

Smart Technologies for Power, Energy and Control
(STPEC 2025)



December 10 -13, 2025 | NIT Goa. Goa. India



IEEE STPEC 2025

2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control

10-13 December, 2025, Goa, India

Technical Session Schedule

(First Phase)

Note: The finalization of schedules for the remaining papers will be done by 24th November 2025.



National Institute of Technology Goa, India













Smart Technologies for Power, Energy and Control (STPEC 2025)

Day 1	Date: 10-12-	2025	Oral Session - 1 T	Sime: 16:00 to 17:30
Date: 10-1	2-2025 P	arallel Sessi	on 1 Track 1	Venue:
ID	Time Slot	Paper ID	Paper Title	
OS-T1-S1-P1	16:00 - 16:15	258	False Data Injection Attack Resilient LFC System with Optimized Hybrid Fractional <i>Authors:</i> Anukriti Sharma, Bharat Singh	Order PID Controller
OS-T1-S1-P2	16:15 - 16:30	188	Economic Load Dispatch using RUN optin <i>Authors:</i> Ujjwal Kumar	mization
OS-T1-S1-P3	16:30 - 16:45	1503	Design and Simulation of an Electronic on Transformer under Transient and Steady-S <i>Authors:</i> Narayan Prasad, Rajesh Pindoriy Apsara Adhikari, Akhileshwar Mishra, Sha	State Conditions ya, Jeetendra Chaudhary,
OS-T1-S1-P4	16:45 - 17:00	425	Power Grid Failures in the Renewable Era in Spain and Portugal <i>Authors:</i> Sunil Ankeshwarapu, Vennol Dh Rao	•
OS-T1-S1-P5	17:00 - 17:15	452	Hybrid Machine Learning for Uncertainty-Forecasting in Renewable-Integrated Grid <i>Authors:</i> Yogita Singh, Vaibhavi Raja, Jyo G Lloyds Raja	S
OS-T1-S1-P6	17:15 - 17:30	1369	Reliability Improvement of Bullet Train Po Cyber Insurance Premium under Grid and <i>Authors:</i> Pesingi veerendra Rajesh varma	Cyber Outages
Date: 10- 2	12-2025 F	Parallel Sessi	ion 2 Track 2	Venue:
ID	Time Slot	Paper ID	Paper Details	
OS-T2-S1-P1	16:00 - 16:15	93	Comprehensive Study Paper on the Role of in Production of Permanent Magnet Synch <i>Authors:</i> Asma Raza, Ujjwal Kumar Kalla	nronous Motor
OS-T2-S1-P2	16:15 - 16:30	437	Performance Analysis of DTC-Based Dua Two-Level Inverters in Five-Phase OEW-I simplified SVM <i>Authors:</i> Mohan Malla, Ramesh Tejavathu	PMSM Drives with
OS-T2-S1-P3	16:30 - 16:45	503	Frequency Domain Dielectric Response of paper Insulation Retrofilled with Natural E <i>Authors:</i> Soumya Chatterjee, Brahmaswar	Ester Oil rup Laha, Arup Kumar Das
OS-T2-S1-P4	16:45 - 17:00	715	Stator Winding Faults Detection using Syr Stator Fluxes in Three Phase Induction Mo <i>Authors:</i> Tushar Vilhekar Visvesvaraya, M	otor
OS-T2-S1-P5	17:00 - 17:15	737	Sensorless Speed Control of Dual Stator In Enhanced Rotor-Flux based Model Refere Stator Command Voltage Estimation <i>Authors:</i> Abhijit Das, Shantanu Chatterjee	ence Adaptive System with
OS-T2-S1-P6	17:15 - 17:30	1012	Performance Comparison of Field-Oriente MOSFET and GaN-Based PMSM Drive <i>Authors:</i> BHARAT LAL, Jeevanand Sesh	













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 10-3	12-2025 H	Parallel Sessi	ion 3 Track 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T3-S1-P1	16:00 - 16:15	216	Coupled Inductor Based Non-Isolated High Gain DC-DC Converter <i>Authors:</i> Raj Moyal, Jahangeer Dar, Mukesh Pathak
OS-T3-S1-P2	16:15 - 16:30	386	Power Factor Correction by Phase Angle Regulation and Mitigation of Voltage fluctuations using MLI based DVR <i>Authors:</i> singamasetty manmadha rao, R J Satputaley, Renuka Dhote
OS-T3-S1-P3	16:30 - 16:45	117	Integrated Control Strategy for BLDC Motors Using a High-Gain DC-DC Converter with Sensorless Feedback <i>Authors:</i> Konda Naresh, D Suresh, Swapnajit Pattnaik
OS-T3-S1-P4	16:45 - 17:00	254	Evaluation of a ±5 kV Solid-state-based 200 ns duration Pulse Generator <i>Authors:</i> Aashish Ranjan, Babul Saini, Anshul Kumar Yadav, Anand Abhishek
OS-T3-S1-P5	17:00 - 17:15	285	Design and Analysis of a Triple-Gain Seven-Level Switched Capacitor Inverter for PV Application Authors: Biswajit Sarangi, Varsha Singh
OS-T3-S1-P6	17:15 - 17:30	311	Study the effect of Current Source Driver on the performance of Traction Inverter *Authors: Yashahshree Thombre, Madhuri Chaudhari*
Date: 10- 2	12-2025 I	Parallel Sessi	ion 4 Track 4 Venue :
Date: 10-1	Time Slot	Parallel Sessi Paper ID	on 4 Track 4 Venue : Paper Details
ID	Time Slot	Paper ID	Paper Details Gradient-Based Optimizer for Short-term Hydrothermal Generation
ID OS-T4-S1-P1	Time Slot 16:00 - 16:15	Paper ID 187	Paper Details Gradient-Based Optimizer for Short-term Hydrothermal Generation Scheduling. Authors: Aman Kumar A Reduced Switch Count Three-Level Inverter for Wind Energy System Using ANN-Based Vector Control
OS-T4-S1-P1 OS-T4-S1-P2	Time Slot 16:00 - 16:15 16:15 - 16:30	187 1246	Paper Details Gradient-Based Optimizer for Short-term Hydrothermal Generation Scheduling. Authors: Aman Kumar A Reduced Switch Count Three-Level Inverter for Wind Energy System Using ANN-Based Vector Control Authors: GIRIBABU DYANAMINA, Navin Kumar Grid-Tied Single-Stage Solar Photovoltaic-Based EV Battery Charging with MPPT and Power Quality Improvement
OS-T4-S1-P1 OS-T4-S1-P2 OS-T4-S1-P3	Time Slot 16:00 - 16:15 16:15 - 16:30 16:30 - 16:45	187 1246 500	Paper Details Gradient-Based Optimizer for Short-term Hydrothermal Generation Scheduling. Authors: Aman Kumar A Reduced Switch Count Three-Level Inverter for Wind Energy System Using ANN-Based Vector Control Authors: GIRIBABU DYANAMINA, Navin Kumar Grid-Tied Single-Stage Solar Photovoltaic-Based EV Battery Charging with MPPT and Power Quality Improvement Authors: VARSHA SAHU, RAJAN KUMAR Assessing the Impact of EV Integration in Multi-Area Economic Dispatch under Renewable Uncertainty











in L



Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 10-2	12-2025 F	Parallel Sessi	ion 5 Track 5 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T5-S1-P1	16:00 - 16:15	283	SoC estimation of lithium-ion batteries using Golden Jackal algorithm tuned Support Vector Machine *Authors:* Saneep K, Sundareswaran K, P Srinivasa Rao Nayak, Sishaj P Simon, Josephine R L, Mithun T
OS-T5-S1-P2	16:15 - 16:30	504	Design, Analysis and Control of Multi-Mode Cell Voltage Equalizer using Fly-back Converter for Series-Connected Battery String <i>Authors:</i> ABHAYA KUMAR SAHOO, Keerthi Saladi, Sashwathkumar S, Lizanne Fernandes, V. Sankaranarayanan
OS-T5-S1-P3	16:30 - 16:45	709	Integrating Distracted Driving Detection with Vehicle Platooning for Semi-Autonomous Driving in Smart Transportation <i>Authors:</i> Anirban Dasgupta, Rahimul I. Mazumdar, Parijat Bhowmick
OS-T5-S1-P4	16:45 - 17:00	770	Dual Solar based Isolated Battery Charger for Vehicle Integrated Photovoltaics Application Authors: Sanam Agnihotri, Dipankar Debnath
OS-T5-S1-P5	17:00 - 17:15	817	Comparative Analysis of Different Rotor-Shaped IPMSM for Two-Wheeler Electric Vehicles *Authors:* Lourembam Devi, Sreenu Sreekumar, Anoubam Delin Sharma, Stalin Meitei Athokpam, Kilangleima Chingsubam
OS-T5-S1-P6	17:15 - 17:30	909	Sensitivity Analysis of LCC-S Based Multiphase Inductive Power Transfer System Under Compensating Parameter Variation <i>Authors:</i> Sukumar Das, Apurv Kumar Yadav
Date: 10- 3	12-2025 F	Parallel Sessi	ion 6 Track 6 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T6-S1-P1	16:00 - 16:15	72	Eddy Current Sensor Based Smart Control System for Optimizing Industrial Zinc Coating Process Using Adaptive Machine Learning and IIoT Authors: Tarun Das; Chinmay Bera; Chandan Dutta; Prem Kumar Das; Nitish Kumar Bhakat; Kedar Bhabe; Sarmishtha Palit Sagar
OS-T6-S1-P2	16:15 - 16:30	97	Calibration of Photo Resistive Sensor Using Optimization Algorithms <i>Authors:</i> Bhanu Teja
OS-T6-S1-P3	16:30 - 16:45	109	Dual Parametric Fractional Controller for Unstable Fractional Order Processes. <i>Authors:</i> Rammurti Meena; Sudipta Chakraborty; Vipin Chandra Pal
OS-T6-S1-P4	16:45 - 17:00	226	Dual-Loop PD Control for Time Delayed Double Integrating Processes Using a Smith Predictor <i>Authors:</i> Prabir Singha; Dipjyoti Das; Sudipta Chakraborty
OS-T6-S1-P5	17:00 - 17:15	300	Dynamic Viscoelastic Modeling Analysis & Nonlinear Control of Smart Material Actuator for Rehabilitation Purposes <i>Authors:</i> Pranjal Sharma; Krishnan Chemmangat
OS-T6-S1-P6	17:15 - 17:30	315	Leader-Follower Consensus with Deep Neural Networks Authors: Khushal Chaudhari; Krishanu Nath; Manas Bera











