

Overall Tentative Schedule for the Oral & Poster Presentations

Day 2 8 th December 2025 09:00 - 10:30	Session-I Session-IV	Session-II Session-V	Session-III Session-VI
Day 2 8 th December 2025 16:15 - 17:45	Poster Presentations		
Day 3 9 th December 2025 09:00 - 10:30	Session-VII Session-X	Session-VIII Session-XI	Session-IX Session-XII
Day 3 9 th December 2025 16:15 - 17:45	Session-XIII Session-XVI	Session-XIV Session-XVII	Session-XV Session-XVIII

Papers for which no registrations have so far been made are presently not included in the oral/poster presentation schedules. However, once the registration for such a paper is completed, it will be included in an appropriate session.

Session - I Subject Area - Smart Grid and Power Systems Venue - Lecture Hall Complex - 01		
Chair - Prof. Prabodh Bajpai, Professor, IIT Kanpur		
Co-Chair - Dr. Seshadri Sravan Kumar V, Associate Professor, IIT Hyderabad		
8th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
63	An IoT-Enabled Framework for Real-Time Smart Metering with Dynamic Tariff Pricings	S Gayathri, M Monisha, Anant Kumar, K Shanti Swarup
64	Generative Artificial Intelligence Enabled Smart Metering Framework For Predictive Energy Sharing	M Monisha, S Gayathri, Anant Kumar, K Shanthi Swarup
68	Assessment of Unbalance in Tata Power Mumbai Network due to Single-Phase Railway Loads	Santosh V. Singh, Prashant V. Navalkar, Anil M. Kulkarni, Girish T. Jawale
123	Impact of Cyber Vulnerabilities on Automated BESS Mode Transitions in Smart Microgrid	Suhani Baru, Khwrwmdao Basumatary, Anup Shukla
255	Impact of ToD Charges and Power Factor on Total Energy Costs of BVRIT Campus Distribution Grid	VSB Chaitanya Duvvury, Josna Goud G, G Bhanu Ganesh, Pradeep Kumar Yemula
288	Data-Driven Fault Classification and Localization in Smart Grids for Accurate Self-Healing Using Multifaceted Machine Learning Techniques	Praneeth N, P Swati Patro, STP Srinivas

Session - II Subject Area - Security-Constrained Economic Dispatch Venue - Lecture Hall Complex - 02 Chair - Prof. S. C. Srivastava, Professor (Retd.), IIT Kanpur Co-Chair - Mr. K. V. S. Baba, Former CMD, Grid-India, India		
8th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
26	SECED Pilot Study - For Emission-Constrained Economic Dispatch for India's ISGS thermal fleet	Debasis De, Sushil K Soonee, Deb Chattopadhyay
54	SCED in India: The Duals Behind Dispatch	Debasis De, Sushil K Soonee, R S Abhishek, Deb Chattopadhyay, Saumen Majumdar
59	Addressing Infeasibilities in SCED Optimization	Debasis De, Sushil K Soonee, Abhishek R S, <i>et al.</i>
110	Ramping in States Power System in India: Harnessing Flexibility through Integrated SCED	Debasis De, Abhishek R S, Sushil K Soonee, Deb Chattopadhyay
118	Optimizing Regional Power Trade in South Asia: A SECED Based Emission-Constrained Economic Dispatch Framework	Anita Prajapati, Richa Parmar, Khadiza Umme Tahera, Phuntsho Choden, <i>et al.</i>
173	Scheduling vs Despatch in the Indian Power Sector: The Statutory Role of Load Despatch Centre	S K Soonee, Dr. Deb Chattopadhyay, Dr. Sushanta Chatterjee, Debasis De

