



Detailed Programme of SSDEE 2025



Day 1 (28th February 2025)

08:00 hrs-09:00 hrs	09:00 hrs-10:30 hrs	10:30 hrs-11:00 hrs	11:00 hrs - 13:30 hrs	13:30 hrs-15:00 hrs	15:00 hrs-15:50 hrs	15.50 hrs-18.00 hrs	18:00 hrs-18:30 hrs	18:30 hrs-19:30 hrs	19:30 hrs-21:30 hrs
Registration & Breakfast (GJLT)	Inauguration (GJLT)	High Tea Break (GJLT)	Keynote-1 (11:00 – 11:50) Keynote-2 (11:50 – 12:40) Keynote-3 (12:40 – 13:30) (GJLT)	Lunch Break (GJLT)	Keynote -4 (GJLT)	Technical Session-1 (OS: 1-6) OS-1 (GJLT) OS-2 (Room No. 111) OS-3 (Room No. 113) OS-4 (Room No. 121) OS-5 (Room No. 106) OS-6 (Room No. 20) (Dept. of EE, Acad. Complex)	Network Tea (GJLT)	Cultural Programme (GJLT)	Dinner (GJLT)

Keynote-1:

Keynote-2:

Keynote-3:

Keynote-4:

GJLT: Golden Jubilee Lecture Theatre, **OS:** Oral Session

Day 2 (1st March 2025)

08:00 hrs - 09:00 hrs	09:00 hrs - 11:10 hrs	10:40 hrs-11:00 hrs	11:00 hrs-11:50 hrs	12:00 hrs - 13:30 hrs	13:30 hrs-15:00 hrs	15:00 hrs - 16:30 hrs	14:30 hrs-17:30 hrs	17:30 hrs-18:00 hrs	18:30 hrs-19:30 hrs	19:30 hrs-21:30 hrs
Registration & Breakfast (GJLT)	Keynote-5 (09:00–09:50) Keynote-6 (9:50–10:40) (GJLT)	Tea Break (GJLT)	Keynote -7 (11:00–11:50) (GJLT)	Technical Session-2 (OS: 7-11) OS-7 (GJLT) OS-8 (Room No. 111) OS-9 (Room No. 113) OS-10 (Room No. 121) OS-11 (Room No. 106) (Dept. of EE, Acad. Complex) Technical Session-3 (OS: 12-16) OS-12 (NLHC-01) OS-13 (NLHC-02) OS-14 (NLHC-03) OS-15 (NLHC-04) OS-16 (NLHC-05)	Lunch Break (GJLT)	Technical Session-4 (OS: 17-21) OS-17 (NLHC-01) OS-18 (NLHC-02) OS-19 (NLHC-03) OS-20 (NLHC-04) OS-21 (NLHC-05) Technical Session-5 (OS: 22-26) OS-22 (NLHC-6) OS-23 (Room No. 111) OS-24 (Room No. 113) OS-25 (Room No. 121) OS-26 (Room No. 106)	WIE (GJLT)	Tea Break (GJLT)	Cultural Programme (GJLT)	Gala Dinner (GJLT)

Keynote-5:

Keynote-6:

Keynote-7:

NLHC: New Lecture Hall Complex, **WIE:** Women in Engineering.

Day 3 (2nd March 2025)

08:00 hrs - 09:30 hrs	09:30 hrs - 11:10 hrs	11:10 hrs - 11:30 hrs	11:30 hrs - 13:00 hrs	13:30 hrs - 15:00 hrs	15:00 hrs - 16:30 hrs	16:30 hrs - 17:00 hrs
Breakfast (GJLT)	Keynote-8 (09:30–10:20) Keynote-9 (10:20–11:10) (GJLT)	Tea Break (GJLT)	Technical Session-6 (OS: 27-31) OS-27 (GJLT) OS-28 (Room No. 20) OS-29 (Room No. 121) OS-30 (Room No. 111) OS-31 (Room No. 113) (Dept. of EE, Acad. Complex)	Lunch Break (GJLT)	Award cum Closing Ceremony (GJLT)	High Tea (GJLT)

Keynote-8:

Keynote-9:

Details of Technical Session Schedule

Day-1 (28.02.2025): Technical Session-1

Oral Session-1:

Track 1: Power System (Operation, Control, Monitoring, Protection, FACTS Devices, Stability, High Voltage Engineering, Energy Market and Deregulation)

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: GJLT)

Session Chair: To be updated soon

Paper ID	Title	Author
37	A Multi-Agent Approach for Protection Coordination in a Microgrid using JADE Platform	Jayant Mani Tripathi, Nitin Yadav, Sanjeev Mallik, Aseem Chandel
84	Streamer Dynamics in Micro-Contaminated Transformer Oil	Mihir Bhatt, Praghness Bhatt, Chirag Parekh
91	Evaluation of High Resistance Grounding in Medium Voltage Marine Systems	Shashidhar Kasthala, Nithya Chandran, Goru Radhika, Rakesh Kumar
124	Digital Optimization Process of Thermal Trip Unit in Circuit Breakers for Carbon Footprint Reduction	Ravi Sidhpuria, Avadhoot Kittur, Hardik Jaiswal, Rajesh Londhe, Shashank Kedare
127	Frequency Regulation using Advanced Fractional Order-Based Controller in Interconnected Power Systems Involving EV Aggregator	Kona Amarendra, Kiran Teeparthi
156	Enhancing Economic Power Delivery: A Squirrel Search Algorithm Approach Addressing Realistic Power System Constraints	Debabrata Mukharjee, Kaushik Sit, Abhik Hazra, Tanmoy Maity
160	Controlling and Performance Evaluation of DC Microgrid Using Adaptive Control Integrated with Blue Whale Optimization	Vijoy Peddiny, Brajagopal Datta, Abhik Banerjee