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa, India

Date: 10-12-20	25 Down!	lal Caggian 7	Chariel Cassian 1 Vanue
ID	Time Slot	lel Session 7 Paper ID	Special Session 1 Venue : Paper Details
OS-SS01-S1-P1	16:00 - 16:15	497	Electric Vehicles Impact on the Power Grid: A Review of Challenges, V2G Integration, and AI-Based Control Strategies *Authors:* Sahil Bansod; Rudresh kadu; Madhuri Chaudhari
OS-SS01-S1-P2	16:15 - 16:30	582	A Data-Driven Dynamic Pricing Framework for EV Fast Charging Using Enhanced Bi-LSTM <i>Authors:</i> GOBIKA NIHEDHINI; THANGAVEL S
OS-SS01-S1-P3	16:30 - 16:45	978	Optimal Allocation and Hosting Capacity Analysis of EV Charging Stations and Solar PV Systems in Bhopal City *Authors:* Priyanshu Gupta; Vivek Mohan; Reshmi A. R; Mrudula Murukan G; Aedna Kurian
OS-SS01-S1-P4	16:45 - 17:00	1486	A Grid/Solar PV Assisted Multifunctional On-Board Charger for Micro EVs <i>Authors:</i> Prakash Ji; Virendra Prasad Maurya
OS-SS01-S1-P5	17:00 - 17:15	365	Optimal Sizing of PV, Wind Power, and Battery Storage for Coordinated EV Charging Stations with Distribution System <i>Authors:</i> DIGAMBAR GOVIND; MANOJ FOZDAR
OS-SS01-S1-P6	17:15 - 17:30	1169	Optimal Placement of Electric Vehicle Rapid Charging Stations with V2G Strategies *Authors:* Sandip Yeole; Prakash G. Burade
Date: 10-12-20	25 Paral	lel Session 8	Special Session 2 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS02-S1-P1	16:00 - 16:15	565	Design and Experimental Validation of Robust Super-Twisting Control for Underactuated Rotational Pendulum Systems *Authors: TARA SWARAJ; Prachurjya Dutta; Rahash Nathasarma; Nabanita Adhikary
OS-SS02-S1-P2	16:15 - 16:30	566	A Toolbox for Estimating UAV Battery Requirements and Flight Time *Authors:* Nageshwar Kumar; Nalin Kumar Sharma; Rahul R. Salunkhe
OS-SS02-S1-P3	16:30 - 16:45	1378	Gaussian Process Regression-Assisted Sliding Mode Control for Trajectory Tracking of Unmanned Surface Vehicles <i>Authors:</i> Sidharthan S; Santhakumar Mohan
OS-SS02-S1-P4	16:45 - 17:00	964	Robust Position Tracking Control of Underwater Vehicle- Manipulator System: Nonsingular Fast Terminal Quasi Sliding Mode <i>Authors:</i> Vikas Karade; Girish Lakhekar
OS-SS02-S1-P5	17:00 - 17:15	1281	Semantic Spatial Object Interpretation for Indoor Environments using Sensor Fusion *Authors:* Deep Senchowa; Deepjyoti Kalita; Priyakshi Bordoloi; Abhijit Boruah; Debajit Sarma
OS-SS02-S1-P6	17:15 - 17:30	912	Mobile Robot Navigation Using Reinforcement Learning based Soft Actor-Critic Algorithm *Authors: Syed Zaffir Sajad Kamili; Shoaib Mohd Nasti; Mohammad











Smart Technologies for Power, Energy and Control





(STPEC 2025) December 10 -13, 2025 | NIT Goa, Goa, In

Day 2	Day 2 Date: 11-12-2025		Oral Session - 2	Time: 08:30 to 10:00
Date: 11-	-12-2025	Parallel Sess	sion 1 Track 1	Venue:
ID	Time Slot	Paper ID	Раре	er Title
OS-T1-S2-P1	08:30 - 08:45	480	Optimized Power Flow Manageme Penetration Scenarios Using Multi- Authors: Supriya Jaiswal, Ankur M	-Verse Optimizer
OS-T1-S2-P2	08:45 - 09:00	501	Strategic Bidding for Virtual Powe New Hybrid MGFO Technique for <i>Authors:</i> Choudhary Prakash	e ;
OS-T1-S2-P3	09:00 - 09:15	521	Optimal Reactive Power Dispatch Intelligible-in-time Logics <i>Authors:</i> Rahul Kumar, S. Sivasub	
OS-T1-S2-P4	09:15 - 09:30	523	Critical Voltage Stability Index Ba Distribution Network Authors: Koushik Mandal, Manas Roy	·
OS-T1-S2-P5	09:30 - 09:45	528	Directional Relaying Using Fundar Phase Currents <i>Authors:</i> Srijita Saha, Biman Kum	·
OS-T1-S2-P6	09:45 - 10:00	647	Autoencoder	Against Cyber Attacks Using LSTM (OBIA, Baidyanath Bag, Swapnajit
Date: 11-	-12-2025	Parallel Sess	sion 2 Track 2	Venue:
Date: 11-	Time Slot	Parallel Sess Paper ID		Venue : r Details
				r Details it-phase Induction Motor under
ID	Time Slot	Paper ID	Paper Modeling of Series-connected Spli Open-Circuit Fault	it-phase Induction Motor under arshan Kaarthik e Symmetric and Asymmetric
OS-T2-S2-P1	Time Slot 08:30 - 08:45	Paper ID	Modeling of Series-connected Spli Open-Circuit Fault Authors: Deeksha Bhule, R. Sudha Comparative Analysis of Six Phase Induction Motor Under DTC Authors: Shruthi Regu, Ramsha K	r Details it-phase Induction Motor under arshan Kaarthik e Symmetric and Asymmetric farampuri, Jay K. Pandit Versus Current Contours in Single-hed Reluctance Machine
OS-T2-S2-P1 OS-T2-S2-P2	Time Slot 08:30 - 08:45 08:45 - 09:00	1128 1424	Modeling of Series-connected Spli Open-Circuit Fault Authors: Deeksha Bhule, R. Sudha Comparative Analysis of Six Phase Induction Motor Under DTC Authors: Shruthi Regu, Ramsha K Dynamic Effects on Flux Linkage Pulse-Operated High-Speed Switch	arshan Kaarthik e Symmetric and Asymmetric farampuri, Jay K. Pandit Versus Current Contours in Single- hed Reluctance Machine m Narayanan ration Behaviour of Axial
OS-T2-S2-P1 OS-T2-S2-P2 OS-T2-S2-P3	Time Slot 08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	1128 1424 1455	Modeling of Series-connected Spli Open-Circuit Fault Authors: Deeksha Bhule, R. Sudha Comparative Analysis of Six Phase Induction Motor Under DTC Authors: Shruthi Regu, Ramsha K Dynamic Effects on Flux Linkage Pulse-Operated High-Speed Switch Authors: Samrat Das, Gopalaratna Experimental Studies on Magnetiz Electromagnetic Bearings Authors: Aditya Raj, Kamisetti N Investigations on effect of shaft-me SRM performance and its remedy	arshan Kaarthik e Symmetric and Asymmetric farampuri, Jay K. Pandit Versus Current Contours in Single- hed Reluctance Machine m Narayanan ration Behaviour of Axial











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa,

Date: 11	-12-2025	Parallel Sess	sion 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T3-S2-P1	08:30 - 08:45	1586	A New Converter Topology to Suppress Common-Mode Voltage in Open End PMSM Drives based on Three-Phase Unfolder <i>Authors:</i> Brojogopal Majhi
OS-T3-S2-P2	08:45 - 09:00	287	Modified Bridgeless Luo Converter Topology for Electric Vehicle Charging Applications Fed with Multiple Sources <i>Authors:</i> VISHVANATH M, Venkadesan A, Sentamizh Selvan S, Jojin Thomas
OS-T3-S2-P3	09:00 - 09:15	341	Optimal EPS Control for Minimum Backflow Power and Current Stress for Dual Active Bridge Converter <i>Authors:</i> JAHANGEER DAR
OS-T3-S2-P4	09:15 - 09:30	357	Assessment of Control Strategies and Switching Technologies in DC-DC Power Conversion. <i>Authors:</i> Abhishek Raj
OS-T3-S2-P5	09:30 - 09:45	385	Harmonic Component Based Analysis and Loss Minimization of Soft Switched Triple Active Bridge Converters <i>Authors:</i> Harikrishnan A, Silpashree Sahu, Dipankar De, Alberto Castellazzi
OS-T3-S2-P6	09:45 - 10:00	92	Design and Performance Evaluation of a Bridgeless Zeta Converter for Efficient EV Charging Systems *Authors:* VISHVANATH M, Chenna Raghavendra Reddy G, Lokesh Kola, Sunkanna Ganiga, Venkadesan A, Sentamizh Selvan S
Date: 11	-12-2025	Parallel Sess	sion 4 Track 4 Venue :
	12 2020		Hon 4 Track 4 Venue .
ID	Time Slot	Paper ID	Paper Details
ID	Time Slot	Paper ID	Paper Details A Seamless Transition of Microgrid using Dedicated Resynchronization Distributed Generation based on Droop Control
ID OS-T4-S2-P1	Time Slot 08:30 - 08:45	Paper ID	Paper Details A Seamless Transition of Microgrid using Dedicated Resynchronization Distributed Generation based on Droop Control Authors: Pallavi Rani, Suman Murugesan, Asheesh Kumar Singh Market Design for Short-Term Power Trading Through Electric Power Exchange
OS-T4-S2-P1 OS-T4-S2-P2	Time Slot 08:30 - 08:45 08:45 - 09:00	1436 505	Paper Details A Seamless Transition of Microgrid using Dedicated Resynchronization Distributed Generation based on Droop Control Authors: Pallavi Rani, Suman Murugesan, Asheesh Kumar Singh Market Design for Short-Term Power Trading Through Electric Power Exchange Authors: Vankadara Kumar Electrical Design and Techno - Economic Analysis of Hybrid Floating Solar PV System Authors: GUNDA SAI CHARAN RAJ, P S Kulkarni, Vaidehi Menon,
OS-T4-S2-P1 OS-T4-S2-P2 OS-T4-S2-P3	Time Slot 08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	1436 505 507	Paper Details A Seamless Transition of Microgrid using Dedicated Resynchronization Distributed Generation based on Droop Control Authors: Pallavi Rani, Suman Murugesan, Asheesh Kumar Singh Market Design for Short-Term Power Trading Through Electric Power Exchange Authors: Vankadara Kumar Electrical Design and Techno - Economic Analysis of Hybrid Floating Solar PV System Authors: GUNDA SAI CHARAN RAJ, P S Kulkarni, Vaidehi Menon, Eluri Haritha, Riya Kansal, Muskan Saxena DFOGI-RLS lattice-FLL Based Synchronization Technique for Wind- PV-BESS Based Standalone Distributed System with Local Non- Linear Load