Session - III Subject Area - Power Systems Protection, Stability, and Optimization Venue - Lecture Hall Complex - 03 Chair - Prof. Abhijit Abhyankar, Professor, IIT Delhi Co-Chair - Dr. K. Siva Kumar, Professor, IIT Hyderabad		
8th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
78	Modular Open-loop Eigen-sensitivity Analysis for Computation-efficient Stability Assessment	Aditya Pandey, Lokesh Kumar Dewangan
109	Impact of Droop Control on Impedance Trajectories under Stable Power Swings in Grid-Forming Converter-Integrated Power Systems	Sreenath B, Balabhaskar S S, Manas Kumar Jena
171	Transient Response Analysis in IBR-Dominated Power Systems Based on Short Circuit Ratio	Koduri Gowtham, Kiran Teeparthi, Pavan Kumar Yadala
225	Loss of Synchronism during Grid Disturbances in India	Mithila Aithagani, Anil M. Kulkarni
229	Virtual Inertia vs Physical Inertia for Improving the Stability of a Heavily Renewable Driven Power System	Ravi Reddi, Deepak Kumar Soni, Vaskar Sarkar
273	Modal Controllability and Observability Estimation of Critical Power System Modes From MIMO Frequency Scans	Kaustav Dey, Anil M. Kulkarni

<p>Session - IV Subject Area - Grid Resilience and Security Venue - Lecture Hall Complex - 04 Chair - Dr. Mital Kanabar, CEO, PowerProfs Inc. Co-Chair - Dr. Pradeep Kumar Yemula, Associate Professor, IIT Hyderabad</p>		
<p>8th December 2025 & 09:00 am to 10:30 am</p>		
Paper ID	Paper Title	Authors
56	A Novel Image-Based Watermarking Method for Detecting False Data Injection in Line Current Differential Relays	Swati Agarwal, Kondety Tony, Manish Pandit, Ranjana Sodhi
83	Hybrid IWSOA-ANN Approach for Load Stability During Cyber-Attack Blocking Controller Access	Arti Singhal, Ashu Verma, Rabindra Mohanty
88	Effective Graph Resistance based Vulnerability Assessment Framework for Cyber Resilient CPPS	Jigyasa Singhai, K Shanti Swarup
217	Reduced effective voltage control by shunt reactors in renewable rich grid – Experience of Western Region of India	Naresh Mhalas, Vishal Balram Puppala, Raj Shailendra Mudliar, <i>et al.</i>
274	Analyzing Risk in Power Substations through an Automated Vulnerability Assessment Tool	Shashank S, Nayan Aahladh, Sridevi P Rao, Gurunath Gurrala, <i>et al.</i>

Session - V Subject Area - Renewable Energy Systems Venue - Lecture Hall Complex - 07		
Chair - Dr. Satish Sharma, Assistant Professor, MNIT Jaipur Co-Chair - Dr. Rupesh Wandhare, Associate Professor, IIT Hyderabad		
8th December 2025 & 09:00 am to 10:30 am		
Paper ID Paper Title Authors		
75	Hydrogen-Based Offshore Wind Farm Energy Storage: Simulation and Sensitivity Analysis	Sree Vyshanvi Mamilla, K Shanti Swarup
85	A Data-Driven Framework of PV Hosting Capacity Assessment for a Military Garrison	Ujjawal Srivastava, P Amritansh Naidu, Ankit Singhal
135	Wind Power Forecasting using Auto-Regressive QRF for Operational Reserve Management	Girraj Raigar, Naveen Kumar Thokala, Swathi Battula, Abheejeet Mohapatra
167	Comparative Assessment of Feedforward and Sequence-Based Neural Networks for Solar Radiation Prediction Model	Bongoni Naresh, Amit Kumar Yadav, Ch Vineeth
177	Hybrid Energy Storage-Based Power Management Strategy for Stand-alone DC Microgrid	Krishnakant, Chuskit Dolma, Pravin Kumar, Prabodh Bajpai
222	Sector Coupling between Green Hydrogen and Steel: Machine Learning-based Estimation of Levelized Cost of Steel	Pratham Goel, Naran Pindoriya

<p>Session - VI</p> <p>Subject Area - Power System Planning and Operations</p> <p>Venue - Lecture Hall Complex - 08</p>		
Chair - Dr. Gurunath Gurrala, Associate Professor, IISc Bangalore		
Co-Chair - Dr. Ravikumar Bhimasengu, Professor, IIT Hyderabad		
8th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
94	Tariff Impact Analysis on Peer-to-Peer Energy Sharing in Residential Communities	Gopalji S. Kalojiya, Anupama S. Kowli
117	A Comprehensive Design Framework for AT-Fed Railway Traction Power Systems	Archita Vijayvargia, Abhijit Abhayankar
120	Fast Jacobian Evaluation for Islanded Microgrid Load Flow Using Compact Matrix Operations for Composite Load Models	Rasmita Muduli, Debapriya Das
125	Deep Analysis for Selective Control and CO ₂ Emission in Power Systems	Suresh Varwandkar
130	Insights and Analysis from Black Start Mock Drill Case Studies using Synchrophasor Technology	Praveen Tripathy, Subhash Kumar, Sachin Singh, <i>et al.</i>
202	Impact Analysis of Zero-Sum False Data Injection Attacks on Peer-to-Peer Energy Trading	V.V.N Prasad Thota, Kiran Teeparthi, Sri Phani Krishna Karri

