Networks	Muneeb Sheikh *; Himani Mattoo ; Sreenath J. G ; Praveen Tripathy
145	GaN FET Based Dual Active Bridge Converter for Supercapacitor Integration in Electric Vehicle	Sudip Sarkar *; Samir Hazra
153	Voltage Balancing of Ultracapacitor Bank using Fuzzy Logic Controller	Kaviya K *; Shreelakshmi M P

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 01

Track 6 - Electric Mobility and Transportation	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. S Kanagalakshmi, NIT Calicut	Track Chair 2: Dr. M Deepak, KIT Coimbatore
Student In-charge: Srimahesheswaran	Contact Number: 9786234141
Venue: Hall F, NLHC	

Paper ID	Paper Title	Authors
91	Efficiency Evaluation of a Series-Series Compensated 11-kW IWPT System for EV Charging Application	Subhajit Maity ; Sumit Pramanick; Sreyam Sinha
96	Boost-integrated Dual-bridge LLC Resonant Converter with Fault-tolerant Capability for Battery Charging Applications	Krishna Velmajala *; Srinivasa Rao Sandepudi
104	Intelligent EV Charging Algorithm	Anirudha Marothiya *; Sarthak Nagose ; Purva Dahake; Saurabh Chandankhede ; Vedant Mahajan ; Kirti Madan ; Harshit Dalvi
117	A Decentralized, Offline EV Charging and Battery Swapping Platform with Real Time Station Tracking	Neha Deshmukh *; Vaishali Khairnar
123	Three Phase Bidirectional Onboard Charger for the Unbalanced grid condition	Bhukya Naveen *; Lokesh Sharma ; Anup Shukla

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 02

Track 07 - Power Converter Topologies, Components and Devices	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Harish Sudhakaran Nair NIT Calicut	Track Chair 2: Dr. Prajof Prabhakaran, NIT Surathkal
Student In-charge: Nimmi Paulson	Contact Number: 9995587552
Venue: Hall F, NLHC	

Paper ID	Paper Title	Authors
69	Variable Transformer Turns Dual Active Bridge Converter with Reduced Current Stress for Battery Charging Applications	Harikesh Kurup; Shelas Sathyam *
72	Single Phase Buck Power Factor Correction Rectifier for Electric Bike Charging Application	Hariharan P *; Hemarani P
73	Modelling and Simulation of a NARMA-L2 Controlled Buck Regulator System	Janesh Mohanan *; Moleykutty George; Jagadeesh Pasupuleti
75	High Efficiency Bi-directional LLC Resonant DC-DC Converter for Electric Vehicle Charging Applications	Santhiya M *; Chandira Sekaran Easwaran; Vikaasini R; Subhasri Lavanya I; Anjali M
78	Multi-Class Fault Detection and PWM Prediction in Inverter-Driven Induction Motors for Electric Vehicles Using Machine Learning	Hemant Verma *; Swapnajit Pattnaik
81	Design and Simulation of a Resonant Inductive Wireless Charging System for Electric Vehicles	Kalicherla Reddeppa*; Hema Rani P

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 02

Track 08 - Power Electronics for Renewable Energy Systems	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Shihabudheen K V, NIT Calicut	Track Chair 2: Dr. Chandrasekar V, CDAC Thiruvananthapuram
Student In-charge: Allen Solly	Contact Number: 9142444551
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
133	Efficacy of a Conventional Kalman Filter for Side-Channel- Noise (SNI) Mitigation in an SST-based Power System	Luiz Fernando M. Arruda*; Debotriya Sur; Uzair Aisf; Harsha Modugu; Sudip Mazumder; Mohammad Shadmand
148	Energy-Efficient Wireless Charging Architecture Using LLC Resonant Converter and Synchronous Rectification for Portable Devices	K Saranya, M. Deepak, Vasanth P, Gowtham C, and Harish Ragavendar P
150	Enhance PV integrated BLDC Motor using field oriented Control For EV Application	S. Rathinamala; Deepak M.*; Akshaya A.; Karishma A.; Kathiravan S.; R Mythili
151	Modulation and Control Technique for a Reconfigurable Capacitor-based DAB Converter in EV Applications	Thresia M*; Josephine R L
156	Optimal Utilization of Isolated DC Microgrids and Reliability Enhancement Using a Partially Rated Multiport Coupling Converter	Pragya Nand Singh*; Ravi Ranjan; Srinivas Bhaskar Karanki
170	Multiport PSFB Converter based EV Charging from Solar PV and BESS System	Rohit Gupta; Rahul Bharti; Rajesh Gupta*