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11	-12-2025	Parallel Sess	sion 5 Track 5 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T5-S2-P1	08:30 - 08:45	961	A Taxonomy of Data Inconsistencies and their operational impact in Automatic Train Operation Authors: Pardeep Kumar, Divakar Singh, Meenakshi Chaudhary, Sanjay Motia
OS-T5-S2-P2	08:45 - 09:00	1001	Fault-Tolerant Radio Communication Framework for TCAS: Design, Implementation and Validation *Authors: Raj Singh, SANDEEP KUMAR, Sanjay Motia, Manpreet Kaur
OS-T5-S2-P3	09:00 - 09:15	1066	Design and Analysis of Coreless Double-D Coil for Dynamic Wireless Power Transfer in Electric Vehicles Under Misalignment *Authors:* Ngangoiba Maisnam, Maria Loukrakpam, Shaik Affijulla, Ksh Milan Singh
OS-T5-S2-P4	09:15 - 09:30	1068	Sustainability Challenges and Economic Impact of Electric Vehicle Charging Infrastructure Deployment Authors: Joynath Mishra
OS-T5-S2-P5	09:30 - 09:45	1151	Performance Analysis of Distribution Systems under Different Electric Vehicle Penetration Levels *Authors:* Sapna Verma, Bhavnesh Kumar, Arjun Tyagi
OS-T5-S2-P6	09:45 - 10:00	1377	A Comprehensive Review on Pantograph-Catenary Arc Detection and Classification in High-Speed Railway Traction Systems *Authors:* Kriti Mathur, Dr. Sandeep Kumar Yadav, Dr. Bharat Singh Rajpurohit
Date: 11	-12-2025	Parallel Sess	sion 6 Track 6 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T6-S2-P1	08:30 - 08:45	389	Empirical Study of Challenges and Knowledge Practices in Automation Control Software. <i>Authors:</i> Amar Banerjee
OS-T6-S2-P2	08:45 - 09:00	409	Design and Implementation of Smart Road Management System Using PLC and HMI *Authors:* Dinanath Prasad; Alok Vardhan; Mahendra Dwivedi; Preeti Singh
OS-T6-S2-P3	09:00 - 09:15	535	Interactive steering for seamless transition during control handover in autonomous driving *Authors:* Adithyaa Rettaikudi Gurumoorthi; Vaidehi Bagaria; Bijo Sebastian
OS-T6-S2-P4	09:15 - 09:30	751	Multi-hypotheses Trajectory Prediction of On-Road Vehicles Using MC-EKF with Map Constraints *Authors:* Muni Srinvasulu B; Bijo Sebastian; Lelitha Vanajakshi
OS-T6-S2-P5	09:30 - 09:45	1093	AI-Driven Adaptive FOPID Control for Predictive Maintenance with Experimental Analysis <i>Authors:</i> ANKUSH GUND
OS-T6-S2-P6	09:45 - 10:00	1116	Smart Controller for Energy-Efficient AHU Operation in Academic Buildings *Authors:* Sushil Kannan; Maya Vijayan; Thanga Raj Chelliah; Sudhakar Subudhi













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11-12-2	025 Para	llel Session '	7 Special Session 1 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS01-S2-P1	08:30 - 08:45	306	Modeling and Interpretation of Grid Power Loss in EV Infrastructure with Explainable AI *Authors:* Kanaka Raju; Suresh Patnaik Pakki; Y Santhosh Satya; Ashok Ganga; Jaganmohan Rao Tarra
OS-SS01-S2-P2	08:45 - 09:00	683	Design and Development of a Dynamic Wireless Charging System Using a Single Inverter with Constant Voltage and Constant Current Charging. <i>Authors:</i> Bharatiraja C; Nakeeran R
OS-SS01-S2-P3	09:00 - 09:15	1003	Quantum Inspired Weighted PSO Guided Incentive Scheme for EV Charging Stations Authors: SOHOM BANERJEE; DIPAYAN NATH; UJJAL SUR
OS-SS01-S2-P4	09:15 - 09:30	1155	Optimal Sizing And Placement Of Electric Vehicle Charging Station With The Integration Of Renewable Energy Source *Authors:* Anugraha C; Narayanan K; Anurag Sharma; Tomonobu Senjyu; Alexander Aguilla; Gulshan Sharma
OS-SS01-S2-P5	09:30 - 09:45	1342	VSG-based Grid Forming Inverter Control for Solar PV and Electric Vehicles to Enhance the Frequency Stability in LFC Systems <i>Authors:</i> Suriya Sharif; ASADUR RAHMAN; Abdullah Ahmad
OS-SS01-S2-P6	09:45 - 10:00	1224	A Novel THF-NLFXLMS Control Approach for PMSG-Integrated Three-Phase Microgrid intended to G2V and V2G EV Charging Infrastructure Authors: SANJAY KUMAR; SHAILENDRA KUMAR; BHIM SINGH
Date: 11-12-2	025 Para	llel Session 8	Special Session 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS03-S1-P1	08:30 - 08:45	279	Impact Assessment of Fast DC EV Charging Station Integration in Islanded Microgrid Using a Node Sensitivity-Based Approach <i>Authors:</i> Amrutha Raju B
OS-SS03-S1-P2	08:45 - 09:00	761	Health Monitoring of Brushless DC Motor Based Electric Vehicles-A Review *Authors:* Munish Yadav; Abhishek Kumar Pandey; Anshika Gupta; Monalisa Biswal
OS-SS03-S1-P3	09:00 - 09:15	792	Co-adaptive Reinforcement Learning-based Attacker-Defender Model for Secured Smart Distribution System <i>Authors:</i> Atharva Rathi; Akshaiy Thinakaran; Dipanshu Naware
OS-SS03-S1-P4	09:15 - 09:30	952	Probabilistic Flexibility Enhancement in Active Distribution Networks under Operational Constraints *Authors:* T Koteswara Rao; Ankur Rana
OS-SS03-S1-P5	09:30 - 09:45	1579	A Comparative Analysis of Various Deep Learning Models for State-of-Charge Estimation in Lithium-Ion Batteries
			Authors: Arghya Mitra; Sourabh Joshi Digital Twin Implementation and Scenario Analysis for a PV Fed













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11-12-	2025 Par	allel Session	9 Track 1 & 2 Venue :
ID	Time Slot	Paper ID	Paper Details
OL-S1-P1	08:30 - 08:45	137	Modeling and Analysis of Partial Discharge Behavior in XLPE Cables: Void Characteristics, Voltage Impacts, and Insulation Aging <i>Authors:</i> Puja Roy, Ujjwal Kumar Kalla, Neha Adhikari
OL-S1-P2	08:45 - 09:00	396	A Study And Assesment Of Impact Of Accelerated Thermal Ageing On Partial Discharge Test On Xlpe Cable *Authors: Puja Roy, Ujjwal Kumar Kalla, Neha Adhikari*
OL-S1-P3	09:00 - 09:15	508	A Closed Form Fault Location Method for Double-Circuit Series Compensated Lines Authors: NEETHU GEORGE, OD Naidu, Ashok Kumar Pradhan
OL-S1-P4	09:15 - 09:30	926	Intelligent Fault-Tolerant Control Strategy for 5-Phase HV Electric Vehicle Traction Inverters *Authors:* Anindya Banik, Shantanu Saha*
OL-S1-P5	09:30 - 09:45	1361	A Modified Hysteresis Controller for SRM Drive Fed from AHB Converter Authors: Sumit Singh, Amit Kumar Jain
OL-S1-P6	09:45 - 10:00	1575	Design and Performance Assessment of Hybrid Halbach Brushless PM Motor for UAV Applications Considering Torque and Rare-Earth Utilization Efficiency *Authors: Vaibhav Bhardwaj, Amit Kumar Jain*

Day 2	Date: 11-12-2025		Oral Session - 3	Time: 12:00 to 13:30
Date: 11-1	12-2025 F	Parallel Sessi	on 1 Track 1	Venue:
ID	Time Slot	Paper ID	Pap	oer Title
OS-T1-S3-P1	12:00 - 12:15	679	Modern Distribution Networks	ty Theft Detection Technologies in kumar Shinde, Subhra Kar, Manish
OS-T1-S3-P2	12:15 - 12:30	760	Improving the Resilience of Insular Systems Against Cyber Attacks <i>Authors:</i> Akash R, Sarathi R, Ma	ator Hydrophobicity Classification nu A. Haddad
OS-T1-S3-P3	12:30 - 12:45	798	Economic Operation of an Islande Droop-Controlled Distributed Ger Generations. <i>Authors:</i> SK SORIF	nerations alongside Solar and Wind
OS-T1-S3-P4	12:45 - 13:00	847	Resilience Enhancement Methods Under Extreme Events - Review, <i>Authors:</i> Mohd Shahrukh, Ranjar	Gaps and Future Directions
OS-T1-S3-P5	13:00 - 13:15	944	Cyber Resilient Protection Function Authors: RAHUL PUJARI	onality of Modern Protective Relays
OS-T1-S3-P6	13:15 - 13:30	992	Transmission Lines	with Real-Time Fault Isolation for harti, Priyadarshni S, Roopa Sri A E,