Session - VII Subject Area - Electric Vehicles and Drives Venue - Lecture Hall Complex - 01		
Chair - Dr. Koti Reddi Butukuri, Technical Advisor, IIT Hyderabad Co-Chair - Dr. Rupesh Wandhare, Associate Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID Paper Title Authors		
91	Power Electronics Converter Topologies and Control Methods for On-Board and Off-Board Electric Vehicle Charging Systems: An Overview	Jajjalya Kashyap, E S N Raju P
93	Decentralized Smart EV Charging with Multi-Agent System Communication and Energy Coordination	Priyansh Dwivedi, Himanshu Tiwari, Pradyumna Yadav, Murari Kumar, K Shanthi Swarup
128	Electric vehicle battery charger based on DC-001 charging standard	Vaishnavvignesh G Iyer, Cilaveni Satish Chandra, Ravindranath Adda, Sreenath J G, Praveen Tripathy
223	Light Load Efficiency improvement of Dual Active Bridge Converter for EV Fast Charging Application	Nagasai G, Ravikumar Bhimasingu
261	High-Efficiency SIDO-SEPIC with Improved Cross-Regulation for EV Charging Systems	Kamalesh MS, Prabha S Umapathy, Bharatiraja Chokkalingam, Sanal Kumar S, <i>et al.</i>
266	Electrifying Mobility : Dynamic Charging for Next-Generation Electric Vehicles	Mahendar Reddy Peddolla, Sanjeeva Reddy B R

Session - VIII

Subject Area - Power System Planning and Operations

Venue - Lecture Hall Complex - 02

Chair - Dr. Amit R. Kulkarni, Additional Executive Engineer, MAHATRANSCO

Co-Chair - Dr. Vaskar Sarkar, Professor, IIT Hyderabad

9th December 2025 & 09:00 am to 10:30 am

Paper ID	Paper Title	Authors
126	Co-optimized Flexibility Market Framework for DSO Enabled Market Operations	Manu Ranjan Sharan, Abhijit R. Abhyankar, Ankit Singhal
142	Cost Allocation Mechanism for Shared Battery Storage Systems: A Game-Theoretic Approach	Anchal Maurya, Harshit Dhiman, Agam Jain, <i>et al.</i>
191	BIBC-Based Distribution Network Reconfiguration with Optimal Placement and Sizing of Renewable DGs under a 24-Hour Load Profile	Astamita Mishra, Manish Tripathy, Papia Ray
228	A Hybrid Clustering-PSO Framework for Reliable Islanded Microgrid Expansion Planning	Rasmita Muduli, Debapriya Das
230	Operational Strategies for Enhancing RE Integration into the Grid using Existing Transmission System	Minnakuri Venkateswara Rao, Priyam Jain, Vishal Puppala, <i>et al.</i>
262	Primary Frequency Response by Renewable Energy Plants: Regulatory Framework and Compliance Analysis in India	Mohit Kumar Gupta, Aman Gautam, Rahul Shukla, <i>et al.</i>