Oral Session-2:

Track 2: Smart Grid (Renewable Energy Resources, Microgrid, Grid Integration, Energy Management, Islanding, IoT)

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: Room No. 111, First Floor, Department of Electrical Engineering, First Floor, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
59	Satin Bowerbird Optimized Automatic Generation Control with Cyber Resilient Mechanism	Durga Prasad Chinta, Monalisa Biswal, Paresh Nayak, Ravi Kumar Jatoth
77	Active Disturbance Rejection Control for a Hybrid Energy Storage based Low Voltage DC Microgrid	Niranjan Behera, Sankarsan Mohapatro
78	A Novel Hybrid Adaptive Filtering Algorithm Controlled STATCOM for LVRT Capability Enhancement of DFIG	Arindam Chakraborty, T Maity, Prof. Nilanjan Senroy
90	Mitigating Low Inertia Challenges in Renewable Energy-Based Microgrids: A Survey	Manish Kumar, Deep Acharya, Pankaj Mishra
144	Mitigating Cloud Movement Effects on Solar Panel Performance through Different Re-configuration Techniques	Dr. Altaf Badar, Mahati Mangipudi
146	A Comparative Study of Droop and VSG Controlled Grid Forming Inverters Integrated with D-STATCOM	Prakirty Kumari, Dushyant Sharma

Oral Session-3:

Track 3: Power Electronics and Applications (Devices and Converters, Electrical Drives, Power Quality)

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: Room No. 113, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
80	Modelling and Performance Analysis of Novel Asymmetric 11-level Solar Inverter using PDPWM Technique	Madan Das, Zaheen Javaid, Shruti Tiwari
95	Generation of PWM for 2-level Inverter on Modern Microcontrollers: A Generic Algorithm Leveraging on Waveform Symmetry	Nabarun Dasgupta
96	Comparison And Analysis Of Single Phase And Three Phase Static Wireless Charging System For E-Auto Rickshaw	P Srinivasa Rao Nayak, Parameshwari M, Subhajit Mahanta
117	Design and Analysis of Impedance Network-Based Cascaded Multilevel Inverter	Abhishek Gond, Roshan Pariyar, Molay Roy, Aurobinda Panda

161	Performance Analysis of Modified Leaky LMS based Control Scheme for Single-stage and Dual-stage Three Phase Grid-tied PV System	Urvashiben Rathod, Darsh Pawar, Dr. Siddharthsingh Kamaljitsingh Chauhan, ABHISEK PARIDA, Prof. Dr. P. N. Tekwani
165	A Novel Multi-level SVPWM Scheme for High Power Induction Motor Drive Applications	Anoop Kumar Kanaujia, Sanjiv Kumar
173	Hybrid PWM Control for Speed Control of Induction Motor with Improved Performance of Voltage Source Inverter	Gudipati Jawahar Sagar, Choppa Narasimha, Tarkeshwar Mahto

Oral Session-4:

Special Session 1: SmartGrids and MicroGrids for Electric Vehicle Charging

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: Room No. 121, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
53	Integrating Solar Power with Vehicle-to-Grid (V2G) Technology for Improved Grid Reliability	Rohit Kumar, Madhuri Chaudhari, Kumar Raghavendra G B
67	Daily EV Load Prediction Using Fuzzy Inference: A Microgrid Planning Perspective	Yasmeena, Shubh Lakshmi, Tarkeshwar Mahto, Veera Kotlu Lella, Somesh Tewari
71	Multi-objective Optimization Approach for EV Hosting Capacity Maximization of Distribution Networks with Renewable Generations	Shubh Lakshmi
89	Wireless Solar-Powered Solution for Electric Vehicle Charging and Energy Management Systems	Narendra Beniwal, Shruti Kalra, Ruby Beniwal, Krishnraj Nisha
93	Protection Coordination Study and Recommendations for a Real time Operational Wind Farm with Type-1 and Type-4 Wind Turbine Generators	Kaliappan P, Selvam P
265	Enhanced Grid Stability of Bi-Directional Converter in Grid to Vehicle System	Surendar, Sritha P, Poojitha P T, Shivali S, Sakthivel G, Lokesh M
387	A novel method for monitoring and controlling the electrical parameters in industrial applications using IoT technology	Suresh Muthusamy, Sarathkumar D, Meenakumari Ramachandran, Surendar Vadivel, Kavitha V, Suresh Kumar T, Praveen Kumar Ramanathan, Rahul Rajendran Ravikumar, Sanjay Balaji Mohanraj

Oral Session-5:

Special Session 2: DC-DC Power Converters: Innovative Circuits, Advanced Control and its applications in Renewable energy and Electric Vehicles

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: Room No. 106, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
101	Converter Topologies and Control Strategies of Switched Reluctance Motors for Electric Vehicular Application: A Review	V. Shirish Murty, Swathi munnur, Sagar Kumar Rathod, Nikita Gandhi, Swati Tendulkar, Deepika Masand
149	Multi Objective Power Optimization in DC microgrid Using Hybrid GA-PSO Techniques	Gaurav Kumar
170	Hybrid PV and Battery-Powered Inverter for BLDC Speed Control with Hall Effect Feedback	Gudipati Jawahar Sagar, Syed Sohail, Tarkeshwar Mahto, Vigya Saxena, Amit Yadav
183	Performance Analysis of Off-board Fast Charging DC-DC Converter Regulated by Fuzzy Logic Controller	Ravindra Janga, Karumanchi Priyanka, Grandhi Venkata Sai Nivas
187	Renewable Power Integration for Electric Vehicle Charging System: A Review	PRITAM NIRALA, Amar Kumar Barik, Ravi Bhushan, kushal jagtap, Ravi Raushan
243	DC-DC Cascode Converter-Based Speed Control of PMBLDC Motors for EV Drive Applications	Abdoalateef Alzhrani, Preet Samanta, Sagar Babu Mitikiri, Pranay Sahay, Vedantham Srinivas
245	Battery-Ultracapacitor based Hybrid Energy System for Electric Vehicle Operation	Arijit Halder, Rohit Shaw, Swaran Chakraborty, Sourodip Ghosh, Chandan Dutta, Gargi Konar
279	Investigation of Modified SEPIC converter with P&O based MPPT for Solar PV	Surendar V, Nandhakumar A, Chandru R, Dineshkumar K, Heamanthkumar B, Mahibalan K P