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11-1	2-2025 Pa	rallel Sessio	n 2 Track 2 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T2-S3-P1	12:00 - 12:15	855	CKF-based Sensorless Control of PMSM Drives Integrating with gh- framed DTC-SVM *Authors:* Shibaji Mondal, Priyankar Roy, Atanu Banerjee, Ujjwal Mondal
OS-T2-S3-P2	12:15 - 12:30	941	Scalar Control of Induction Motor with Current Limiting Feature *Authors:* Manju Bhashini, Ragavan K, Pallavi Bharadwaj
OS-T2-S3-P3	12:30 - 12:45	1051	A Current Sensor Fault Tolerant Technique for Pole-Changing Induction Motors Authors: SHUBHAM DABRAL, Saptarshi Basak
OS-T2-S3-P4	12:45 - 13:00	1565	Dynamic Band-Scaling Adaptive Flux Hysteresis With Adaptive Field Weakening for MTPA-Integrated Advanced DTC in Three-Level NPC Inverter-Fed IPMSM Drives Under Voltage-Constrained Wide-Speed Operation *Authors:* Arnab Chatterjee, Avik Bhattacharya
OS-T2-S3-P5	13:00 - 13:15	209	Field-Oriented Control of Synchronous Reluctance Motor for Electric Vehicle *Authors: Vaishnavi M*
OS-T2-S3-P6	13:15 - 13:30	369	Sensorless position estimation and speed control of IPMSM using high frequency oscillating voltage injection *Authors:* SOURABH PAITANDI, Subhajit Dey, Arnab Bose, Mainak Sengupta
Date: 11-	-12-2025 I	Parallel Sessi	ion 3 Track 3 Venue:
ID	Time Slot	Paper ID	Paper Details
OS-T3-S3-P1	12:00 - 12:15	426	Modeling of Mazzilli ZVS Flyback Converter Coupled with Cockcroft-Walton Voltage Multiplier Using MATLAB Simulink <i>Authors:</i> Sushma Balanagu, Srikanth Allamsetty, Ambrish Devanshu
OS-T3-S3-P2	12:15 - 12:30	445	New Scheme of Health Monitoring for SiC based Three-Phase Inverter <i>Authors:</i> Jegurupati Gowri Prasanth, Priyabrata Shaw, Manoranjan Sahoo
OS-T3-S3-P3	12:30 - 12:45	451	An Improved Quadratic Boost Converter with High Voltage Gain and Lower voltage stress for Fuel Cell Applications *Authors:* Ravi Kanaparthi*
OS-T3-S3-P4	12:45 - 13:00	465	Active Disturbance Rejection Control for Power Quality Improvement in Islanded Microgrids *Authors:* REVANNATH KAKADE, Kayalvizhi S
OS-T3-S3-P5	13:00 - 13:15	485	Single Switch Based Quadratic Gain Buck-Boost PFC Charger with DCM Operation Authors: Rahul Kumar, Bhim Singh
OS-T3-S3-P6	13:15 - 13:30	498	Performance Analysis of Chaotic PWM Schemes for Cascaded H-Bridge Multi-Level Inverter Topologies *Authors:* Kritika Kamboj, Shubham Chib, Kamaldeep Boora*













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11-1	2-2025 Pa	rallel Sessio	n 4 Track 4 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T4-S3-P1	12:00 - 12:15	873	Investigation of Flow Induced Variation in Vandium Redox Flow Battery with Electrochemical Impedance Spectroscopy <i>Authors:</i> JUSMITA DAS
OS-T4-S3-P2	12:15 - 12:30	894	Hybrid BO-LSBoost Model for Accurate Prediction of Remaining Useful Life of Li-Ion Battery *Authors: SHIVI VARSHNEY*
OS-T4-S3-P3	12:30 - 12:45	852	Time-Localized Detection of Partial Shading in Solar PV Array Using Discrete Wavelet Transform Authors: SONALI MEENA, SURESH KUMAR GAWRE
OS-T4-S3-P4	12:45 - 13:00	897	Boosting Energy Storage Performance: Ni-Doped ZnMn2O4 as a Promising Electrode for Supercapacitors *Authors:* Kalpana Kukreti, Shivam Kumar Mittal, Kanhaiya Lal Yadav
OS-T4-S3-P5	13:00 - 13:15	924	Data-Driven Digital Twin for Real-Time Condition and Stability Monitoring of a PV-Integrated Boost Converter System Using ED-LSTM-A Authors: NARESH KUMAR KUMAWAT, NISHANT KUMAR
OS-T4-S3-P6	13:15 - 13:30	979	Optimal Wind-Solar Generation Mix for Cost-Reliability Trade-Off in Power Systems *Authors:* Aedna Kurian, Vivek Mohan, Reshmi A.R, Priyanshu Gupta
Date: 11-1	2-2025 Pa	rallel Sessio	n 5 Track 5 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T5-S3-P1	12:00 - 12:15	1440	Anti-Demagnetization and Efficiency Enhancement Strategies for Hybrid Magnet Interior Permanent Magnet Synchronous Motor <i>Authors:</i> Abhishek Shukla, Saptarshi Basak
OS-T5-S3-P2	12:15 - 12:30	1461	Solar Integration by Topological Reconfiguration of On-board Charger <i>Authors:</i> Dilip Patel, Ramanuja Panigrahi
OS-T5-S3-P3	12:30 - 12:45	1588	Reduction of Harmonic Distortion in Five-Phase VSI using Modified Pentagonal Space Vector PWM Authors: Harsh Moon, Ramsha Karampuri
OS-T5-S3-P4	12:45 - 13:00	511	Power Flow Control in Dual-Stage Bidirectional EV Charging System <i>Authors:</i> Akash Ganne, Lalit Sahu, Allamsetty Hemachander, Rajan Kumar
OS-T5-S3-P5	13:00 - 13:15	723	Constant Power Wireless Charging with Active Load Impedance Matching Network *Authors:* Rohan Burye, Sheron Figarado
OS-T5-S3-P6	13:15 - 13:30	1040	VANET and Reinforcement Learning: A Performance Optimisation Perspective Authors: Amrit Raj, Deepti Kakkar











on l



Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11-1	2-2025 P	arallel Sessi	on 6 Track 6 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T6-S3-P1	12:00 - 12:15	1363	Real-Time Detection of Cyber Attacks in Smart Environments Using Multi-Rate Kalman Filtering *Authors:* Akash Agarwal; Jagat Jyoti Rath; Shubhi Purwar
OS-T6-S3-P2	12:15 - 12:30	239	Gaussian Filtering for Noisy Hyperchaotic System: Synchronization and Secure Communication Authors: Venu Gopal Yamalakonda; Ram Bilas Pachori; Balasubramanyam Appina; Abhinoy Kumar Singh
OS-T6-S3-P3	12:30 - 12:45	304	Performance Analysis of LSVF Equivalent Output Feedback I-PD control for Non-Minimum Phase Systems *Authors:* RAJEEV KUMAR; Jayati Dey; Tapas Kumar Saha
OS-T6-S3-P4	12:45 - 13:00	1134	ISE-Tuned Control for Frequency Regulation of Renewable-Integrated Airport Microgrid Authors: Sameer Singh; V. P. Singh; A. Mathur
OS-T6-S3-P5	13:00 - 13:15	1133	Analysis and Quasi Sliding Mode Synchronization of Quadratic Hyperbolic Tangent Memductance Function based Lorenz System *Authors:* Surajit Suklabaidya; Piyush Pratap Singh; Binoy Krishna Roy
OS-T6-S3-P6	13:15 - 13:30	124	AI-Driven Automated Design Generator for Smart Mechanical Components in Power and Energy Systems <i>Authors:</i> Poorva More; Vishvajeet Sutar; Rohit Chitari; Sanika Kamble; Sadhana Shendage; Tanvi Patil
Date: 11-1	12-2025 P	arallel Sessi	on 7 Special Session 11 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS11-S1-P1	12:00 - 12:15	1562	Matrix Converter-Fed DFIG for Variable-Speed Wind Energy Systems: A Vector Control Approach Authors: Soumyabrata Das
OS-SS11-S1-P2	12:15 - 12:30	1309	Load Variance and Reliability Analysis of Distribution Systems with Coordinated PV Generation and Green Hydrogen Storage <i>Authors:</i> Payal Jangilwar; Soumyabrata Das; Jawaharlal Bhukya
OS-SS11-S1-P3	12:30 - 12:45	1333	An Enhanced Fox Optimization Algorithm for Optimal Reactive Power Dispatch: A Case Study on the Indian 62-Bus System *Authors:* Prachi Nagarkar; Bimal Kumar Dora; Manoranjan Sahoo
OS-SS11-S1-P4	12:45 - 13:00	1332	Hybrid Tasmanian Devil Optimization Algorithm for Solving multi- objective Optimal Power Flow <i>Authors:</i> Bimal Kumar Dora; Prachi Nagarkar; Manoranjan Sahoo
OS-SS11-S1-P5	13:00 - 13:15	1036	Cost-Effective Deployment of EV Charging Infrastructure Using MIZOA and Dynamic Tariff Pricing <i>Authors:</i> Yashwanth Goud Donikeni; Soumyabrata Das
OS-SS11-S1-P6	13:15 - 13:30	1207	Solution of stochastic Dynamic economic load dispatch problem using Pelican Optimization Algorithm <i>Authors:</i> Nibha Rani; Soumyabrata Das; Suraj Gupta

