Session - IX Subject Area - Smart Grid and Power Systems Venue - Lecture Hall Complex - 03		
Chair - Dr. P. Bala Sai Kiran, Senior Software Engineer (Power Syst.), GE Vernova Co-Chair - Dr. K. Siva Kumar, Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
106	Digitizing Electrical Panels with MQTT and Multi-Network Raspberry Pi Gateways	Anmol Sardhalia, Sheraza Bashir, Ayush Yadav, <i>et al.</i>
131	Impacts of fast voltage boosters with current limiters of droop controlled grid forming inverters during delayed voltage recovery events	Upendran Mukundarajan, K. Shanti Swarup
195	Performance Assessment of Inverter-Fed Autonomous Microgrid with Uniform and Non-Uniform Delay Utilizing Internal Model Controller	Sneha Gonuguntla, Gnana SaiSree Boppudi, Naresh Kumar Vemula, Pratikanta Mishra, Kiran Kumar N
200	Improving Stability of GFL Inverter in Weak Grid using Paralleled GFM Inverter: Hardware Validation	H R Sai Kiran Pandit, Sarasij Das
258	An Improved Differential Admittance Based Fault Detection Algorithm for Low Voltage AC Microgrid	Joy Narayan Das, Dr. Biswajit Sahoo, Sandeep Banik
286	Short-Term Load Forecasting for Energy and Cost Savings: A Case Study	T. Praneeth, Gajangi Arun Kumar, P. Ram Kishore Kumar Reddy, Pradeep Kumar Yemula

Session - X Subject Area - Power Systems Protection, Stability, and Optimization Venue - Lecture Hall Complex - 04		
Chair - Prof. K. Shanti Swarup, Professor, IIT Madras Co-Chair - Dr. Seshadri Sravan Kumar V, Associate Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID Paper Title Authors		
61	Advanced Power Grid Feeder Protection and Control Functions for Wildfire Mitigation and Control	Srujana Yenigalla, Nagarjuna Koppakula, Sai Pramod Tati, Priya Kumari, Balakrishna Pamulaparty
70	An Integrated Approach for Fault Diagnosis and Localization in DC Microgrid	Anu Bhalla, Bhavesh R. Bhalja
136	Sequence Component-Based Protection Strategies for Fully Inverter-Dominated Microgrids	Arjita Pal, Rabindra Mohanty, Bijaya Ketan Panigrahi
170	Transmission Networks Connected With GFM Inverters: Protection Challenges and Opportunities	OD Naidu, Aarthi V, Neethu George, Vedanta Pradhan
236	Analysis of Grid Protection in the North-East Regional Network of India Using Actual Fault Data Under High Solar PV Penetration	Subhash Kumar, Karan Katariya, Sachin Singh, Subhra Ghosh, <i>et al.</i>
237	A New Facile Time-Voltage-Current Characteristics for Numerical Distance Relay Coordination in Modern Power Grids and FPGA Implementation	Praneeth N, STP Srinivas, Alivelu Manga Parimi

Session - XI Subject Area - Artificial Intelligence and Data Analytics in Power Grids Venue - Lecture Hall Complex - 07		
Chair - Prof. Pratyush Chakraborty, Associate Professor, BITS Pilani (Hyderabad) Co-Chair - Dr. Pradeep Kumar Yemula, Associate Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
102	Optimized Hybrid CNN-Transformer-LSTM Architecture for Accurate Solar Irradiance Forecasting under Variable Weather Conditions	Shanker M, Vikram Kulkarni
124	Efficient Wide Area Data Compression- A Ramanujan's Sum-Based Approach	Manish Pandit, Ranjana Sodhi
144	Sectoral Disaggregation of India's Peak Day Load Curve: A Pathway to Demand Flexibility	Pallavi Buwa, Anupama Kowli
172	OTC Platforms in Indian Power Markets – Driving Digitalization and Data Analytics for Economy, Efficiency, and Transparency	Vinod Kumar Agrawal, Kapil Dev, Ashish Shrivastav, <i>et al.</i>
183	Cybersecure Line Differential Relay Based on Transient Signatures and Decision Tree Classification	Suryanarayana Gangolu, Rakesh Kumar Panda, Suman M, CH Venkateswarlu
187	Constrained Loss Function Optimization based Short-Term Load Forecasting	Murari Jha, Ankit Singhal