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 02

Track 09 - Electrical Machines, Drives and Control	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Angshudeep Majumdar, NIT Calicut	Track Chair 2: Dr. Panchalai V. N., DRDO Cochin
Student In-charge: Nandakrishnan	Contact Number: 7012628479
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
114	A Low Cost Distributed Computing Cluster for Power Electronics	Yogeshwar Nath*; Henil Shah; Mukul Chandorkar
118	Sensorless Control of IPMSM using PLL based on rotor flux	Bingi Venkatesh*; Piyush Kant
173	Space Vector PWM technique involving all odd pulse number for improved high power IM operation	Dinesh PG*; Divyanshu Mathur; Sourav Ghimirey; Ashish Panda; Avanish Tripathi
177	Leveraging Artificial Intelligence in Model Predictive Control for Improved Electrical Drive Performance and Vehicle Control: A Review	Sanila C M*; Jisha Kuruvilla
189	Application and Comparative Study of the $\alpha\beta$ Filter in Model-Based Speed Estimation and Sensorless Control of PMSMs	Harikrishnan S*; Arun Rahul S
192	An Advanced Deep Learning Approach for Intelligent Casting Defect Detection	Pranay Kumar; Sujit kumar*; Gaurav Kumar

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 02

Track 10 - Energy Storage Systems	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr Ashiq Muhammed P E, NIT Calicut	Track Chair 2: Dr. Mattia Ricco, University of Bologna, Italy
Student In-charge: Parvathy Saji	Contact Number: 9497560432
Venue: Hall C, NLHC	

Paper ID	Paper Title	Authors
157	Electromagnetic Compatibility Analysis of Metamaterials	Adithya Krishnan P*; Sunitha K
158	Emi Filtering Using Frequency Selective Surfaces	Praphul Sankar P *; Sunitha K
172	Design and Development of Gyrotropic Material to Effectively Shield High Frequency Signals	Rayadurgam Pavan Sankarsh, and Sunitha K
255	Unintended Discharge Behaviour of a Degraded 1200 mAh Li-ion 18650 Battery Pack: A Case Study	Ilanga Karuppasamy*; Tarun Subramanian; Vishnuvarthan L; Murugaraj Govindaraj
272	Automatic Vehicle Accident Alert System	Santosh Mani*; Bharath M; Bhuvan R; Dheeraj B S; Gagan M
274	C-HIL Validation of Reduced Device Stress Multi-level PFC Rectifier for EV Charging Application Using OPAL-RT	Manish Kumar Barwar*; Akhilesh Kumar Tiwari; Sai Teja Cherla; Lalit Kumar Sahu; Sameer Singh; Prasanta Kumar Jena
286	Implementation of System Identification for an EV powered with renewable sources	Vykunta Rao Gondu*; Sudha Radhika

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 02

Track 11 - Electric Mobility and Transportation	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Vivek Mohan, NIT Calicut	Track Chair 2: Dr. Riccardo Mandrioli, University of Bologna, Italy
Student In-charge: Suprina S.	Contact Number: 7907568165
Venue: Hall D, NLHC	

Paper ID	Paper Title	Authors
126	Smart Energy Management Using Vehicle-to-Home (V2H) Technology for Indian Homes	Nayana L*; Shobana Devi P; Lakshmy sp; Amal S; Chandrasekar V
131	Performance Comparison of PMSM Operated using Solar PV and Battery Energy Storage	Naman Verma; Prateek Singh Kushwaha; Abhinay Singh; Rajesh Gupta*
135	Analytical Estimation of Fringing Electric Field and Resulting Capacitance in CPT Systems	Subhabrata Basak*; Utsab Kundu; Loganathan Umanand
160	Recent Advances in Battery Management System Topologies for Electric Vehicles	Garima Singh; Deepak Chaturvedi; Deepak Verma*; P S Rathore
195	A Fully Turn-on and Turn-off Zero-Voltage Switched CSI-fed PS/S-based IPT System Without Using any Auxiliary Switches or Circuits	Akhouri Prateek Sinha*; Jalaj Kumar; Suvendu Samanta
207	Performance Analysis of Modular Multilevel DC-DC Converter: Impact of Arm Inductors	Atheeshlal Pallath*; Hitesh Malviya; Chandan Kumar

## Paper Presentation Schedule

Date/Day: 15 December 2025/ Monday

### Session 02

#### Track 12 - Power Electronics and Control Techniques for Renewable Energy Applications

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. S Kanagalakshmi, NIT Calicut	Track Chair 2: Dr. Kaushik Basu IISc Bengaluru
Student In-charge: Shabarish Shetty G	Contact Number: 9361451152
Venue: Hall E, NLHC	

Paper ID	Paper Title	Authors
193	Grid-Following and Grid-Forming Inverters: Design, control and implementation with Multilevel Inverters	Monika Dewangan*; Haripriya Vemuganti; D Sreenivasa Rao
203	Compact 15W Automotive USB PD Charger Featuring Synchronous Buck with Cost Enhancement	Ravikiran Hiremath*; Himanshu Shekhar; Rahul Sarode
248	Snow Ablation Inspired Metaheuristic Algorithm for MPPT in Solar PV System	Madhu Raj*; Sourav Mallick
257	Design and Simulation of Demand Response Strategies with Real-Time FPGA Load Inputs for Smart Grid Applications	Chandra Sekhar S*; Virendra K. Sharma
283	Novel Feedforward and Feedback Control Strategy for Active DC-Bus Ripple Decoupling in Single-Phase PWM Rectifiers Using Bidirectional Buck-Boost Converter	Kavitha B *; Pinkymol K. P; Patnana Swarna Teja
291	A New Method to Establish Smart Transformer-based Meshed Hybrid ac and dc Distribution Grids	Chandan Kumar; Sahil Gaurav *; Somnath Meikap; Hitesh Malviya