Oral Session-6:

Special Session 3: Cyber-physical systems and smart infrastructures for future cities

28th February 2025 @ 15.50 hrs – 18.00 hrs (Venue: Room No. 20, Ground Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
120	Hybrid Approach of TabNet and Transformer-XGBoost for Predicting Traffic Flow in Smart Cities	Shreyas Hole, Vinothkumar Kolluru, Shreekant Salotagi, Yagnesh Challagundla, Sudeep Mungara, Nagarjuna Naik Mude
121	A Design of Hybrid Model and Bayesian Neural Networks for Smart Grid Stability Prediction	Shreyas Hole, Vinothkumar Kolluru, Shreekant Salotagi, Yagnesh Challagundla, Sudeep Mungara, Sriramkumar R
139	Hybrid PCA-Based Machine Learning Models for Predictive Analytics in Urban Health Monitoring Systems	Shreyas Hole, Girish Bhavakar, Arvind Prajapati, Vinothkumar Kolluru, Suraj Karpe, Jayavrinda Vrindavanam
206	EV Battery Charging with a Solar-Integrated Boost Converter	Kalyaani Thota, Srikanth Velpula, Vedik Basetti, Prashanth Kumar Masadi
249	Marine Microgrid Frequency Regulation: Utilizing Diverse Power Generation and Enhanced Nonlinear Control Strategies with Energy Storage Integration	Odelu P, Chandan Shiva, Sachidananda Sen, Vedik Basetti
250	Improvement of Frequency Stability in Airport Microgrids by Nonlinear Generation Control	Odelu P, Chandan Shiva, Sachidananda Sen, Vedik Basetti

Day-2 (01.03.2025): Technical Session-2

Oral Session-7:

Track 1: Power System (Operation, Control, Monitoring, Protection, FACTS Devices, Stability, High Voltage Engineering, Energy Market and Deregulation)

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: GJLT)

Session Chair: To be updated soon

Paper ID	Title	Author
169	Insights and Analysis from Black Start Mock Drill Case Studies using Synchrophasor Technology	Subhash Kumar, Sachin Kumar Singh, Kishore Kalita, Saksham Rithe, Sharmistha Dutta
184	Multi-area Economic/Emission Dispatch with Arctic Puffin Optimization	Aditya Krishna, Hari Mohan Dubey, Surender Reddy Salkuti
192	Fuzzy PSO Algorithm for Optimal DG Integration in a Practical Indian Distribution Network Using Logic OR-Based Forward Backward Load Flow	Anagha Rajendran K P, Soumyabrata Barik, Sudarshan Swain
215	Adaptive protection Based Fault Detection, Classification, and Location in Power system	Goutam Yadav
222	Analyzing Partial Discharge and Over-Voltage Interactions in Transformer Insulation	Kaveri Bhuyan, Jyotishman Boruah Bhuyan, Rahul Ray Bhuyan, Gaurav Bairagi, Ranjeeta Pegu, Shabnam Ajaj
238	A New Method to Detect DMR Faults During Balanced Condition for a VSC Bipole Onshore-Offshore HVDC Network	Sauvik Biswas, Saikat Majumdar, Kiran Kumar Math, Sunil Joshi, Omar Jasim

Oral Session-8:

Track 2: Smart Grid (Renewable Energy Resources, Microgrid, Grid Integration, Energy Management, Islanding, IoT)

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Room No. 111, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
147	Power Management in Photovoltaic Based Microgrid under Varying Load and Generations	Raghupatruni Venkatesh, Chandrasekhar Perumalla, Chandrashekhhar Bhende
164	Quantifying Solar Cell Power Output in the Lab: A MATLAB-Based Approach with Artificial Illumination	Apoorva Vaishya, Chinmaya K A
178	Smart Load Shedding designed for Unintentional Islanding of Steel Plants with Captive Generation	Karothu Tulasidhar, Bhakta Ranjan Satapathy, Pradumn Kumar Dixit
189	Stability Enhancement in Power Systems with High Renewable Penetration: The Role of Grid-Forming Inverters	Gaurab Dash, Priyam Jain, Vivek Pandey, Prof. Nilanjan Senroy
216	Design and Development of DC Inductor for Hybrid Circuit Breaker Protection	Shreyaksh Kashoudhan, Divyanshu Bhardwaj, Saurabh Barot, Deepak Somayajula, Bibhu Patnaik

Oral Session-9:

Track 3: Power Electronics and Applications (Devices and Converters, Electrical Drives, Power Quality)

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Room No. 113, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
185	Model Predictive Current Control of Induction Motor Drive Integrated with Inverse Rotor Time Constant Estimator	Navneet Kumar Ray, Sukanta Das
233	A Comparative Study of Different Controllers for DC Bus Voltage Control in DC Microgrid	Khalid Khan, Kartick Jana
260	Performance Analysis of Enhanced Power Quality with Active Power Filters	Vikash Anand
269	Speed Control of 3 Phase Induction Motors using different PWM Techniques	Jai Ram
271	Performance Analysis of Improved Linear Sinusoidal Tracer Controlled Single-Stage and Dual-Stage Three-Phase Grid-Tied PV system	Urvashiben Rathod, Darsh Pawar, Dr. Siddharthsingh Kamaljitsingh Chauhan, Abhisek Parida, Prof. Dr. P. N. Tekwani
299	Design and Control of an Improved Four-Phase SRM Drive using a 4-Level Converter	Sandeep Dehuri