Session - XII Subject Area - Control in Power Systems/Power Electronics Venue - Lecture Hall Complex - 08		
Chair - Dr. Shri Ram Vaishya, AI & Optimization Engineering Lead, EEPLUS, INC Co-Chair - Dr. Jose Titus, Assistant Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
82	Cyber-Physical Vulnerabilities of Distributed Secondary Control in DC Microgrids: The Role of DoS Attacks and CPLs	Bazila Rashid, K. Shanti Swarup
129	Controller design for Three level boost converter with single-phase inverter load	Vaishnavvignesh G Iyer, Cilaveni Satish Chandra, Ravindranath Adda, Sreenath J G, Praveen Tripathy
193	LVRT-Enabled Virtual Synchronous Generator Control for Grid-Forming Inverter-Based Resources	Supriya Sharma, Yashasvi Bansal
198	A 3-phase 2-level inverter with AC side boost and CMV mitigation scheme	S S Phaniram Musti, Ravikumar Bhimasingu
220	Modified Control Strategy to Improve the CC-CV Mode Transition Performance in Variable DC-Link Voltage On-Board Chargers	Cilaveni Satish Chandra, Vaishnavvignesh G Iyer, Ravindranath Adda, Sreenath J G, Praveen Tripathy
226	Controller Output Dynamic Limiting Technique for Overshoot Suppression in Current-Controlled Grid-Following PV Systems	Ajay Jena, Arun Rahul S

Session - XIII Subject Area - Power System Planning and Operations Venue - Lecture Hall Complex - 01		
Chair - Mr. Mohit Kumar Gupta, Chief Manager, NLDC, India Co-Chair - Dr. Vaskar Sarkar, Professor, IIT Hyderabad		
9th December 2025 & 04:15 pm to 05:45 pm		
Paper ID Paper Title Authors		
185	Decentralized Energy Exchange: A Blockchain-Based Smart contract Pricing Model for Sustainable Distributed Energy Markets	Tharun Tejavath, Surendra Srinivas
207	Utilization of Spinning Reserves in Largest Hydro Electric Power Plant in India-A Base Case	Rajesh Kumar, Absar Ahmad, Pavitra Malik, B. Raviteja
224	Simulation Analysis of Fault-Induced Delayed Voltage Recovery and 16000 MW Load Reduction Event in India	Priyam Jain, Gaurab Dash, Raj Kishan, <i>et al.</i>
233	Optimal reliability planning of radial distribution network considering hourly energy availability with renewables integration	Dharmendra Trivedi, Naveen Jain, Umesh Agarwal, Manoj Kumawat
259	Real-Time Oscillation Analytics for Power Grids: A Wavelet-Assisted Matrix Pencil Approach in SLDC Operations	Raja Shekar Nalluri, Bhanu Ganesh Ganta, Pradeep Kumar Yemula, <i>et al.</i>
287	Markov Modeling Based Reliability Evaluation of Compressed Air Energy Storage in Grid Operations	Abhishek Harit, Prerna Jain, Satish Sharma

Session - XIV

Subject Area - Control in Power Systems/Power Electronics

Venue - Lecture Hall Complex - 02

Chair - Dr. Shri Ram Vaishya, AI & Optimization Engineering Lead, EEPLUS, INC

Co-Chair - Dr. Seshadri Sravan Kumar V, Associate Professor, IIT Hyderabad

9th December 2025 & 04:15 pm to 05:45 pm

Paper ID	Paper Title	Authors
127	A Soft-Switched Dual Active Push-Pull Converter	Jabi Ali, Mandeep Singh Rana
252	Remaining Useful Life Prediction of Boiler Feed Pump Motor: A Statistical and Condition Monitoring Approach for Industry 5.0	Koti Reddy Butukuri, Hari Preetham Golla, Pradeep Kumar Yemula, Gali Sridhar, Tadiparti Koti Reddy
253	Multilevel Inverter for Grid Connected and Standalone applications	Shoubhik Mukherjee, Dr. Rupesh Wandhare, Deepak Gehlot, A.S Krishnapriya
269	Unbalanced Reference Voltage generation for Grid Forming Inverter Control During Asymmetrical Faults	Sunil Gajula, Ravikumar Bhimasingu
271	Modified Direct Power Control of Photovoltaic to Grid tied Voltage Source Converter with Active Filtering Capability	Praveen Vankadari, Korivi Yogananda Reddy, Sree Hari J B, Akshay Chabukswar, Avinash Naramu, Rupesh Wandhare