## Paper Presentation Schedule

**Date/Day:** 15 December 2025/Monday

### Session 03

<b>Track 13 - Power Converter Topologies, Components and Devices</b>	
<b>Time</b>	03:45 PM – 05:15 PM
Track Chair 1: Dr. M Raghuram NIT Calicut	Track Chair 2: Dr. Arun Karuppaswamy Balasubramanian, IIT Madras
Student In-charge: Sri Krishna R.	Contact Number: 8778911616
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
86	Design and Development of High Gain Cascaded DC DC Converter	Prince Kumar*
88	Design, Development, and Experimental Testing of High-Frequency Power Supply for Plasma Applications	Aditya Naugraiy*a; Aritra Chakraborty; Kumar Saurabh; Meddi Tharun; Amal S; Paul Christian; Abhishek Singh; Ashok D. Mankani
93	Coupled Electrical–Thermal Simulation for Power Stage Validation in Motor Drive Systems	Sandeep Roy; Siddhartha Vishwanatha*; Albert Dunford; Marek Jableka; Abinash Baruah; Sreeram Mohan
97	A Novel Modulation Scheme for Three-Phase Voltage Source Inverter	Aatman Patel*; Kodeeswaran R; Sateesh Kumar Kuncham
98	Boost-integrated Single-stage AC-AC Configuration for Induction Cooking Applications	Thoutreddy Deepthi Reddy*; S Porpandiselvi
100	Compact Physics-Informed Modeling of $\beta$ -Ga <sub>2</sub> O <sub>3</sub> Drain-Extended Junctionless FETs and Its Integration in Buck Converter Topology	Manukrishna V R*; Nikhil K S
90	A Fully Integrated Single Phase Integrated Charger with Active Power Decoupling with Synchronous Reluctance Motor	Roja Roy *; Deeksha Bhule; R. Sudharshan Kaarthik

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 03

#### Track 14 - Power Electronics for Renewable Energy Systems

Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Sandeep J, NIT Calicut	Track Chair 2: Dr. Arun Rahul S, IIT Palakkad
Student In-charge: Maddula Sri Ram Gupta	Contact Number: 7287878705
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
182	AI-Driven Optimization of EV Battery Charging	R Thamizharasan, Ramathilagam K, R Mythili, Sukitha D, and Sivakarthikeyan G
186	Analysis and Design of Bidirectional Active Front End Converter for High-Power EV Charging Applications	Thangamuhu N*; Lakshminarasamma N; Jitendra Jain
200	Design of Buck Converter Integrated Circuit in 180nm SCL Technology with CMOS Logic	Surya Prakash JS*; Saravana Ilango Ganesan
205	A Wavelet Transform Approach for Short-Circuit Fault Diagnosis in Smart Transformer-Based Meshed Hybrid Microgrids	Lakshmi Kant Rao*; Sahil Gaurav; Chandan Kumar
220	Multi Source Series Connected Solar Water Pumping System With Optimized Battery Storage	Ramashis Swain*; Tukaram Alias Saurabh Dhavjekar; Siva Kumar Keerthipati
223	Impact of Signal Injection Axis choice on Islanding Detection in PLL-Synchronized Inverters	Saradha Devi R*; Sugoto Maulik; Vinod John

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 03

Track 15 - Electrical Machines, Drives and Control	
Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Shreelakshmi M P, NIT Calicut	Track Chair 2: Dr. Jayan P. P., CDAC Thiruvananthapuram
Student In-charge: Jyothir Adithya S.	Contact Number: 8330859855
Venue: Hall C, NLHC	

Paper ID	Paper Title	Authors
197	FEM-based Broken Rotor Bar Fault Detection in Inverter-fed Induction Motor using Wavelets and SVM	Praveen Kumar N*; Rajiv S
201	High PWM Resolution Analog Dimming LED Driver for Automated Microscopy Applications	Aravind Jayan; Vijay Muralidharan*
202	Design and Analysis of a Linear Induction Motor based Syringe Pump for High-Precision Biomedical Applications	Raju T*; Sharmili Das
204	An Improved Design Methodology for SPMSM in Electric Vehicle Traction Application	Anchal Saxena*; Baylon G. Fernandes
208	Frequency-Dependent Magnetization Behaviour of Solid-Steel Core Materials for Axial Electromagnetic Bearings	Aditya Raj*; Shahjahan Ahmad Syed; Gopalaratnam Narayanan
215	Fictitious Star Configuration-Based Motor Parameter Estimation and Real-Time Rotor-Flux Oriented Control of Delta-Connected Induction Motor Using TMS320F28379D DSP and MATLAB	Urbesh Sarkar*; Debranjan Mukherjee; Prasun Mishra

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 03

Track 16 -Electric Mobility and Transportation	
Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Vivek Mohan, NIT Calicut	Track Chair 2: Dr. Natesh Mayavel, InPhase Power Technologies, Bengaluru
Student In-charge: Aravind R. K.	Contact Number: 8590662262
Venue: Hall D, NLHC	