Date: 11-1	2-2025 P	arallel Sessio	on 8 Special Session 06 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS06-S1-P1	12:00 - 12:15	198	Optimized Machine-Learning Approach for Estimation of State-of- Charge of Lithium-ion Batteries for Sustainable Transportation <i>Authors:</i> Zeba Anjum; Sheeraz Kirmani; Mohd Rizwan Khalid
OS-SS06-S1-P2	12:15 - 12:30	303	Non-Intrusive Load Monitoring using Power Signature Analysis: An adaptive AI Approach *Authors:* setti suresh; Sharada Rudrakshimath; T Narendra Reddy; Prakash Vinod; Geetha Chakaravarthi
OS-SS06-S1-P3	12:30 - 12:45	698	State of HealthSOH Estimation of Simscape Table-Based Lithium-Ion Battery for Microgrid Using Extended Kalman Filter <i>Authors:</i> Mainak Biswas; Arnab Ghosh; Pravat Kumar Ray
OS-SS06-S1-P4	12:45 - 13:00	804	Integrating Water-Solid TENGs into Green Energy Systems: Insights from Experiment and Machine Learning <i>Authors:</i> Mohammad Khan; Khursheed Ahmad Sheikh
OS-SS06-S1-P5	13:00 - 13:15	1086	PSO and Fuzzy Based Optimal Allocation of Wind Turbines *Authors:* Ritika Anand; Divya Bharathi Raj; Venkatakirthiga Murali
OS-SS06-S1-P6	13:15 - 13:30	757	Hybrid Deep Q-Learning with Tabular Updates for Speed Prediction of Heavy Duty Vehicles *Authors:* Priyankaa Sarkar; Rajan Chaudhary; Nalin Kumar Sharma; Rahul Kala; Sri Niwas Singh
Date: 1	1-12-2025	Parallel Se	ssion 9 Track 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OL-S2-P1			Modeling and Integration of Regenerative Braking for Motor Through
	12:00 - 12:15	598	SCMIC-Based Hybrid PV/ Battery System **Authors: Parinita Mondal, Jayati Dey, Tapas Kumar Saha
OL-S2-P2	12:00 - 12:15 12:15 - 12:30	598 484	l
OL-S2-P2			Authors: Parinita Mondal, Jayati Dey, Tapas Kumar Saha A Single Phase to Three Phase Direct AC-AC Modular Multilevel Converter based Induction Motor Drive
	12:15 - 12:30	484	Authors: Parinita Mondal, Jayati Dey, Tapas Kumar Saha A Single Phase to Three Phase Direct AC-AC Modular Multilevel Converter based Induction Motor Drive Authors: Irfan Ahmed, Prarambhik Sur A Novel High Step-Up Voltage Improvement DC-DC Circuit with Evolutionary-based Fuzzy Controller for Fuel Cell Systems
OL-S2-P3	12:15 - 12:30 12:30 - 12:45	484 1277	Authors: Parinita Mondal, Jayati Dey, Tapas Kumar Saha A Single Phase to Three Phase Direct AC-AC Modular Multilevel Converter based Induction Motor Drive Authors: Irfan Ahmed, Prarambhik Sur A Novel High Step-Up Voltage Improvement DC-DC Circuit with Evolutionary-based Fuzzy Controller for Fuel Cell Systems Authors: Dr. HUSSAIAN BASHA Solar-Powered Boost Converter Using PID Control for Efficient Speed Regulation of a BLDC Motor and Real-Time MPPT Authors: MOHIT SINGH, NAUSHAD HUSSAIN, MADHU SINGH Extended Kalman Filter Based Control of Coupled Inductor Buck- Boost Converter For Grid Connected System Authors: DEBARCHITA MISHRA, Krithik M, Ananth S
OL-S2-P3 OL-S2-P4	12:15 - 12:30 12:30 - 12:45 12:45 - 13:00	1277 1388	Authors: Parinita Mondal, Jayati Dey, Tapas Kumar Saha A Single Phase to Three Phase Direct AC-AC Modular Multilevel Converter based Induction Motor Drive Authors: Irfan Ahmed, Prarambhik Sur A Novel High Step-Up Voltage Improvement DC-DC Circuit with Evolutionary-based Fuzzy Controller for Fuel Cell Systems Authors: Dr. HUSSAIAN BASHA Solar-Powered Boost Converter Using PID Control for Efficient Speed Regulation of a BLDC Motor and Real-Time MPPT Authors: MOHIT SINGH, NAUSHAD HUSSAIN, MADHU SINGH Extended Kalman Filter Based Control of Coupled Inductor Buck- Boost Converter For Grid Connected System











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa,

Day 2	Date: 11-12-2025		Oral Session - 4	Time: 16:00 to 17:30
Date: 11-1	12-2025	Parallel :	Session 1 Track 1	Venue:
ID	Time Slot	Paper ID	Paper Ti	tle
OS-T1-S4-P1	16:00 - 16:15	1083	A Unified Approach for Mitigating Loss of Excitation Using Adaptive Sliding Mode Control. <i>Authors:</i> Ankush Sharma, Bhavesh R. Bhalja	
OS-T1-S4-P2	16:15 - 16:30	1106	Steady-State Modeling and Frequency Control for Enhanced Power Stability under Dynamic Bidirectional Load Scheduling <i>Authors:</i> SRIKANT SABBANWAR, Rajshri J. Satputaley	
OS-T1-S1-P3	16:30 - 16:45	1288	Utilizing Flexibility from P2P Network for Frequency Control Under a Coordinated TSO-DSO Framework. Authors: Liza Debbarma, Sanjoy Debbarma, Kingshuk Roy, Piyush Pratap Singh	
OS-T1-S1-P4	16:45 - 17:00	1310	Current Mismatch-Based Newton-Raph Autotransformer Fed Traction Power St Authors: PRADYUMNA PRADHAN Das IIT ROORKEE	upply System
OS-T1-S1-P5	17:00 - 17:15	1405	An Imposed Distributed Generation for Methodology for Microgrid Seamless T Jagram Singh, Suman Murugesan, Ash	Fransitions. Authors: Shikhar
OS-T1-S1-P6	17:15 - 17:30	1335	PMU Data Security via Chaotic Freque Correlation-Based Intrusion Detection. MANIT Bhopal; Siddhartha Deb Roy M	Authors: Abhishek Chauhan
Date: 11-12-20		allel Session		Venue:
Date: 11-12-20:	Time Slot	Paper ID	2 Track 2 Paper Det	
				Reluctance Motor With Stator
ID	Time Slot	Paper ID	Paper Det Torque Ripple Reduction of Switched I	Reluctance Motor With Stator Amit Patel, Om Mistry or with Fractional Slot hicle Propulsion K S, Nagarajan V S, Rajini V,
ID OS-T2-S4-P1	Time Slot 16:00 - 16:15	Paper ID 247	Torque Ripple Reduction of Switched F Pole And Rotor Pole Shaping. <i>Authors</i> . High-Performance V-Shaped IPM Moto Concentrated Windings for Electric Vel- <i>Authors</i> : Bharatiraja C, Sanjeev Guhan Dilsha Purushothaman, Mahesh Krishn Enhanced Sensorless PMSM Drive Cor SMO Integration. <i>Authors</i> : Shilpa Ranjan, Brijendra Sang Sreejeth	Reluctance Motor With Stator : Amit Patel, Om Mistry or with Fractional Slot nicle Propulsion n K S, Nagarajan V S, Rajini V, namurthy ntrol with Data-Driven ANFIS- gar, Madhusudan Singh, Mini
OS-T2-S4-P1 OS-T2-S4-P2	Time Slot 16:00 - 16:15 16:15 - 16:30	247 674	Torque Ripple Reduction of Switched F Pole And Rotor Pole Shaping. <i>Authors</i> : High-Performance V-Shaped IPM Moto Concentrated Windings for Electric Vel <i>Authors</i> : Bharatiraja C, Sanjeev Guhan Dilsha Purushothaman, Mahesh Krishn Enhanced Sensorless PMSM Drive Con SMO Integration. <i>Authors</i> : Shilpa Ranjan, Brijendra Sang	Reluctance Motor With Stator: Amit Patel, Om Mistry or with Fractional Slot hicle Propulsion h K S, Nagarajan V S, Rajini V, hamurthy htrol with Data-Driven ANFIS- gar, Madhusudan Singh, Mini Invariance Observer for Robust s: MITESH ASTIK, Nitte
OS-T2-S4-P1 OS-T2-S4-P2 OS-T2-S4-P3	Time Slot 16:00 - 16:15 16:15 - 16:30 16:30 - 16:45	247 674 791	Torque Ripple Reduction of Switched F Pole And Rotor Pole Shaping. <i>Authors</i> : High-Performance V-Shaped IPM Moto Concentrated Windings for Electric Vel <i>Authors</i> : Bharatiraja C, Sanjeev Guhan Dilsha Purushothaman, Mahesh Krishn Enhanced Sensorless PMSM Drive Cor SMO Integration. <i>Authors</i> : Shilpa Ranjan, Brijendra Sang Sreejeth Lyapunov Control with Immersion and BLDC Motor Drive Operation. <i>Authors</i> .	Reluctance Motor With Stator : Amit Patel, Om Mistry or with Fractional Slot hicle Propulsion n K S, Nagarajan V S, Rajini V, namurthy ntrol with Data-Driven ANFIS- gar, Madhusudan Singh, Mini Invariance Observer for Robust s: MITESH ASTIK, Nitte hah M Using Torque-Aided eed Operation