Session - XV Subject Area - Electric Vehicles and Drives Venue - Lecture Hall Complex - 03		
Chair - Dr. B. Prathap Reddy, Assistant Professor, IIT Indore Co-Chair - Dr. Rupesh Wandhare, Associate Professor, IIT Hyderabad		
9th December 2025 & 04:15 pm to 05:45 pm		
Paper ID Paper Title Authors		
49	Implications of induction of Electric Vehicles in India	Goutam Bhaskhar, Saumen Majumdar, Debabrata Chattopadhyay, S.K. Soonee, Debasis De
69	Swarm-Based EV Fleet with Grid-Aware Charging and Traffic-Adaptive Routing in Urban Networks	Greeshma Potnuru, K Shanti Swarup
256	Assessing Impact of Dynamic Parameters on Electric Vehicle Energy Consumption using Parameter Perturbation Analysis	Bhanu Ganesh Ganta, Raja Shekhar Nalluri, V S B Chaitanya Duvvury, Pradeep Kumar Yemula
263	Physics-Guided Indicators with PSO-Tuned Regression for EV Battery SOH Estimation	V. Yashwanth, Y. Likhith, B. Nikhil, C. Priyanka, K. H. Phanishree
267	Optimal EV Charging under Marginal Emission Factors and Time-of-Use Tariffs: Comparison of Telangana and Karnataka	Aishree Boruah, Gaddam Vardhan, Parmar Aryan Jasvantkumar, Pritha Chatterjee
279	Real-time Monitoring of Energy Dynamics in Electric Vehicles	Bhanu Ganesh Ganta, Pradeep Kumar Yemula, Koti Reddy B

Session - XVI Subject Area - Electric Vehicles and Drives Venue - Lecture Hall Complex - 04		
Chair - Dr. Kiran Kumar Nallamekala, Assistant Professor, SRM University Co-Chair - Dr. Jose Titus, Assistant Professor, IIT Hyderabad		
9th December 2025 & 04:15 pm to 05:45 pm		
Paper ID	Paper Title	Authors
10	Real-Time Fault Analysis and System Optimization in EV Controllers with Field-Oriented Control: A Practical Investigation on Monitoring Diagnostics and Enhancements	Suganya R, L.M.I. Leo Joseph, K Sreedhar
181	Multilayer Winding Configuration for Variable Pole Induction Motor Drives	Monika Jain, B Prathap Reddy
265	A Constant Switching Controller based DTC Scheme for Speed Control of Five-Phase Open End Winding Induction Motor	C Venkata Subba Reddy, Sabavath Akhila, Nalla Akshitha, Gunji Poojitha, Yadlapalli Ragini
270	Robust Optimal Non-Linear Control Technique for Efficient EV Drive Applications	Akshay Chabukswar, Sree Hari J B, Ponnaganti Sirisha Devi, Korivi Yogananda Reddy, Chekka Supriya, Rupesh Wandhare
272	Simulink-Based Modeling of Regenerative Braking with Energy Recovery Optimization for Electric Vehicles	Sadia Begum, Ujwala Gajula, Gouthami Eragamreddy, Swapna Raghunath

Session - XVII Subject Area - Smart Grid and Power Systems Venue - Lecture Hall Complex - 07		
Chair - Dr. Balakrishna Pamulaparthys, Senior Engineer, GE Vernova		
Co-Chair - Dr. Pradeep Kumar Yemula, Associate Professor, IIT Hyderabad		
9th December 2025 & 04:15 pm to 05:45 pm		
Paper ID	Paper Title	Authors
44	Design and Implementation of Blockchain-Enabled P2P Energy Trading Testbed	Shweta Arvind Kadam, Debasmita Panda, Ashutosh Yadav
84	Operational Analysis of Shipboard DC Microgrid Integrated with Advanced Storage Solutions	Ayush Bhatia, Rabindra Mohanty, Avanish Tripathi
86	Hybrid Islanding Detection in Grid-Connected PV-Battery Microgrid	Suraj Mishra, P Amritansh Naidu, Bijaya Ketan Panigrahi
190	Identification and Exploitation of Critical Lines through Targeted LR Attacks	V. Bharat Kumar, Satish Sharma
194	Practicing Advanced Technology Implementation for Indian Transmission Grid	Dr. Amit R. Kulkarni
210	Experimental Validation of Online Frequency Response Estimation of a Multi-port LTI Apparatus using Power System Ring-down Events	Santosh Singh, Anil Kulkarni