Paper ID	Paper Title	Authors
216	Steady-State and Small-Signal Analysis of a T-Type DAB Converter Using a Generalized Averaging Approach	Ashish Gupta*; Deepak Singh; Piyush Kant; Sunil Kumar Dube
217	Normalized Quality Factor Based Comparison and Misalignment Sensitivity Analysis of WPT Topologies	Farhat Manzoor*; Suvendu Samanta
219	IoT-Assisted Hybrid Multiport Converter for Battery Swapping Charging Station with V2G Capability	Akshay Chabukswar*; Sirisha Devi Ponnaganti; Sree Hari J B; Supriya Chekka; Yogananda Reddy Korivi; Priyanka Chabukswar; Praveen Vankadari; Rupesh Wandhare
224	Comparative Study of Various Coil Geometries for Inductive Power Transfer in EV Charging Applications	P Srinivasa Rao Nayak; Parameshwari M*; Arjun Bharathi Kumar
235	Kalman Filter based State-of-Charge Estimation of Lithium-ion Batteries using OCV-SoC Linearization	Sai Vinay Kishore N; Seshadri Sravan Kumar Vanjari*
237	Adaptive SPMSM Stator Winding Connection for Single Phase Integrated Onboard EV Chargers	Deepak Sai Duvvapu*; Venugopal Reddy Barry

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 03

#### Track 17 - Integration of Edge AI and IoT for Decentralized Energy Systems

Time	03:45 PM – 05:15 PM	
Track Chair 1: Dr. V Karthikeyan, NIT Calicut	Track Chair 2: Ravikiran Hiremath, Varroc, Pune	
Student In-charge: Ashwin Bhaskar	Contact Number: 8547071001	
Venue: Hall E, NLHC		

Paper ID	Paper Title	Authors
285	GA-tuned Reinforcement Learning Nonlinear Model Predictive Control for Conical Tank Systems	Boobalan J*; Kiruba R; Radhika V
306	Investigation on Road Safety and Smart Braking System Using Ultrasonic Sensor	Govinthusamy N R*; Devashree M; Vigneshwaran N; Aathisri V; Vasanth T
324	A Systematic Review of Computational Intelligence Approaches for Improving Energy Optimization of Cluster and Routing Protocols in WSNs	Sankara Rao Allada*; Manoj Kumar Nigam
333	Enhancing EV Load Forecasting in Data-Scarce Environments Through Cluster-Informed Transfer Learning	Srinand S; Rahul Satheesh*; Mohan Lal Kolhe
343	Adaptive Edge-AI and Digital Twin Coordination for Resilient Energy Management in Decentralized Microgrids	Vanitha C.N; Anusuya P*
357	Coordinated Load-Generation Optimization for Renewable Integrated Microgrid	Gayathri K*; Pallavi Bharadwaj

## Paper Presentation Schedule

Date/Day: 15 December 2025/Monday

### Session 03

#### Track 18 - Power Electronics and Control Techniques for Renewable Energy Applications

Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Harish Sudhakaran Nair, NIT Calicut	Track Chair 2: Dr. Aarthi A, Delta Electronics India Pvt. Ltd., Bengaluru
Student In-charge: Lakshmi A	Contact Number: 7306907993
Venue: Hall F, NLHC	

Paper ID	Paper Title	Authors
296	Adaptive Hierarchical Deep Reinforcement Learning with Meta Learning for Health-Aware Multi-Service Battery Energy Storage Systems in Dynamic Electricity Markets	Kamaleshwar Viyanwar*; Prachi Bhatarkar; Pranali Dandekar; Isha Chaudhari
340	Dynamic Wireless EV Charging System Using Solar Energy	Murali A, Vijaya Bhaskar Reddy K, Srinivasa Rao Balasani, V. Anirudh, S.Nikitha and Sai prakash Challa
341	Study of Peak Hopping Algorithm for Maximum Power Point Tracking Under Partial Shading Conditions for a Photovoltaic Array	Shashwat Dhurandhar*, S. Kayalvizhi
346	Enhanced Starfish Optimization Algorithm Based MPPT Technique Under Rapidly Fluctuating Shading Conditions in PV System	Rajat Pawan Singh; Kaibalya Prasad Panda*; Deepak Vyas
347	Performance Enhancement of Transformer based Stacked Cascade Multilevel Inverter Using Modified SPWM Control	Anirban Chatterjee*; Lalit Mohan Saini, Shivam
348	Performance Evolution of Enhanced Quadratic-Gain Converter with Voltage Multiplier and Reduced Devices Voltage Stress for Solar PV Integration	Seshagiri Vemparala*; Sagar Bhaskar Mahajan; Mahmoud Elmorshey; Dhafer Almakhles; Kumaravel S; Sivaprasad Athikkal