Smart Technologies for Power, Energy and Control



December 10 -13 2025 | NIT Goa Goa India

Date: 11-12-2	2025	Parallel Ses	sion 3 Track 3 Venue :	
ID	Time Slot	Paper ID	Paper Details	
OS-T3-S4-P1	16:00 - 16:15	708	Switched-Capacitor Based Common-Ground Nine-Level Boosting Inverter SCCGI Authors: KAIBALYA PANDA, Sumant Kumar Dalai, Pratap Sekhar Puhan, Gayadhar Panda	
OS-T3-S4-P2	16:15 - 16:30	767	Evaluating PWM Strategies for Enhanced Performance in Three-Phase Modular Multilevel Converter <i>Authors:</i> Krunal Prajapati, Pradyumn Chaturvedi	
OS-T3-S4-P3	16:30 - 16:45	768	Load-Resilient Voltage Regulation of Interleaved Boost Converter Using Model-Free Reinforcement Learning <i>Authors:</i> Shubham Tirmallu, Krunal Prajapati, MOHD ALAM	
OS-T3-S4-P4	16:45 - 17:00	774	Design and FEM Analysis of High Frequency Transformer using ANSYS Maxwell for Galvanic Isolation Application <i>Authors:</i> Ashish Gupta, Piyush Kant, Sunil Kumar Dube	
OS-T3-S4-P5	17:00 - 17:15	803	A Modified Virtual Impedance Based Current Limiting Control of Grid Connected PMSG under Distorted Grid Conditions <i>Authors:</i> AMIT KUMAR, Asha Rani M.A.	
OS-T3-S4-P6	17:15 - 17:30	868	Control of Dual Transformer Triple Active Bridge with NN-based Link Current Optimization Authors: Varri Chandra Sekhar Pavan Kumar, HARIKRISHNAN A, Silpashree Sahu, Dipankar De, Alberto Castellazzi	
Date: 11-12	-2025	Parallel Se	Ssion 4 Track 4 Venue :	
ID				
TD .	Time Slot	Paper ID	Paper Details	
OS-T4-S4-P1	16:00 - 16:15	Paper ID 993	Paper Details Design and Implementation of an Efficient and Safe Adaptive Charging System for Li-Ion Batteries Authors: Hemann A Devarajan, Venkatesan S, Venkatesh M, Moorthi Sridharan	
		-	Design and Implementation of an Efficient and Safe Adaptive Charging System for Li-Ion Batteries *Authors:* Hemann A Devarajan, Venkatesan S, Venkatesh M, Moorthi	
OS-T4-S4-P1	16:00 - 16:15	993	Design and Implementation of an Efficient and Safe Adaptive Charging System for Li-Ion Batteries *Authors:* Hemann A Devarajan, Venkatesan S, Venkatesh M, Moorthi Sridharan Performance Enhancement and Excess Energy Minimization in Hybrid Renewable Energy Systems for Cold Desert Regions	
OS-T4-S4-P1 OS-T4-S4-P2	16:00 - 16:15 16:15 - 16:30	993	Design and Implementation of an Efficient and Safe Adaptive Charging System for Li-Ion Batteries *Authors:* Hemann A Devarajan, Venkatesan S, Venkatesh M, Moorthi Sridharan Performance Enhancement and Excess Energy Minimization in Hybrid Renewable Energy Systems for Cold Desert Regions *Authors:* Neelam Bora, Swapnajit Pattnaik, Baidyanath Bag Virtual Synchronous Generator-Controlled Grid-Forming Wind Turbine Integrated with VSC-HVDC System: Modeling and Performance Evaluation	
OS-T4-S4-P1 OS-T4-S4-P2 OS-T4-S4-P3	16:00 - 16:15 16:15 - 16:30 16:30 - 16:45	993	Design and Implementation of an Efficient and Safe Adaptive Charging System for Li-Ion Batteries *Authors:* Hemann A Devarajan, Venkatesan S, Venkatesh M, Moorthi Sridharan Performance Enhancement and Excess Energy Minimization in Hybrid Renewable Energy Systems for Cold Desert Regions *Authors:* Neelam Bora, Swapnajit Pattnaik, Baidyanath Bag Virtual Synchronous Generator-Controlled Grid-Forming Wind Turbine Integrated with VSC-HVDC System: Modeling and Performance Evaluation *Authors:* Arvind Kumar, Prakirty Kumari, Dushyant Sharma Effect of ANode Thickness on Internal Short Circuit Behavior of Liion Battery	











on



Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 11- 1	12-2025	Parallel	Session 5 Track 5 Venue:
ID	Time Slot	Paper ID	Paper Details
OS-T5-S4-P1	16:00 - 16:15	1513	A Time-Varying COA-TVECM Enumeration for Modelling the Demand–Cost Nexus in EV Battery Recycling Towards Circular Economy *Authors:* Uttam Saha, Parimal Acharjee, DR. TUSHAR KANTI BERA
OS-T5-S4-P2	16:15 - 16:30	282	AC-powered Dual-Active-Bridge DAB Based EV Charger with Reduced Current Stress Converter using an Adaptive DC link <i>Authors:</i> RANJEET SAH, Shashank Kurm, Shailendra Kumar
OS-T5-S4-P3	16:30 - 16:45	167	A Comprehensive Study of Battery Health Indicators Extraction using Partial Charging Curve *Authors:* Ilango Karuppasamy, Shrinidhi Ganesh, VARSHINI R, SHUBHASHRI V P
OS-T5-S4-P4	16:45 - 17:00	280	Embedded Realization of Deep Learning Based LMPC for PMSM Drives *Authors:* Akash Patil, Yoshit Tapar, Pramod Ubale, Nirlipta Ranjan Mohanty, Dr.Dayaram Sonawane
OS-T5-S4-P5	17:00 - 17:15	359	Exploring Cyber Risks in Grid-Integrated Electrical Vehicle On-Board Charger OBC. Authors: Nikhil Sardar; Prashant Surana, Gaurav Choudhary, Dr. Ehsan Jamshidpour
OS-T5-S4-P6	17:15 - 17:30	881	Optimized Ferrite Design for Wireless Charging of Electric Vehicles A Cost-Efficient Approach Authors: Bharatiraja C; Ragul R; R.Nakkeeran
Date:	11-12-2025	Para	allel Session 6 Track 6 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T6-S4-P1	16:00 - 16:15	144	Enhancement of Model Order Reduction for Discrete-Time Systems with Guaranteed Time-Domain Performance *Authors:* KALYANA KIRAN KUMAR; Kurman Sangeeta; Kranthi Kumar; Neelima Ambati; Sivasai Tangudu; Gandi Ramarao
OS-T6-S4-P2	16:15 - 16:30	231	Enhanced Automation Using FPGA and IoT for Multi-Environment Applications Authors: HARSHAVARDHAN SINGH; PARVATHY HARIKUMAR
OS-T6-S4-P3	16:30 - 16:45	317	Anomaly Detection in Industrial Time Series Using LSTM: A Case Study on Solar Panel Monitoring *Authors:* MUKESH AZAD*
OS-T6-S4-P4	16:45 - 17:00	367	Application of Golden Eagle Optimization in Reduced Order Modeling <i>Authors:</i> ASWANT KUMAR SHARMA
OS-T6-S4-P5	17:00 - 17:15	414	Metaheuristic Optimization of UAV Mission Planning with a Novel Cost Function Authors: Naresh Kumar; Persdeep Kaur
OS-T6-S4-P6	17:15 - 17:30	685	Edge-AI Framework for Real-Time PCB Fault Detection with Cloud-Integrated Automation for Sustainable Electronics <i>Authors:</i> Veeramanikandasamy T; Ramesh Babu P; Devendiran S; Raj Thilak S T













Smart Technologies for Power, Energy and Control (STPEC 2025)

December 10 -13, 2025 | NIT Goa, Goa,

Date: 11-12-2	025	Parallel Ses	sion 7 Special Session 12 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS12-S1-P1	16:00 - 16:15	383	Stabilizing the Memristive Liu System Using PI-Based Sliding Mode Control: Implications for Autonomuos Vehicle Dynamics <i>Authors:</i> Pallav Sahay; Rani Kumari
OS-SS12-S1-P2	16:15 - 16:30	653	Hybrid Quantum-Classical Model for Digit Recognition in Electric Vehicle *Authors:* Fareed Singh Kang; Neeraj Kumar; Ravinder Kumar; Rajesh Chaudhary
OS-SS12-S1-P3	16:30 - 16:45	658	Development and Validation of a LiDAR-Based Autonomous Navigation Stack Using Autoware with Custom PCD and Lanelet2 Maps Authors: Manikandan G; Bharatiraja C; Sivanathan K
OS-SS12-S1-P4	16:45 - 17:00	854	Real-Time Road Surface Classification Using MobileNetV2 and Vision Transformers: A Smartphone-Based Edge AI Framework <i>Authors:</i> Nakka Gowri Prasad; A Srinivaas
OS-SS12-S1-P5	17:00 - 17:15	670	Design, Implementation & Optimization of Indoor Autonomous Mobile Robotic System using RGBD Camera and 2D Lidar Authors: HEM JOSHI THAPAR
OS-SS12-S1-P6	17:15 - 17:30	872	A 5G-Enabled IoT Architecture for V2V and V2I Communication in Autonomous Vehicles *Authors:* Momin Shaik; Gudipati Jawahar sagar
Date: 11-	12-2025	Paralle	el Session 8 Special Session 17 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS17-S1-P1	16:00 - 16:15	719	Model Predictive Control based Optimal Charging for the Health Improvement in Lithium-ion Batteries *Authors:* Swastik Acharya; Arijit Guha; Asim Kumar Naskar; Bikky Routh
OS-SS17-S1-P2	16:15 - 16:30	733	In-Situ State of Health Estimation of Electric Vehicle Batteries using Partial Driving Data *Authors: Jayabrata Maity; Munmun Khanra*
OS-SS17-S1-P3	16:30 - 16:45	1034	Design and Evaluation of Carboxymethyl Cellulose-Starch Hybrid Gel Electrolytes Toward Quasi-Solid-State Zinc-Ion Batteries <i>Authors:</i> SRESHTHA GANGULY; Dilip Bennada; Sreeraj Puravankara
OS-SS17-S1-P4	16:45 - 17:00	1165	Understanding the Impact of Charge-Discharge Rates on Lithium-Ion Battery Performance *Authors:* Subham Khange; Vivek Kumar Chaudhary; Ashwini Kumar Sharma
			A Multiplantia Call land DEMWE Simulation Madel for Consequen
OS-SS17-S1-P5	17:00 - 17:15	1411	A Multiphysics Cell-level PEMWE Simulation Model for Crossover Mitigation Authors: Manikya Pathak; Lalit Pant Optimal Estimation of the State-of-Energy and Surface Temperature of







17







Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 1	1-12-2025	Pai	rallel Session 9	Track 4	Venue:
ID	Time Slot	Paper ID		Paper Detail	S
OL-S3-P2	16:00 - 16:15	1431	Forecasting	TM Framework for Data Singh, Poonam Dhaka	a-Driven EV Load
OL-S3-P3	16:15 - 16:30	1435	Frequency in an O		e for Regulating Voltage and urbine-Driven SEIG System N.
OL-S3-P4	16:30 - 16:45	1535	Conventional and	~	nnected Microgrid, including gy Sources, using Demand ashish Kumar Bohre
OL-S3-P5	16:45 - 17:00	1540	Economic Dispate Dragonfly Algorith <i>Authors:</i> HEMAN		without DR using
OL-S3-P6	17:00 - 17:15	567	Harris Hawks Opti Techniques	G and Soft Open Points mization and Particle S T PATEL; Aashish Kun	•
OL-S5-P6	17:15 - 17:30	301	Battery Charging A	nogenerator for Wind E Applications a Sil, Arunangshu Ghos	