Session - XVIII Subject Area - Renewable Energy Systems Venue - Lecture Hall Complex - 08		
Chair - Dr. Rabindra Mohanty, Assistant Professor, IIT Delhi Co-Chair - Dr. K. Siva Kumar, Professor, IIT Hyderabad		
9th December 2025 & 04:15 pm to 05:45 pm		
Paper ID	Paper Title	Authors
50	Fault Detection in Unequal-Rated PV Strings Using Normalized Power and Snapshot Median Filtering	Jayakumar J, Justin Salamon M, Aswin Kumar M, <i>et al.</i>
79	Techno- Economic Modeling of a Renewable Hybrid Energy System	Kavya E M, Monisha M, Pasela Ramtej, K Shanthi Swarup
96	Next-Gen Offshore Wind Year Ahead Forecasting Aided Modelling for Techno-Economic Feasibility	Nidhi Gummaraju, Shri Varshini C, Sree Vyshnavi Mamilla, <i>et al.</i>
218	Impact of High Temperature on Wind Turbine Performance in India and Need for Climate-Resilient Design	Abhijeet Prakash, Priyanka Meena, Lav Kumar Khandelwal, <i>et al.</i>
247	Capacity credits for renewable energy and value of cross-border transmission in South Asian power systems	Suruchi Uppal, Srishty Jain, Puneet Chitkara, Sushil Kumar Soonee
281	Techno-Economic Feasibility Analysis of a Building Integrated Agrovoltaics Model	Alan Sam, Bhanu Ganta, Pradeep Kumar Yemula, Rayudu Katuri

Poster Presentations Venue - Corridor Space, Lecture Hall Complex		
<u>List of Judges</u>		
Dr. Shri Ram Vaishya, AI & Optimization Engineering Lead, EEPLUS, INC		
Dr. B. Prathap Reddy, Assistant Professor, IIT Indore		
Dr. Gurunath Gurrala, Associate Professor, IISc Bangalore		
Dr. Koti Reddi Butukuri, Technical Advisor, IIT Hyderabad		
Prof. Pratyush Chakraborty, Associate Professor, BITS Pilani (Hyderabad)		
8th December 2025 & 04:15 pm to 05:45 pm		
Paper ID	Paper Title	Authors
41	Intra state SCED, dispatch using LP optimization in Maharashtra – A case study	Debasis De, Sushil K Soonee, Prof. Zakir Hussain Rather, Shashank Jewalikar, Akhilesh Panwar, Dr. Deb Chattapadhyay
46	Dynamic Line Rating Computation and Limit Exchange Methodologies	Pradeep Kumar Manigilla, Mritunjay Aman, Sriker Annangi, <i>et al.</i>
62	Data-Driven Inertia Estimation using BiLSTM and XGBoost for RES Integrated Power Networks	Magam Vasista Sai, Shahbazuddin Syed, Altaf Q. H. Badar, Prachi Salodkar
65	Study of Dielectric Performance of Insulating Stand-offs Under Lightning Impulse	Gyanendra Kumar Kurmi, Basanta Kumar Gautam

66	Experimental study of the surface dielectric strength of insulating tubes on basis of geometry under lightning impulse voltages	Akrit Acharya, Basanta Kumar Gautam
74	Review of Mathematical Modeling and Scheduling Strategies of an Electric Vehicle Aggregator	SSSR Sarathbabu Duvvuri, Bala Sai Kiran P, Pinnamraju Sadhvika, Kukkala Varshini, Majji Vaishnavi, Jillabathula Pavithra
76	Adaptive Electric Vehicle EMS with Secure V2G Energy Transactions using Blockchain	C Shri Varshini, Nidhi Gummaraju, K Shanthi Swarup
92	A Survey on Fault Location, PMU Deployment, and Fault Behavior of Distributed Generators and Active Loads in Medium-Voltage Distribution Networks	Anchal Maurya, E S N Raju P
100	Multi-part Innovative Tariff Framework for the Renewables for ambitious Net Zero targets	Sushil Kumar Soonee, Dr Amit Kumar Singh Parihar, Ghansham Thakkar, Himanshu Mishra
104	Improving Wind Energy Forecast Accuracy Using Machine Learning	Tirunagaru V Sarathkumar, T Sanjeeva Rao, Arup Kumar Goswami, T Venkata Prasad
116	Virtualization of Protection in Distribution Substation: An Object-Oriented Approach	Bhaskar Sahu, K. Shanti Swarup