Oral Session-10:

Special Session 2: DC-DC Power Converters: Innovative Circuits, Advanced Control and its applications in Renewable energy and Electric Vehicles

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Room No. 121, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
287	Power Quality Improvement of Switched Reluctance Motor using Different PFC Converter	Abhilesh Mishra, Biplab Bhattacharyya
304	Design and Assessment of DC-DC Interleaved Flyback Stage for Module-Integrated PV Microinverters	Nakkella Laxmi, Vignesh Kumar V, Salai Thavakkodi S V
336	Neural Network-based Sensorless Control of Flyback Converter for Cell Balancing	Prajin Premarajan, Ravi Raushan, Ravi Bhushan
345	High-Efficiency Boost Converter Design for PV Systems Using P&O MPPT	Satyendra Singh, Rachna Tyagi, Naveen Gaherwar
393	Supercapacitor Assisted DC Microgrid Voltage Regulation Using Multipoint Droop Control Mechanism	Tushita Das, Bharath K R, Kanakasabapathy P, Sagar Babu Mitikiri, Pranay Krishna Sahay, Varun Kumar Gupta, Nishant Kumar, Lakshmi Srinivas Vedantham
394	An Efficient Bi-directional based Single Phase V2G and G2V technology	Aman Anand, Pranay Krishna Sahay, Sagar Babu Mitikiri, Tushita Das, Preet Samanta, Varun Kumar Gupta, Shailendra Kumar Dwivedi, Lakshmi Srinivas Vedantham
396	Modeling and Monthly Maximum Power Analysis of Solar Photovoltaic Modules in Dhanbad Using MATLAB	Shriballabha Mahapatra, Brij Mohan Singh, Pranay Krishna Sahay, Tushita Das, Preet Samanta, Varun Kumar Gupta, Lakshmi Srinivas Vedantham, Anirban Ghoshal

Oral Session-11:

Special Session 4: Advancing Energy Innovations in Power Integration and Electric Transportation with AI and Hydrogen Technologies

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Room No. 106, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
41	Thermal Optimization of Microprocessor Chip Used in Power Electronics Devices with Machine Learning Techniques	Rohit Kumar, Madhuri Chaudhari, Niraj Chopade
240	Improving Frequency Regulation in Interconnected Islanded Microgrids through Nonlinear Control and Cogeneration Systems	Odelu P, Chandan Shiva, Sachidananda Sen, Vedik Basetti
246	Frequency Regulation Characteristics of Hybrid Microgrid Supported by Bio-renewable Cogeneration with modified Control Strategy	Odelu P, Chandan Shiva, Sachidananda Sen, Vedik Basetti
247	Frequency Control management in Interconnected Islanded Port Incorporating Nonlinear Control Strategy with Cogeneration	Odelu P, Chandan Shiva, Sachidananda Sen, Vedik Basetti
289	Recent advances in microgrid energy management using renewables and storage devices	Sai Mahadevuni, Sachidananda Sen, Chandan Kumar Shiva
322	Centralized-Decentralized Secondary Controller for Standalone PV-Battery Unit Type Microgrid	Sachidananda Sen, Haresh Sabhadia, Dr. Maneesh Kumar, Chandan Shiva

Day-2 (01.03.2025): Technical Session-3

Oral Session-12:

Special Session 5: Renovating Power System Structural form for Sustainable Development Leveraging AI/ML Driven Engineering Innovations

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: NLHC – 01, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
148	Simulation-Based Analysis of Passive Balancing for Parallel Lithium-ion Cells	Suganya R, Dr.L.M.I. Leo Joseph, Sreedhar Kollem
171	Advanced Wind Power Forecasting Using Parallel Convolutional Networks and Attention-Driven CNN-LSTM	Veerakotlu Lella, Bathula Raju, Yasmeena, Vigya Saxena, Somesh Vinaya Tiwari, Tarkeshwar Mahto
212	Cost-Effective SPV Integration for Improved Grid Reliability and Sustainable Energy Solutions	Shilpa Dehedkar, Saurav Raj, Bishwajit Dey
258	Recent Advances in Energy Storage Systems for Maximizing Renewable Integration in Smart Grid	Lavudya Swathi, Sachidananda Sen, Vedik Basetti
295	Load Frequency Control of Multi-Area Power System using Arctic Puffin Optimization	Shahid Akhtar Iqbal Ahmed, Gauri Gadilohar, Kashish Modi, Shruti Gawali, Jagdish More
324	Centralized-Decentralized Control Scheme for Power Sharing in Multiple PV-Battery System	Sachidananda Sen, Haresh Sabhadia, Dr. Maneesh Kumar

Oral Session-13:

Track 1: Power System (Operation, Control, Monitoring, Protection, FACTS Devices, Stability, High Voltage Engineering, Energy Market and Deregulation)

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: NLHC – 02, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
239	Reactive Power Compensation in Hybrid Power System using African Vulture Optimized Statcom tilt controller	Sachin G M, Abhik Banerjee
313	Condition Assessment of Dielectric Liquid Used in Large Power Equipment Using Time-Varying Model	Praveen Kumar, Vikash Kumar Raushan, Somesh Ganguly, Arijit Baral
314	Influence of TiO ₂ and SiO ₂ Nanoparticles on the Dielectric Properties and Breakdown Voltage of Blended Oil	Vikash Raushan
315	Design and Demonstration of an IEC 61850-Based Distribution Substation Using Digital Twin Technology	Sumit Jha, Subhransu Samantaray, Deepak Kumar
316	Performance Comparison of various Classifiers in Detecting Incipient Fault Type using DGA Data	Somesh Ganguly
317	Comparative Impact Assessment of Energy Storage Systems on Frequency Regulation with Various Operating Strategies under ABT	Bhavikkumar Suthar, Vihang Dholakiya