Day 3	Date: 12-12-2025		Oral Session - 5	Time: 08:30 to 10:00
Date: 12-12-2	2025	Parallel Sess	sion 1 Track 1	Venue:
ID	Time Slot	Paper ID	Paper '	Title
OS-T1-S5-P1	08:30 - 08:45	1341	A Novel Passive Islanding Detection Technologies <i>Authors:</i> Ankit Mishra, Abhinesh Ku Mohanty, M.K. Verma, Avirup Mauli	ımar Sah, Rudrakant Tripathi, S.R.
OS-T1-S5-P2	08:45 - 09:00	1359	End-to-End Modeling and Serialization Incorporating Communication Delay <i>Authors:</i> Md Arif Hussain, Vianny W Affijulla	under IEEE C37.118 Framework
OS-T1-S5-P3	09:00 - 09:15	1487	Impedance-Based Topology Identific Networks using Smart Meter Data <i>Authors:</i> Ujjawal Jhajharia, Satish Sl	
OS-T1-S5-P4	09:15 - 09:30	672	A Derivative-Free Power Flow Analy Controlled Islanded Microgrids <i>Authors:</i> Ghanshyam Meena, Akhile	
OS-T1-S5-P5	09:30 - 09:45	377	A Remote Current Injection Based Is Microgrid. <i>Authors:</i> Shyamal Das, P Samantaray	
OS-T1-S5-P6	09:45 - 10:00	1384	ML Based Approach to Mitigate the l the Dielectric Response data for Dry- <i>Authors:</i> Somesh Ganguly	













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 12-1	2-2025	Parallel Se	ession 2	
ID	Time Slot	Paper ID	Paper Details	
OS-T2-S5-P1	08:30 - 08:45	753	Surrogate Modeling of SynRM for Fast Assessment of Dynamic Performance in EVs Applications *Authors:* Gabriel Behling da Silveira, Guilherme Homrich, Igor Pasa Wiltuschnig, Bernardo Ernesto Moro Ransan, Aurélio Tergolina Salton, Paulo Roberto Eckert	
OS-T2-S5-P2	08:45 - 09:00	1018	Data-Driven Fault Severity Estimation in Permanent Magnet Synchronous Machines Authors: Khushboo Ramawat, Anukriti Sharma, Bharat Singh Rajpurohit	
OS-T2-S5-P3	09:00 - 09:15	1442	Enhancing Speed Response in PMSM-Fed Electric Vehicles Through Active Disturbance Rejection Controller-Based Vector Control Method <i>Authors:</i> Sanjay Kumar Kakodia, GIRIBABU DYANAMINA, Amarendra Edpuganti	
OS-T2-S5-P4	09:15 - 09:30	95	Grey Target Approach for Estimating the Remaining Life of Power Transformers Authors: MULPURU GOPI, Chilaka Ranga, Kushal M Jagtap	
OS-T2-S5-P5	09:30 - 09:45	219	Modelling and Simulation of Predictive Torque Control of Matrix Converter fed Induction Motor Drive Authors: Vinay Kumar T, Puli Rajanikanth, Satyam Tiwari	
OS-T2-S5-P6	09:45 - 10:00	980	Induction Motor Control for Wide Speed Range with Parameter Estimation and Validation Authors: Manju Bhashini, Ragavan K, Pallavi Bharadwaj	
Date: 12-12-2		Parallel Sessi	ion 3	
ID	Time Slot	Paper ID	Paper Details	
OS-T3-S5-P1	08:30 - 08:45	869	Analysis and Control of NIBB-Converter Assisted Improved Triple Active Bridge Converter for Two-Port Application <i>Authors:</i> Silpashree Sahu, Dipankar De, Alberto Castellazzi	
OS-T3-S5-P2	08:45 - 09:00	871	Design and Simulation of a DC-DC Boost Converter with MPPT Control for Solar PV Applications Authors: Siddharth Upmanyu, Jeevan Pammi, Sashwathkumar S, Suresh Mikkili	
OS-T3-S5-P3	09:00 - 09:15	925	Efficient Architecture for CubeSat Electric Power System *Authors:* Anil Jakhar, Pravin Kumar, Amarendra Edpuganti	
00 50 05 54			Real-Time Assessment of Grid-Tied Black-Box Inverter: Using Data-	
OS-T3-S5-P4	09:15 - 09:30	950	Driven Digital Twin Authors: Arun Kumar, Nishant Kumar	
OS-T3-S5-P4 OS-T3-S5-P5	09:15 - 09:30 09:30 - 09:45	950 967		













Smart Technologies for Power, Energy and Control (STPEC 2025)

December 10-13, 2025 | NIT Goa, Goa, India

Date: 12	-12-2025	Parallel	Session 4 Track 4 Venue :	
ID	Time Slot	Paper ID	Paper Details	
OS-T4-S5-P1	08:30 - 08:45	1289	DC Bus Voltage Control Strategy for Hybrid Energy Storage System with Renewable Energy System *Authors:* Sheikh Sajid, Pradyumn Chaturvedi	
OS-T4-S5-P2	08:45 - 09:00	1022	Effect of CCTO on Energy Storage of NaNbO3-based Ceramic <i>Authors:</i> Amiya Mandal	
OS-T4-S5-P3	09:00 - 09:15	1322	Estimating Power System Inertia: A Study with Renewable Energy Integrated Power Networks *Authors:* NITISHA DARWADE	
OS-T4-S5-P4	09:15 - 09:30	1324	Intelligent ANN control technique for grid integrated Solar PV System <i>Authors:</i> Shruti Prajapati	
OS-T4-S5-P5	09:30 - 09:45	1376	Techno-Economic Analysis of Integrating Optimized Hydrogen Fuel Cell as an Energy Buffer in Green Energy Microgrid <i>Authors:</i> Harikrishnan K, Rajesh Kumar Mahto, Pallavi Bharadwaj	
OS-T4-S5-P6	09:45 - 10:00	1418	Smart Energy Management System for Green Microgrids with Different Energy Storage Devices *Authors:* Gupteswar Behera, Pallavi Bharadwaj	
Date: 12	-12-2025	Parallel	Session 5 Track 5 Venue:	
ID	Time Slot	Paper ID	Paper Details	
OS-T5-S5-P1	Time Slot 08:30 - 08:45	Paper ID 1589		
		_	Paper Details Cascaded H Bridge converter for STATCOM and multiport EV charging applications and its capacitor voltage balance technique during Uneven Loading Conditions	
OS-T5-S5-P1	08:30 - 08:45	1589	Paper Details Cascaded H Bridge converter for STATCOM and multiport EV charging applications and its capacitor voltage balance technique during Uneven Loading Conditions Authors: Ibhan Chand Rath; Siba Kumar Patro A Multiport Charging Station Based on Parallel Hybrid Converters with Grid and Load Unbalance Compensation.	
OS-T5-S5-P1 OS-T5-S5-P2	08:30 - 08:45 08:45 - 09:00	1589	Cascaded H Bridge converter for STATCOM and multiport EV charging applications and its capacitor voltage balance technique during Uneven Loading Conditions Authors: Ibhan Chand Rath; Siba Kumar Patro A Multiport Charging Station Based on Parallel Hybrid Converters with Grid and Load Unbalance Compensation. Authors: Ibhan Chand Rath; Jayant Kumar; Siba Kumar Patro A Novel Data-Driven Machine Learning Framework for SOC Estimation in EV Batteries: A White-Box Approach Using Elastic Net Regression Authors: Manivannan R; Vigneswar N A Hybrid Solar-PV Grid-Tied Battery Energy Storage System for Modern EV Charging Applications Authors: JAVED ANSARI; Saran Chaurasia; Shivam Yadav; Bhim Singh; Kuldeep Sahay	
OS-T5-S5-P1 OS-T5-S5-P2 OS-T5-S5-P3	08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	1589 1591 447	Cascaded H Bridge converter for STATCOM and multiport EV charging applications and its capacitor voltage balance technique during Uneven Loading Conditions Authors: Ibhan Chand Rath; Siba Kumar Patro A Multiport Charging Station Based on Parallel Hybrid Converters with Grid and Load Unbalance Compensation. Authors: Ibhan Chand Rath; Jayant Kumar; Siba Kumar Patro A Novel Data-Driven Machine Learning Framework for SOC Estimation in EV Batteries: A White-Box Approach Using Elastic Net Regression Authors: Manivannan R; Vigneswar N A Hybrid Solar-PV Grid-Tied Battery Energy Storage System for Modern EV Charging Applications Authors: JAVED ANSARI; Saran Chaurasia; Shivam Yadav; Bhim	