119	Impact of Filters on Grid Connected BESS: Experimental Analysis and Validation	Nivedika Kher, Sonam Gupta, Anup Shukla
137	Key Insights from Security-Constrained Economic Dispatch: A Case Study for Uttar Pradesh	Nishant Kumar, Abheejet Mohapatra, Prabodh Bajpai, <i>et al.</i>
143	Detection and Localization of Low-Frequency Oscillations in North Eastern Region of India in the Presence of Inverter Based Resources	Karan Vasudev Katariya, Subhash Kumar, Palash Jyoti Borah, <i>et al.</i>
192	Optimising Power Despatch: Security Constrained Economic Despatch Initiative in Gujarat	Divya Sharma, Vatsalkumar Bhatt, Pandya Darshan Dilipkumar, <i>et al.</i>
196	Directional Overcurrent Relay Coordination in a Microgrid Environment by using Genetic Algorithm, and Breeder Genetic Algorithm	Ravindra Mankar, Pranav Darji
205	A Novel Development of a Single Switch DC DC Circuit for Fuel Cell Systems	Gurijala Sreedhar, CH Hussain Basha, Likhitha R, Prathibha E, Muralikrishna Boddu

212	Impact of Different Current Limiting Strategies on Stable Power Swing Trajectories in Grid-Forming Converter–Integrated Power System	Balabhaskar S S, Sreenath B, Manas Kumar Jena
219	Shock-Proofing the Grid: Readiness of Indian Electricity Markets for Futures-Based Hedging Instruments	Ribhu Shankar, Dr. Parminder Kaur Bajaj
250	An Enhanced VMD-DT-Based Fault Protection Scheme for AC Microgrid	Sandeep Banik, Dr. Biswajit Sahoo, Prof. Jyoti Prakash Mishra
264	A Hybrid Symmetrical Optimum-Pattern Search tunned PI Based Three-Phase SRF PLL Synchronization System Under Grid Irregularities	Bibhuti Prasad Sahoo, Adityansu Pati, Raseswari Pradhan
278	Security Constrained Economic Despatch for TGSLDC: Architecture, Data Pipeline, and MOD Benchmarking	Avik Ghosh, Pradeep Kumar Yemula, P. Suresh Babu, B. Raja Thirupathi, L. Sarveswar
280	Adaptive Distance Relay Protecting Transmission Lines Connecting Inverter Based Resources	Chandra Panda, Deepak Pullaguram, Ashok Kumar Pradhan
285	Remaining Useful Life Estimation of Aged Power Transformers: A Case Study Using Degree of Polymerisation and Furan Analysis	Koti Reddy B, Pradeep Kumar Yemula, Vishal Devulapalli, Rammohan Rao Vemula, Bhanu Ganesh Ganta

Online Presentations		
Venue - Lecture Hall Complex - 11		
Chair - Prof. Basanta Kumar Gautam, Associate Professor, Institute of Engineering, Tribhuvan University, Nepal		
Co-Chair - Dr. Ravikumar Bhimasingu, Professor, IIT Hyderabad		
9th December 2025 & 09:00 am to 10:30 am		
Paper ID	Paper Title	Authors
73	Evaluating Cascading Failure for Grid Resilience under Extreme Weather Events	Chandan Chaudhary, Alaaeldeen Abdelkader, Mohammed Benidris, Joydeep Mitra
81	Design and Modeling of Campus Microgrid for Future Sustainable Energy Operations	Mahmuda Akter, Jannatul Ferdous, Samiul Hasan Emon, Shah Mohazzem Hossain
138	Comparative Analysis of Flywheel and Battery Energy Storage Systems for Smoothing Photovoltaic Power Output	Anil Bhatt, Bipin Subedi, Nita Kumari Phuyal, <i>et al.</i>
141	Space Vector Pulse Width Modulation Inverter Based Indirect Field Oriented Control for Induction Motor	Aayush Bhatta, Sandip Timsina, Ritesh Basnet, <i>et al.</i>
244	Techno-Economic and Environmental Assessment of On-Grid Rooftop Solar Integration for Diesel-Dependent Urban Markets	Md. Sabbir Alam, Shah Mohazzem Hossain
245	Exploring a Hybrid Renewable Energy System to Meet Bangladesh's Future Energy Needs	Md. Aminul Hoque, MD. Nahid Billah, Shah Mohazzem Hossain