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 04

Track 19 -Power Converter Topologies, Components and Devices	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Jagadanand G, NIT Calicut	Track Chair 2: Dr. M.M. Rajan Singaravel, NIT Puduchery
Student In-charge: Suprina S.	Contact Number: 7907568165
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
103	A new Control scheme for adjustable speed drives using 3-phase 2-level cascaded boost inverter	S S Phaniram Musti; Ravikumar Bhimasingu*
111	A Novel Single-Stage Single-Phase Triple Active Bridge Topology with Parallel High-Frequency Compensation for Second-Harmonic Power	Naresh Rana*; Kaushik Basu
124	Low Side Active Clamp Forward Converter with Synchronous Rectification	Jobin Jose*; Jagadanand G
137	Adaptive Switching Mode Interleaved Totem-Pole PFC Converter for EV Charger Applications	Sushant Gupta; Vignesh Kumar V*; Karthikeyan A
143	Active Gate Driver Based on Gate Voltage Sensing for SiC MOSFET Module	Sanket Kumar*; Samir Hazra
152	Design and Simulation of Voltage Oriented Controller based Vienna Rectifier	Surayya N*; Manju A S; Aby Joseph

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 04

#### Track 20 - Power Electronics for Renewable Energy Systems

Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Greeshma Mohan U, NIT Calicut	Track Chair 2: Dr. Siddavatam Ravi Prakash Reddy, IIT Bombay
Student In-charge: Soumya P. S.	Contact Number: 8078513954
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
227	Design, Fabrication, Testing and Analysis of a Current Source Inverter-fed Electromagnetic Levitation Prototype	Bhairab Mondal*; Gourab Banerjee; Mainak Sengupta
253	Analysis of High Gain Single Stage Modified Z-Source Inverter for Renewable Applications	Mageshwari Sannasy*; Akash Chandrawanshi; Sathyajith V P
258	PWM based Magnetic Torquer control using GaN-FET solution	Dhruti Ranjan Gaan *; Manoj Kumar; Dinakaran E.; Lekshmi V.; Sudhakar S.
266	Comparison of Vector Control Schemes of Synchronous Reluctance Motor with Single Current Sensor	Mansi Katoch*; Himanshu Misra
406	DQ Controlled Grid Connected Converter for Improved Power Factor and Regulated DC Output	Rudresh P Kadu*; Madhuri A Chaudhari; Sahil V Bansod

## Paper Presentation Schedule

**Date/Day:** 16 December 2025/Tuesday

### Session 04

<b>Track 21 - Electrical Machines, Drives and Control</b>	
<b>Time</b>	9.00 AM – 10:30 AM
Track Chair 1: Dr. Angshudeep Majumdar, NIT Calicut	Track Chair 2: Dr. Lenin N. C., VIT Chennai
Student In-charge: Allen Issac	Contact Number: 9544420569
Venue: Hall C, NLHC	

Paper ID	Paper Title	Authors
222	An Investigation of PMSM Rotor Structure for Traction Application	Manju Bhashini R, Rahavan K
231	Investigation of Ferrite Magnet Different Rotor Flux Barrier in Synchronous Reluctance Motor for Traction Applications	Thapasya P; Monika P; Gowtham P; Deepak M*
239	Impact of Asynchronous and Synchronous Sampling of Rotor Position on the Performance of Single-Pulse-Operated High-Speed Switched Reluctance Machine	Samrat Das*; Gopalaratnam Narayanan
240	Experimental Study of the Natural Frequencies of an Assembled High-Speed Switched Reluctance Machine	Shreyas Srivatsa; Syed Shahjahan Ahmad; Samrat Das*; Sakshi Narchail; Ashutosh Patel; Pramod Kumar; Gopalaratnam Narayanan
247	Permeance Network Modeling of IPMSM Considering Outer-Race Bearing Defect	Saptarshi Pal Chaudhuri*; Aurobinda Routray; Siddhartha Mukhopadhyay
256	A Hybrid Model Predictive Control for PMSM Drives with Common-Mode Voltage and Switching Loss Reduction	Muktapuram Venkata Rohith Reddy*; Anugrah Gupta; Ankit Dalal; Mosadiqque Nawaz Hussain

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 04

#### Track 22 - Power Electronics and Control Techniques for Renewable Energy Applications

Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Soumya Ranjan Meher, NIT Calicut	Track Chair 2: Dr. G. Narayanan, IISc Bengaluru
Student In-charge: Srimahesheswaran	Contact Number: 9786234141
Venue: Hall D, NLHC	

Paper ID	Paper Title	Authors
353	An Ensemble Learning Framework for the Early Prediction of Severe SSO in DFIG-based Wind Farms	Jawaharlal Bhukya*; Sameer P Meshram; Soumyabrata Das
355	Stability Analysis of Grid-Following Inverter in RES-Dominant Power Grid	Feridinand T, B. Chitti Babu, Vijayakumar Krishnasamy
359	Versatile LLC Converter Based Multi-Input Multi-Output Bidirectional Onboard Charger for EV Battery and APM	Tarun Panwar*; Ashutosh Rai; Venkata Ratnam Vakacharla
363	Compact 60W Automotive USB Power Delivery Charger Featuring 4-Switch Synchronous Buck-Boost with Cost Enhancement	Ravikiran Hiremath*, Mohammad Ghaus; Himanshu Shekhar; Rahul Sarode
381	Comparative Analysis of Control Techniques for Boost Converter Performance	Moleykutty George, Jagadeesh Pasupuleti, and Janesh N M
385	Enhanced Fault Tolerance and Self-healing DC DC Converter for Uninterrupted Conversion in PV System	M. Mary Linda, Deepak Joshi S, Gunarajan N, and Arjun S; Deepak Mohanraj