Oral Session-14:

Track 2: Smart Grid (Renewable Energy Resources, Microgrid, Grid Integration, Energy Management, Islanding, IoT)

1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: NLHC – 03, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
285	Design of PV Based Streetlight Using Solar Radiation Estimation Technique	Pritam Kumar
298	An Iterative Technique for Enhancing Profitability and Dispatchability of Wind-Battery Energy Storage System	Dr. Tirthadip Ghose, Shubham Kashyap
326	A Comparative Analysis of Grid-Following and Grid-Forming Control Techniques Used in Inverter-based Resources	Abhishekh Mishra, Pankaj Kumar, Shubham Kumar, Paresh Nayak
333	Role of Grid Forming Converters in Microgrid Clusters for Load Frequency Control	Iymon Ahmad, Hailiya Ahsan, Mairaj-ud-Din Mufti
411	An Analogous Virtual Synchronous Machine-Based Virtual Inertia Control Strategy for Microgrid Applications	Ravi Kumar, Satadal Bhowmik, Suryakant Kumar, Gauri Shankar

Oral Session-15:

Track 3: Power Electronics and Applications (Devices and Converters, Electrical Drives, Power Quality)1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Venue: NLHC – 04, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
302	Sensorless speed control of Induction Motors Using DWT-Integrated Ultra Local Model based MRAS	Md Asif Hussain, Ananda Shankar Hati
309	A Zeta Converter-Based Improved BLDC Motor-Driven Water Pumping System for Partial Shading Environment of solar PV	Satadal Bhowmik, Suryakant Kumar, Dr Gauri Shankar
330	Solar PV-Based Mobile Phone Battery Charger	Satadal Bhowmik, Suryakant Kumar, Dr Gauri Shankar
378	Modeling and Analysis of Multi-Phase Induction Motor Drives	Abhishek kumar, Vijay Bhaskar Devara
395	From Conveyor Belts to Crushers: A Review on Radial and Axial Flux Induction Motor Advances and Applications in Industrial Mining Operations	Varun Kumar Gupta, Preet Samanta, Pranay Krishna Sahay, Lakshmi Srinivas Vedantham
400	Unveiling Role of Size, Wet Layer Thickness, and Interface Potential Barrier on the Confinement Effect of the Conical, Cylindrical and Spherical Quantum Dots	Dr . Jayshree Jayshree
401	Reviews on PQ Improvement of RES Integrated Distribution Network by Shunt Active Power Filter	Pradosh Kumar Mishra, Sarita Samal, Chitralekha Jena, Prasanta Barik, Sumeet Sahaya, Saubhagya Ranjan Biswal

Oral Session-16:**Special Session 6: Emerging Smart Technologies in Electrical Engineering: AI, IoT, and Advanced Control for Sustainable Power Systems**1st March 2025 @ 12.00 hrs – 13.30 hrs (Venue: Venue: NLHC – 05, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
111	Intelligent Energy Management with ANFIS based Strategy for Enhancing Battery Performance	Seshu Kumar Rangu, Ch.N.Narasimha Rao, Dr. Arvind R. Singh, G.Venkata Durga Rao, G.Sasi Sai Hanuman, G. Teja
290	Dynamic Load Scheduling Optimization Utilizing the Rao Algorithm for Improved System Performance	Sourav Basak, Biplab Bhattacharyya, Suraj Kumar Rajbhar
357	FinFET Technology Based Development of Energy Efficient Datapath System	G.M. Priyadarshini, Mamidipaka Hema, Eppili Jaya, Lokesh S, Yamini Devi Y, Jami Venkata Suman
363	A Complementary FET (CFET)-Based NAND Design to Reduce RC Delay	Ch Devansh, Jami Venkata Suman, G Eswar, G Narasimha, Sivasubramanyam Medasani, M Balaji
382	Unleashing the Power of TQWT and Adaptive CNNs for Accurate PQ Disturbance Detection	Pampa Sinha, Lipsa Ray

Day-2 (01.03.2025): Technical Session-4**Oral Session-17:**1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 01, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
133	Binary Artemisinin Optimization Algorithm for Optimum Phasor Measurement Unit Placement	Sruthi Ankam, Vedik Basetti, Sachidananda Sen
155	Robust Current Control in Lithium-Ion Battery with a Bidirectional Buck-Boost Converter	Pavan Kumar, Rajababu Durgam
168	The Analysis of Short Duration Power Quality Disturbances using Short Time Fourier Transform	Madgula Satyanrayana, Venkataramana Veeramsetty, Durgam Rajababu
123	The Role of Hydrogen Fuel Cells in Evolving Electric Vehicle Market	Masadi Prashanth Kumar, Dr. Srikanth Velpula, Chidurala Saiprakash
134	Binary Educational Competition Optimizer (BECO) Algorithm For Optimum PMU Placement	Sruthi Ankam, vedik Basetti, Sachidananda Sen

135	Advanced Distribution System State Estimation Techniques: A Review	Sruthi Ankam, vedik Basetti, Sachidananda Sen
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Oral Session-18:

Special Session 7: Machine Learning Applications in Power Electronics and Control for Futuristic Grid