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 04

#### Track 23 - Intelligent Algorithms for Power Electronics in Storage Management and Grid Integration

Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Nikhil Sasidharan, NIT Calicut	Track Chair 2: Dr. Joseph Peter, GEC Palakkad
Student In-charge: Divya R. Nambiar	Contact Number: 8289808846
Venue: Hall E, NLHC	

Paper ID	Paper Title	Authors
327	Prescribed Performance Control Based Advanced Grid Connected PV System	Udit Saini; Ketan Singh; Prashant Surana *; Bheemaiah Chikondra
331	Modeling of Energy Storage System Using Limit Cycle Analysis	Saurabh Pandey *; Bheemaiah Chikondra ; Vijay Kumar Singh
334	PEO-AIR:An AI-Driven Predictive and Adaptive Framework for Intelligent Wireless charging in Smart Grid Wireless Sensor Networks	Vanitha C.N ; Anusuya P *
358	Predicting Mechanically Induced Thermal Runaway Severity in Multi-Chemistry Lithium-Ion Cells Using LightGBM for Battery Safety Applications	Yash Nileshkumar Desai; Samsaptak Ghosh *; Pallavi Bharadwaj
360	Fault Diagnosis of Three-Phase T-Type Multilevel Inverter Based on Variance Analysis	Jeevan N D ; Niraj Dewangan *; Karthik B M ; Krishna Kumar Gupta; Anil Kumar Sharma; Pallavee Bhatnagar

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 04

Track 24 - Transforming Power: Intelligent Control of WBG Converters	
Time	9.00 AM – 10:30 AM
Track Chair 1: Dr. Nasirul Haque, NIT Calicut	Track Chair 2: Dr. V. Vignesh Kumar, NIT Trichy
Student In-charge: Allen Solly	Contact Number: 9142444551
Venue: Hall F, NLHC	

Paper ID	Paper Title	Authors
300	Temperature-adaptive wide bandgap-based domestic induction heater for cooking applications	Tumpa Das *; Molay Roy
302	WBG-based Reduced Switch Self-balanced Symmetrical Capacitors 7-level MLI for Grid Applications	Rajanikanta Sahoo *; Anurag Tiwari; Molay Roy
307	A Data-Driven Pathway to Smarter PV Tilt Angle Selection to get Maximum Power in the Himalayan Regions	Suvendu Nandi *; Vivek Kumar; Molay Roy; Soumya R. Mohanty; A. K. Sangaiah ; Chung Chuan-Yu
311	Design and simulation of an Induction heating coil to melt Aluminium scrap	Bhaskaran Barman *
318	A novel reluctance-barrier design of synchronous reluctance motors for optimizing motor size	Ankur Tiwari; Monojit Seal *; V. S. S. Pavan Kumar Hari; Manoj Modi
335	Grid-Connected Active Front End Converter with Automatic Phase Sequence Detection and Corrective Control	Sourabh Paitandi*; Mainak Sengupta

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

Track 25 - Power Converter Topologies, Components and Devices	
Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Rijil Ramchand, NIT Calicut	Track Chair 2: Dr. V Pradeep, GE Bengaluru
Student In-charge: Nandakrishnan	Contact Number: 7012628479
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
164	Design, Modelling and Analysis of 200 kW Solid State Dummy Load for Performance Validation of Multi-Stage High Voltage DC Power Supply System for the Nuclear Fusion Application	Ashok Mankani*; Aritra Chakraborty; Saurabh Kumar; Aditya Naugraiya; Meddi Tharun; Amal S; Suryakant Gupta; Priyesh Chauhan
169	Estimation of Parasitic Parameters in Magnetic Components Using GA	Asiq Muhammed; Rakesh Warier; Rijil Ramchand; Ambadi Vinayak*
229	Conducted EMI Reduction in High-Gain SiC based DC-DC Converters using Chaos-Controlled Switching	Nandhini M*; Sudhakar Natarajan
236	Analysis and Design of a Non-Isolated High Gain Bidirectional DC-DC Converter with Enhanced Voltage Gain	Dharavath Anusha*; Subbash Y; Ganesh Y; Srinivasan Pradabane
245	Efficient Step-Up Voltage Conversion Using Switched Inductor High-Gain (SIHG) DC-DC Converter Topology	Vailla Rohith Chandra*; Kuraganti Manikanta; Ramulu Chinthamalla
263	Starting Transient Analysis and Pre-Charge Resistor Design for Diode-Based or Active Front-End Converters	Anfas Rahman N*; V. S. S. Pavan Kumar Hari; G Narayanan

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

#### Track 26 - Power Electronics and Control Techniques for Renewable Energy Applications

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Nikhil Sasidharan, NIT Calicut	Track Chair 2: Dr. Sija Gopinathan MA College of Engineering, Kothamangalam
Student In-charge: Parvathy Saji	Contact Number: 9497560432
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
396	Multimode Operation of Grid-tied Voltage Source Converter with Synchronous Harmonic Decomposition and Regulation	Yogananda Reddy Korivi; Praveen Vankadari*; Rupesh Wandhare
397	High Gain Converter Based on Dual-Switch Single-Inductor and Switched Capacitor Network with Reduced MoSFET Stress	Srimaheswaran V*; Rajan Singaravel M.M
398	Enhanced Design and Control of Single Phase PFC-fed Series-Series Compensated Wireless Electric Vehicle Charger	Supriya Chekka; Praveen Vankadari; Avinash Naramu; Bharath Bura; Akshay Chabukswar *; Rupesh Wandhare
402	Explainable Artificial Intelligence for Smart Power Converters Interpretability and Trust in ML-Based Control Systems	Vijayanand Selvaraj *
403	Virtual Synchronous Machine-Controlled Inverter for Enhanced Stability in Microgrids: Design and Rapid Prototyping	Divya R. Nambiar; Gokul G.; Ameen Akthar; Kumaravel S *
405	Dual Source Input Non-Isolated DC-DC Converter for Renewable Energy in EV Applications	D. Revathi, R. Mythili, K. Dhineshkumar, R. Gayathri, D. Poovendhan and S. Thivathana Gunarajan N *; Deepak Mohanraj

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

#### Track 27 - AI-Driven Power Electronics and Intelligent Energy Systems for Sustainable Mobility and Renewable Integration

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Shihabudheen K V, NIT Calicut	Track Chair 2: Prof. S. Srinivasa Rao, NIT Warangal
Student In-charge: Nimmi Paulson	Contact Number: 9995587552
Venue: Hall C, NLHC	

Paper ID	Paper Title	Authors
369	Affordable Low-Wind Rooftop Wind Turbine Energy System Design for Rural Electrification	Jawaharlal Bhukya*; Vivek Chandra Kodamasimham; Yaswanth Koyaneni; Yaswanth Reddy Alavala
374	Enhancement of power quality in a cascaded multilevel inverter utilizing an ANN controller for electric vehicle applications	Sakthivel k*; S. Albert Alexander
389	Future-Ready Charging for Light Electric Mobility: Techno-Economic Assessment of LEVDC Chargers for 2W and 3W	Yugal Kishor*; V. Hemant Kumar; Trilok Deshmukh
388	Waste Heat Recovery from Power Electronic Systems Using Thermo Electric Modules	Vivek R S*; Divyamol S; Jayan P P; Aby Joseph
365	Design and Energy Management of Solar PV-BESS Integrated Off-grid Electric Vehicle Charging station	Mahad Mohamud Awad, Ankur Bhattacharjee, and Kazi N Hasan
399	Design and Analysis of a Dual-Input Boost DC-DC Converter for Hybrid Renewable Energy Integration	Sivaprasad Athikkal, Jeanmary Jose, Nikhil K, Seshagiri Rao Vemparala and Kumaravel S. *

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

#### Track 28 - Integration of Edge AI and IoT for Decentralized Energy Systems

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr V Karthikeyan, NIT Calicut	Track Chair 2: Dr. Sivaprasad Athikkal, MITS Cochin
Student In-charge: Shabarish Shetty G	Contact Number: 9361451152
Venue: Hall D, NLHC	

Paper ID	Paper Title	Authors
386	Optimal Reconfiguration of Microgrids with Electric Vehicle Charging Stations	Venkatakirithiga Murali*; Jatin Thakur; Divya Bharathi Raj
400	AI-Based Energy Optimization and Control of Solar-Assisted Autonomous EVs for Decentralized Smart Waste Management	Ganesh Moorthy J*; Lakshmi K; Manikandan P; Praveen Kumar M; Janarthanan S; Karthic Sibi Raj A R
401	Early Damage Detection in Bridges Using Magnetostrictive Sensors under Traffic Loading Scenarios	Cherosree Dolui*; Debabrata Roy
342	Design and Development of Isolated MPC for Power Quality Enhancement in EV Charging Application	Mamta Kumari *; Aurobinda Panda; Anjan Kumar Ray; Avismi Dutta
352	Ultra-Extended Boost Active Switch Controlled Based Quasi Z-source Inverter	Avismi Dutta *; Sudhansu Sekhar Das; Mamta Kumari; Aurobinda Panda
384	An improved LCL filter design with passive damping for smartgrid and microgrid applications with lower losses	Sourabh Jain; Manoj Modi; Monojit Seal*

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

#### Track 29 – AI-Driven Power Electronics and Intelligent Energy Systems for Sustainable Mobility and Renewable Integration

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Greeshma Mohan U, NIT Calicut	Track Chair 2: Dr. Monojit Seal, CastNX Private Limited, Madhya Pradesh
Student In-charge: Sri Krishna R.	Contact Number: 8778911616
Venue: Hall E, NLHC	