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 02, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
174	Short-term forecasting of wind power plant generation based on Machine learning models	Khai Nguyen, Minh Nhut Phan, Huynh Van Van, Dr. Altaf Badar
284	Analysis of VSC-HVDC System in the Asynchronously Operating Grids during AC Line Faults	Ravishankar Tiwari, Ashish Sinha, Prashant Kumar
404	Analysis of DPC Techniques Used in DFIG Based WECS	Anet Jose
280	Enhancement of Fault Ride through Capability of DFIG based Wind Energy Conversion System using Improved Intersecting Type Fault Current Limiter	Anirban Mishra, Prashant Tripathi, Amit Kumar Singh
377	DSOGI Based Power Quality Control with Grid Connected SECS	Pranay Krishna Sahay, Mitikiri Sagar Babu, Preet Samanta, Tushita Das, Brij Mohan Singh, Vedantham Lakshmi Srinivas

Oral Session-19:

Track 1: Power System (Operation, Control, Monitoring, Protection, FACTS Devices, Stability, High Voltage Engineering, Energy Market and Deregulation)

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 03, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
318	Simulation of 11kV HDPE Cable Insulation Containing Manufacturing Defects Using COMSOL Multiphysics	Neha Kumari, Arijit Baral
328	Analysis of ADRC with complex pole and design of ESO based SMC	Priya Kumari
338	PV Array Fault Detection and Location Estimation Using Ensemble Learning Model	Shubham Kumar, Subodh Mohanty, Paresh Nayak
343	Analysis of Combined Stresses due to Partial Discharge and Operational Voltages in a Power Transformer	Kaveri Bhuyan, Rahul Ray Ray, Gaurav Bairagi, Jyotisman Boruah, Ranjeeta Pegu
360	The Reliability Enhancement of Power System Using Distribution STATCOM Units with Enhanced Capacitive Reactive Power Operation	Vijay Mohale, S S Gurav, N S Patil, Dadasaheb Kachare
361	Optimal Location and Sizing of Distributed Generation using Horse Herd Optimization	Brij Mohan Singh, Charchit Agarwal, Sajgne Sagar Vilas, Harshit Raghuvanshi, Varun Kumar Gupta, Pranay Sahay, Sagar Babu Mitikiri, Lakshmi Srinivas Vedantham, Ashok Kumar

Oral Session-20:

Track 4: Electric Transportation (Electric Vehicle, Electric Aircraft, Electrical Machines, Energy Storage Devices, Charging Infrastructure, Wireless Power Transfer)

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 04, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
98	Design of Highly Efficient Switched Reluctance Motor for Heavy Duty Exhaust Fan for Air Ventilation System	Gurbhej Kalyan, Poonam Syal
154	Analysis of Toe-In Braking in Longitudinal Motion for 4WIS4WID EV	Shailendra Singh, Ram Potluri
175	Effective Control of Speed and Regenerative Braking in Electric Vehicles Utilizing Fractional Order PI Controller	Dola Sinha, Sudipta Ghosh, Saibal Majumder, Chandan Bandyopadhyay, Sovan Bhattacharya

Oral Session-21:

Track 5: Soft Computing Techniques in Electrical Engineering (Artificial Intelligence, Machine Learning, Big Data Analytics, Cyber Security, Quantum Computing)

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 05, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
13	Optimized Cluster Head Selection And Routing In Wbans Using Hybrid Improved Particle Swarm And Adaptive Cuckoo Search Algorithm	Dharmaraj N, G Jeevananth, K Nithish Kumar, N Selva Kannan, C Shree Ridhi Keerthi, B S Ramanan
28	Target Classification in Radar Using Deep Learning	Prashant Menghal, Suchitra Sahi, Perumulla Abhiram
140	Recent Advancement in Transformer based Electric Load Forecasting: A Review	Verendra Kharkwal
167	Fault Detection in PV Grid Integrated System via Machine Learning Technology	Souvik Mitra, Chinmaya K A
179	Inertia Estimation through Local Frequency Measurements and Convolutional Neural Networks	Shahbazuddin Syed, Mayank Kumar Sahu, Dr. Altaf Badar
180	Machine Learning-based Power Loss Analysis in Photovoltaic Systems	Anuradha Tomar, Hritik Kumar

Day-2 (01.03.2025): Technical Session-5

Oral Session-22:

Special Session 9: Advancements in AI, IIoT, and Automation for Sustainable Power and Electrical Systems

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Venue: NLHC – 06, Ground Floor, New Lecture Hall Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
70	Impact of Material Variations on Gate-All-Around Nanowire FETs for Low-Power Applications	Sidhant Rana, Mandeep Singh, Balwinder Raj, Ramesh Kumar Sunkaria
262	Enhancing Solar Panel Efficiency: An IoT-Integrated Machine Learning Approach for Dust Detection	Kanishk Morey, Suhani Jhawar, Saurabh Rajput, Vivek Saxena
282	Real-time monitoring of DC Microgrids of Solar Farms using an MQTT-Based IIoT Device with Node-RED Integration	Soumyadip Banerjee, Priyanka Kumari, T Maity
311	Reinforcement Learning for Sustainable Combustion in Thermal Power Plant	Azad SMAK, Sri Ramya Siraparapu
331	Forecasting the Impact of High Solar Module Temperature on Power output and CO2 mitigation : A Machine Learning Approach	Tejaswa Karodi, Naitik Singhal, Deepansh Kulshrestha, Saurabh Rajput

Oral Session-23:

Special Session 11: Empowering the Future: Cybersecurity and Resilient Integration of Electric Vehicles, Power Systems, Energy Storage, Power Electronics, IoT, and Renewable Energy

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Room No. 111, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
211	An Adaptive non superconducting fault current limiter for low voltage ride-through for protection of DFIG wind generator	Subhendu Sekhar Sahoo, Basant Sethi
242	Comprehensive Review of Cybersecurity Vulnerabilities and Safety Concerns in Autonomous Vehicles	Uppalapati Sudheer Kumar, Dr. Sukanta Halder, Basant Sethi
307	Portable Battery Bank for Emergency Power During Natural Disasters: Case Study	Jyoti Kumari, Suryakant Kumar, Anula Khare
310	Planning and Analysis of Possible Land Utilization Patterns for Food-Energy Park with Renewables	Sachidananda Sen, Dr. Maneesh Kumar, Vedik Basetti, Chandan Shiva
312	Recent Advances in Battery Management System for Li-Ion Type EVs with Predictive Control and FPGA	Sachidananda Sen, Dr. Maneesh Kumar, Vedik Basetti, Chandan Shiva
329	Multi winding Isolated converter with cascaded MLI for Solar Electric Vehicle	Mohanty Rupali, Debashis Chatterjee, Varun sai satya, Subhendu sekhar Sahoo, Situn kumar Bal
346	Wireless Power Transmission using additively manufactured ferrite pad	Shreejan Bhandari, Samip Khanal, Taslima Akter, Frank Li, Bharat Yelamanchi, Srikanth Itapu, Vamsi Borra

Oral Session-24:

Special Session 2:

Special Session 4: Advancing Energy Innovations in Power Integration and Electric Transportation with AI and Hydrogen Technologies

Special Session 5: Renovating Power System Structural form for Sustainable Development Leveraging AI/ML Driven Engineering Innovations

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Room No. 113, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
270	Voltage regulation of DC-DC Boost Converter using PI controller in cascade control structure	Mohammed Hasmat Ali, Md Nishat Anwar, Afroz Alam
325	Power Sharing in Multiple PV-Battery Based MG System by Considering Component Isolation	Sachidananda Sen, Haresh Sabhadia, Dr. Maneesh Kumar, Chandan Shiva
340	Multi-Agent Based Optimization of Hybrid Solar PV, Hydrogen, and Battery Storage Systems to Maximize Energy Production	Mohammad Amir, Rabindra Mohanty, Sukumar Mishra
276	Insulator Fault Detection in Aerial Images using YOLOv9	Soham Kolambe, Arin Johari, Soham Dutta
327	Power Sharing Scheme for PV-Battery Type MG with Inclusion of Communication Link Failure	Sachidananda Sen, Haresh Sabhadia, Dr. Maneesh Kumar

341	A Comprehensive Hydrogen Production Rate Control for a PEM Electrolyzer Load using PID Controller Supplied from a Small-scale Microgrid	Dr. Maneesh Kumar, Sachidananda Sen, Vedik Basetti, Sourav Diwania
286	Power Management for Renewable Energy Integrated Electric Vehicle Charging Station	Kumar Gourav, Prem Prakash, Sarode Shiva Kumar

Oral Session-25:

Track 1: Power System (Operation, Control, Monitoring, Protection, FACTS Devices, Stability, High Voltage Engineering, Energy Market and Deregulation)

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Room No. 121, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
403	Frequency Stability Analysis in Hybrid Power System Using Optimized Fractional Controller	Sabita Tripathy, Jyoti Padhi, Deepanwita Dhur, Manoj Debnath, Gauri Shankar, Rakesh Roshan
406	A Novel Meta-Heuristic algorithm based PI(1+PI) Controller for Automatic Generation of Power System Integrated with Photovoltaic System	Bhabasis Mohapatra, Sujeet Kumar Shah, Binod Kumar Sahu, Manoj Debnath, Manoj Kumar Nayak
410	Leveraging Virtual Synchronous Generators for Stable Wind Energy Integration	Suparna Maity, Sandip Chanda, Alok Srivastava Srivastava, Joyel Prasad, Rahul Mondal, Bidhan Majila
230	Crop Yield Prediction Using Linear Regression and Random Forest Modelling	Anushka Chauhan, Bhawika Suresh Singh, Chinmaya K A

Oral Session-26:

Track 5: Soft Computing Techniques in Electrical Engineering (Artificial Intelligence, Machine Learning, Big Data Analytics, Cyber Security, Quantum Computing)

1st March 2025 @ 15.00 hrs – 16.30 hrs (Venue: Room No. 106, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
241	Bad Data Detection Using Residual Measurement	Sumit Paul, Kalyan Chatterjee
274	Novel Hybrid Algorithm for Investigation of Dissolved Gas Analysis (DGA) for Alternate Dielectric Fluids of Power Transformer	Dr. Rahul Soni, Dr. Raymon Raj, Dr. Bishal Silwal, Dr. Rahman Prasojo, Dr. Mohamed Magdy Fawzy Darwish, Dr. Norazhar Abu Bakar
300	A Comparison of AI and Conventional MPPT Technique for Solar Photovoltaic System	Shah Ansari, Bhukya Naick, Shubham Vishwakarma
339	Slime Mould Algorithm –Based Study on Optimal Placement Planning of Capacitors and Distributed Generations	Vigya, Saubhagya Biswal
364	Intelligent Event Detection In Unbalance Active Distribution System using Reinforcement Machine Learning Algorithms	Archana Tamrakar, Saumendra Sarangi, Arpita Shivastava
412	Signal Processing and Soft Computing Techniques Driven Analysis of Chhattisgarhi Dialects using MFCCS	madhuri Gupta, Jaspal Bagga

Day-3 (02.03.2025): Technical Session-6

Oral Session-27:

Track 6: Control, Measurement and Instrumentation (Cyber Physical Systems, Robotics, Sensors, Interfacing Electronics, Fibre Optics)

2nd March 2025 @ 11.30 hrs – 13.00 hrs (Venue: GJLT)