Paper ID	Paper Title	Authors
244	Real –Time RNN-Based Energy Management for HEV using Battery Capacitor Hybrid with Cloud Feedback	Prathibha S Babu*; Rijo V Thomas; Ilango Karuppasamy
295	Intelligent Analytical Framework for the Design of Interior Permanent Magnet Synchronous Motors Toward Renewable and Mobility Integration	OM JEE Singh*; Praveen Kumar; Bikash Sah
304	Intelligent Data Acquisition System and Monitoring System for Real-Time Fault Detection in Electric Motors	Bhavana C*; Sujitha S; Charan Kora; Charan D S; Vinayaka H S
309	Sustainable Conversion Process of Eggshell Waste into Piezoelectric Nanocomposite for Windmill-Based Energy Harvesting Systems	Nishalini K R, M Mary Linda, Aadarsh Prada S, and Aravindh V ;Deepak M
328	Predicting Plane-of-Array (POA) Solar Irradiance Using Machine Learning: GTI and GHI Comparison	Kanaka Raju Kalla*; D.Ravi Kishore; D.Vijaya Kumar

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 05

#### Track 30 - Next-Generation Power Packaging and Thermal Management for WBG Devices & Cyber-Physical Security, Reliability and Resiliency in Smart Power Electronics and Power Systems

Time	12:15 PM – 01:30 PM
Track Chair 1: Dr. Nasirul Haque, NIT Calicut	Track Chair 2: Dr. Molay Roy, NIT Sikkim
Student In-charge: Jyothir Adithya S.	Contact Number: 8330859855
Venue: Hall F, NLHC	

Paper ID	Paper Title	Authors
322	Leveraging Gated Recurrent Unit for Enhanced Short-Term Load Forecasting: A Computationally Efficient Approach	Dharshan Kumaar S; Rahul Satheesh*; Sreenu Sreekumar
356	Transient Delay Characterization of Parity Logic for Delay-Sensitive Error Detection Applications	Sohamveer Patnaik*; Mahika Negi; Shreya Khade; Saankhya Podagatlapalli; Arjun Sunil Rao; Vijayalaxmi H Manjunatha
361	Grid Forming Inverters (GFM) for Active Front End (AFE) Variable Frequency Drives (VFDs)	Sudeep Guruprasad*
326	Modal Frequency Studies on Different Stator And Rotor Configuration	Lenin Natesan Chokkalingam, Krethik Krishna S. P, Lenin Babu and Rahul Roy
344	Optimized Design of Planar High-Frequency Magnetics for DPS Modulated Dual Active Bridge Converter	Tanzeela Mir *; Ashiq Muhammed; Pallavi Bharadwaj
392	A Comparative Study on the Performance Analysis of a Conventional Boost Converter and High-Gain Boost Converter with a Voltage Multiplier Cell	Kolap Gaurav Rangrao; Greeshma Mohan U*

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 06

#### Track 31 - Power Electronics and Control Techniques for Renewable Energy Applications

Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Hema Rani P, NIT Calicut	Track Chair 2: Dr. Aditya Naugraiyia, Institute for Plasma Research, Gandhinagar, Gujarat
Student In-charge: Aravind R. K.	Contact Number: 8590662262
Venue: Hall A, NLHC	

Paper ID	Paper Title	Authors
196	A Methodology for FEMM–Simulink Co-Simulation for Accurate Simulation of High Frequency Magnetics	Kamran Asad *; Nachiketa Deshmukh ; Mayank Deo; Pramod Chaudhary
265	A Digital Twin-Based Approach for Detection of Inter-Turn Short Circuit Faults in Induction Motors	Haraprasad Badajena , Ratnakar Nutenki , Bivash Charkraborty , Mamata Jenamani , Aurobinda Routray and T P Yuvaraj.
351	Parameter Estimation of DC-DC Buck Converter Using Particle Swarm Optimization Algorithm	Vedant Vyas *; Aditya R Gautam; Somesh Krishna Thanvi
387	Intelligent Substation Feeder Management System	Shanthi T *; Umabarathi U; Sudharsini R P; Vigneshkumar P

## Paper Presentation Schedule

Date/Day: 16 December 2025/Tuesday

### Session 06

Track 32 - Power Converter Topologies, Components and Devices	
Time	03:45 PM – 05:15 PM
Track Chair 1: Dr. Soumya Ranjan Meher, NIT Calicut	Track Chair 2: Dr. Sudeep Guruprasad, ABB India Ltd, Bengaluru
Student In-charge: Maddula Sri Ram Gupta	Contact Number: 7287878705
Venue: Hall B, NLHC	

Paper ID	Paper Title	Authors
267	Indigenous Design and Development of Digital Controller-Integrated SiC Inverter for High Performance Induction Motor Drives	Urbesh Sarkar*; Prasun Mishra
271	Analysis and Design of AC Electronic Load for Testing of Power Electronic Converters	Karthikeyan P*; Sateesh Kumar Kuncham; Kumaresan Natarajan; Panchalai V. N.
273	A Systematic Approach to Estimate High-Frequency Transformer Parameters	Ajay Sai Gangone*; Malingu G; Arun Rahul S; Shamibrota Kishore Roy; CY LIN; Leon Li; Taha M S; Shashidhar Mathapati
276	A Novel High Gain Integrated on Board EV Charger Using FBVF-HCC	Merry Mathew Padayattil*; V Karthikeyan
252	An Exploration of Digital Communication Modulation Techniques in Three-Phase Grid Connected Voltage-Source Inverters	Rajalakshmi Alavanthan*; Kavitha Anbukumar
269	Modelling and Protection of Ring-Configured 6-Bus DC Microgrid	Deepak Kumar*; D. K Tanti