Session Chair: To be updated soon

Paper ID	Title	Author
45	Design and Analysis of Ring Resonator embedded with High Contrast Optical Bragg Grating in Z-domain for Optical Filtering	Aman Shekhar
46	Application of Double Stack Magneto-Resistance Sensor for Angular Measurements at Joints in a Two-Link Bipedal Robot	Ritu Ranjan, Aman Shekhar, Sanjoy Mandal
99	High-Sensitivity High-Frequency Fluidic Passive Sensor using Substrate Integrated Waveguide for Measurement of Glucose Concentration	Kundan Kumar, Shruti Priya, Shweta Kumari, Anupma Marwaha
138	Ensemble Learning Approach for Differentiating Simultaneous Temperature and Strain Impacts on Apodized FBG-based Sensor	Himadri Nirjhar Mandal, Soumya Sidhishwari
150	Application of Pentuple Asymmetrical Microring Resonator as an Optical Filter	Pankaj Ray, Pankaj Rai, Suman Ranjan
213	DimExtract: Extracting Dimensional Attributes From Product Images	Rudra Joshi, Lokesh Gupta, Ravikant Jain, Siba Panda, ManishKumar Tiwari, Rashmi Patel

Oral Session-28:

Track 6: Control, Measurement and Instrumentation (Cyber Physical Systems, Robotics, Sensors, Interfacing Electronics, Fibre Optics)

2nd March 2025 @ 11.30 hrs – 13.00 hrs (Venue: Room No. 20, Ground Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
229	Leader-Follower Consensus Control of Multi-Agent Systems with Disturbance by Distributed Sliding Mode Control	Praveen Kumar, Amit Anand, Dipayan Guha, Shubhi Purwar
263	Lyapunov-Based Feedback Control Stabilization of Uncertain Wheeled Mobile Robots	Nidhi Agarwal, Dr. Shyam Kamal, Sankalp Chandra, Ayushi Kumari, Shreya Ojha, Sandip Ghosh
288	Core Power Control of a Pressurized Water Reactor Using Event Triggered PID Control	Madhumita Pal, Sanjoy Mondal, Suparba Chowdhury, Arpita Mondal, Aritra Mukherjee
335	Synchrophasor Measurement using the Perfectly Flat-Top FIR Filter for M-class PMU	Mukesh kumar, M Senthil Kumar
358	Indigenous Design and Development of Interface Board for TMS320F28335 DSP and Programming via MATLAB Simulink Embedded Coder	Urbesh Sarkar, Prasun Mishra
362	Sensing of Biomechanical properties of Normal and Cancerous Cells using Micropillar Simulation	Khadija Gheewala, P Abirami, Debashis Maji

Oral Session-29:

Track: Miscellaneous

2nd March 2025 @ 11.30 hrs – 13.00 hrs (Venue: Room No. 121, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
40	A Novel Circulating Current Control Technique in A Fast Integrated Onboard Charger	Mandvi Singh, Suvendu Samanta, S. Das
92	Advanced Testing Strategies to Ensure Integrity and Reliability of Earthing System in EHV Substations	S R Pavan Mamillapalli, N S R Veerendra
125	Evaluation of uncertainty and stochastic modelling of renewable energy sources in microgrid	Nasir Wani, Neeraj Gupta
126	A comprehensive Review on MPPT Methods for Enhanced Photovoltaic system Efficiency	Saqib Kanth, Neeraj Gupta
141	Energy Management of Grid Connected PV System without Energy Storage Using High Gain Converter for DC Microgrid Applications	Karri Satyanarayana
182	Vehicle-to-Vehicle conductive charging	Rohan Gawade, Shivaji Raskar

Oral Session-30:

Track: Miscellaneous

2nd March 2025 @ 11.30 hrs – 13.00 hrs (Venue: Room No. 111, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
399	Power System Modeling Using Digital Twins for Smart Grid Research Applications	Shivaji Raskar, Atul Phadke, Sanjay Dambhare
380	Review and Comparison of DC-DC Buck Boost and Boost Converter Topologies for Fuel Cell Integration in Electric Vehicles and Microgrids	Lipika Nanda, Subash Chandra Mishra, Banishree Misra
385	Advanced Epileptic Seizure Recognition with a Hybrid CNN-BiLSTM Model on EEG Signals	Mohan B, Ramalakshmi K, Prem Ananth R, Krishna Kumari L, Santhoshkumar S P, Mahalakshmi S
94	Modelling and Design of Wide Voltage Range Buck-Boost Converter for Fuel Cell Applications	Marrapu Sai Harsha Naidu, Josephine RL, Md. Mirajus Salakin Arnob
190	IoT-Based Autonomous Fire Mitigating Vehicle	Snigdha Kurre, Nikitha Sunkara, G. V. Sai Lakshmi Macharla, Kritika Bansal
224	Design and Implementation of IOT-Based Automatic Power Factor Correction Relay using Raspberry PI	Md Abu Hena Safiq Kamal, Md Nazmul Hasan, Md Hossain

Oral Session-31:

Track: Miscellaneous

2nd March 2025 @ 11.30 hrs – 13.00 hrs (Venue: Room No. 113, First Floor, Department of Electrical Engineering, Academic Complex)

Session Chair: To be updated soon

Paper ID	Title	Author
220	Satellite Image Classification Using Convolutional Neural Networks	Sujit Kumar
251	Enhancing the Power Load Prediction using LSTM in a Smart Grid Scenario for Household Data	Dr.I.Krishna Pavan, Sharanya Gaddam, Sathwika Etti, Jahnvi Karangula, Pranay Kashetty
203	Intelligent Driving Assistance and Alert System for Learners	Raja S K, Athithiya V S, Karthik G, Nagarajan P M, Nisha K L
402	Hybrid Fractional-order PI-PD controller design with Indirect Design Approach	Prabin Kumar Padhy, Rishika Trivedi, Bharat Verma
223	Examination of Signal-to-Noise Ratio in Remote Photoplethysmography Signal Extraction for Video Authenticity Detection	Susi A, Akila Venkatesan, Govindasamy V