20





Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa,

Date: 12-12	-2025	Parallel Sea	Ssion 6 Track 6 Venue :	
ID	Time Slot	Paper ID	Paper Details	
OS-T6-S5-P1	08:30 - 08:45	825	A Resilient NN Assisted Switching Control for Networked Control Systems under DoS Attacks Authors: ManMahendra Singh; PUNEET MISHRA	
OS-T6-S5-P2	08:45 - 09:00	937	Decentralized Interval Type-2 Fuzzy Logic Fractional Order PID Controller Design for a Liquid Level System Authors: Soumya Mahapatro; Bidyadhar Subudhi; sudipta chakrabroty; Dr. Manmohan Sharma	
OS-T6-S5-P3	09:00 - 09:15	1005	Real-Time Lane Assist System Using Computer Vision with Adaptive PID Control. <i>Authors:</i> Devadharshan D; S Shyam Ganesh; Hrithick E; Dhanvin S; Karthika R	
OS-T6-S5-P4	09:15 - 09:30	1011	Type-2 Fuzzy-Based NMPC for Robust Trajectory Tracking Under Sensor and Actuator Faults *Authors:* Atanu Panda; Lidia Ghosh; Biswanath Chakraborty	
OS-T6-S5-P5	09:30 - 09:45	1039	Crowd Monitoring and Control Using Joint Face Super-Resolution, Head Pose Estimation and Face Verification Authors: Ramakant Soni; Pawan K. Ajmera; Ayush Srivastava; Yatharth Agarwal	
OS-T6-S5-P6	09:45 - 10:00	1292	An Intelligent Marksheet Extraction Framework Using GenAI, PaddleOCR and TableNet *Authors:* Kummari Gangadhar; Jagadam Deepak; Nakka Ratnakar	
Date: 12-12-		Parallel Ses		
Date: 12-12- ID	-2025 Time Slot	Parallel Ses Paper ID	Special Session 13 Venue : Paper Details	
ID	Time Slot	Paper ID	Paper Details Sensorless Feedforward Neural Network—Observer MPPT for Boost Converter Photovoltaic Systems. <i>Authors:</i> RAJEEV RANJAN; Niket	
ID OS-SS13-S1-P1	Time Slot 08:30 - 08:45	Paper ID 403	Paper Details Sensorless Feedforward Neural Network–Observer MPPT for Boost Converter Photovoltaic Systems. <i>Authors:</i> RAJEEV RANJAN; Niket Tamrakar; Syed Ayan; Nikhil Chander Efficient Method for Maximizing Power Output from a Hexagonal Solar Pyramid Structure Compared to a Planar Surface <i>Authors:</i> AJIT RAJAWAT; ANURAG AGARWAL; KUNWAR	
OS-SS13-S1-P1 OS-SS13-S1-P2	Time Slot 08:30 - 08:45 08:45 - 09:00	Paper ID 403 932	Paper Details Sensorless Feedforward Neural Network—Observer MPPT for Boost Converter Photovoltaic Systems. Authors: RAJEEV RANJAN; Niket Tamrakar; Syed Ayan; Nikhil Chander Efficient Method for Maximizing Power Output from a Hexagonal Solar Pyramid Structure Compared to a Planar Surface Authors: AJIT RAJAWAT; ANURAG AGARWAL; KUNWAR ADITYA Experimental investigation of wind-induced aerodynamic responses on a ground-mounted photovoltaic array under varying wind angles	
OS-SS13-S1-P2 OS-SS13-S1-P3	Time Slot 08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	932 1330	Paper Details Sensorless Feedforward Neural Network—Observer MPPT for Boost Converter Photovoltaic Systems. Authors: RAJEEV RANJAN; Niket Tamrakar; Syed Ayan; Nikhil Chander Efficient Method for Maximizing Power Output from a Hexagonal Solar Pyramid Structure Compared to a Planar Surface Authors: AJIT RAJAWAT; ANURAG AGARWAL; KUNWAR ADITYA Experimental investigation of wind-induced aerodynamic responses on a ground-mounted photovoltaic array under varying wind angles Authors: Krishna Debnath The Efficiency-Quality Dilemma: Real-Time HIL Validation of MPPT Algorithms for Resilient Rural PV-Grid Integration Authors: umavani m; Pravalika Phani D; Kishore Babu; Jagadish S;	













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 12- 1	12-2025	Parallel S	Session 8 Special Session 17 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS17-S2-P1	08:30 - 08:45	971	Hybrid Pulse Power Characterization and Equivalent Circuit Modeling of 18650 NMC Batteries at Low Temperature *Authors:* Farkhanda Azmi; Mayur Bonkile; Anandaroop Bhattacharya
OS-SS17-S2-P2	08:45 - 09:00	583	Modeling and Control of Hybrid Fuel Cell–Battery System Using a Bidirectional DC-DC Converter for EV and Microgrid Applications <i>Authors:</i> Hemavathi S; G Shri Meenakshi; Akashkumar R
OS-SS17-S2-P3	09:00 - 09:15	668	Dynamic State of Charge Estimation of Lithium-Ion Batteries Using a Model Switching Approach <i>Authors:</i> RAJKUMAR ROY; Nilanjan Patra
OS-SS17-S2-P4	09:15 - 09:30	1037	Design and Thermal Characterization of Al6061-T6 Reinforced with Graphene, SiC, and B4C Nanoparticles for Electric Vehicle Battery Enclosure. <i>Authors:</i> Manimaran Saravanan; Bharatiraja C; Rohit Xavier Chatter SRM Institute of Science and Technology, Kattankulathur; Udit Narayan Sai P SRM Institute of Science and Technology, Kattankulathur
OS-SS17-S2-P5	09:30 - 09:45	1126	Identifiable Single Particle Model with Electrolyte Dynamics *Authors:* Saketh Pinapati; Akesh Kotnana; Jose Mathew; Anilkumar Davu
OS-SS17-S2-P6	09:45 - 10:00	429	Smart Prognostics for Li-Ion Battery Reuse: Machine Learning-based Remaining Useful Life Estimation in Second-Life Applications <i>Authors:</i> Akhtar Zeb; Pankaj Saha; Ari Hentunen; Doniyor Urishov
Date: 12	-12-2025	Paralle	Session 9 Track 4,5 &6 Venue:
ID	Time Slot	Paper ID	Paper Details
OL-S4-P2	08:30 - 08:45	1017	Interval Modelling and Model Order Reduction of WTG Connected Power System Authors: SALIK DEWANGAN
OL-S4-P3	08:45 - 09:00	1276	A Novel Accurate Demand Side Battery Management by Using an Adaptive Radial Basis Neural Network Controller <i>Authors:</i> Dr. HUSSAIAN BASHA
OL-S4-P4	09:00 - 09:15	1163	Energy Efficient Control of Photovoltaic Integrated Low Voltage Distribution Network *Authors:* Anuradha Tomar, Lakshya Bhatnagar
OL-S4-P5	09:15 - 09:30	755	Design of Axial Flux Ferrite Permanent Magnet DC motor for E-bike application Authors: Sagar Gupta; Amit Jain
OL-S4-P6	09:30 - 09:45	917	Low-Cost Flat-Type Interior Permanent Magnet Machine With Hybrid Permanent Magnet Material <i>Authors:</i> Sagar Gupta; Vaibhav Bhardwaj; Amit Jain
OL-S5-P1	09:45 - 10:00	173	Urban Traffic Intelligence: Merging Computer Vision and Reinforcement Learning for Proactive Congestion Control <i>Authors:</i> Aadithyaa Aadithyaa; Sravya Duvvuri; Bhavana Naidu; Lalithamani N











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa,

Day 3	Date: 12-12	-2025	Oral Session – 6	Time: 12:00 to 13:30
Date: 12-	12-2025	Parallel S	Session 1 Track 1	Venue:
ID	Time Slot	Paper ID	Paper	: Title
OS-T1-S6-P1	12:00 - 12:15	1444	String Level Arc Fault Detection an PV Array Authors: Shubham Kumar	d Localization in Large-Scale Solar
OS-T1-S6-P2	12:15 - 12:30	1551	Conditional-GAN-Based Generation in a Mileage-Based Dispatch Frame Flexibility Authors: Kingshuk Roy, Sanjoy De	work with Aggregated VPP
OS-T1-S6-P3	12:30 - 12:45	392	Effect Of Inertia On Power System Integration Authors: Pandi K	With Renewable Energy
OS-T1-S6-P4	12:45 - 13:00	131	Smart Energy Management System Station <i>Authors:</i> SINDHU M R	for a Solar-Powered EV Charging
OS-T1-S6-P5	13:00 - 13:15	155	Comprehensive Insights on Partial I Monitoring in Medium Voltage App <i>Authors:</i> Rafeetha V C , Shashank I Vyjayanthi C	lications
OS-T1-S6-P6	13:15 - 13:30	697	Real-Time Energy Theft Detection is Based Big Data Analytics *Authors:* Vijayanand Selvaraj	in Smart Meters Using Stream-
Date: 12-1	12-2025	Parallel S	ession 2 Track 1	Venue:
ID	Time Slot	Paper ID	Paper	
OS-T1-S9-P1	12:00 - 12:15	656	Poisson-Based Modeling of Arc-Inc Voltage Distribution Systems <i>Authors:</i> Ratnakar Nutenki, Harapr Ashok Kumar Pradhan	
OS-T1-S9-P2	12:15 - 12:30	675	Guidelines for Relay Configuration of Parallel lines <i>Authors:</i> RAVINDRA KUMAR, M	, 0
OS-T1-S9-P3	12:30 - 12:45	1132	Short-Term Electricity Price Foreca Selection and GA-Optimized BiLST <i>Authors:</i> ASHISH PRAJESH, Prem	ГМ na Jain
OS-T1-S9-P4	12:45 - 13:00	255	Solving OPF with Stochastic Wind Gorilla Troops Optimizer <i>Authors:</i> Abhishek Saini	Power Using a Nature-Inspired
OS-T1-S9-P5	13:00 - 13:15	1433	Modular Electric Power Supply for <i>Authors:</i> Rhethika S, Anindya Dasg Sujith	
OS-T1-S9-P6	13:15 - 13:30	1458	IoT Node Synchronized with Indian Measurement in Power System <i>Authors:</i> Pratik Sharma, Ankush Sh	













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 12-12	-2025	Parallel Sea	Ssion 3 Track 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T3-S6-P1	12:00 - 12:15	1432	Design and Control of High Power Density Power Electronics for Fuel Cell-based Energy Storage Systems *Authors:* Rajesh Mahto, Aditya Kant, Pallavi Bharadwaj
OS-T3-S6-P2	12:15 - 12:30	1530	A Multi-Functional Dual-Source Single-Stage Converter for Hybrid Energy Integration and Power Conditioning *Authors:* Nikhil Agrawal, Anshul Agarwal, Tirupathiraju Kanumuri, Nitish Kumar Halliburton, Anurag Das, Dr. Vishwanath Karad
OS-T3-S6-P3	12:30 - 12:45	1539	Design and Implementation of a High-Gain DC–DC Converter for Solar Photovoltaic Systems **Authors:* Madhav kumar, Kaibalya Prasad Panda, Ritula Thakur, Gayadhar Panda
OS-T3-S6-P4	12:45 - 13:00	141	Robust Isolation Demonstration of BDC Process in DC-DC Converter for Data-Center Application *Authors:* Balaji Rathod, Alok Mishra, Asif Iqbal, Nataraj Kowti, Rajesh Reddy Tummuru
OS-T3-S6-P5	13:00 - 13:15	673	Performance-Oriented Design of a Three-Phase ANPC SC Inverter Using Multilevel Architecture Authors: DIPANWITA GANGULY
OS-T3-S6-P6	13:15 - 13:30	256	High-Gain OSQSBC with Coupled Inductor for Efficient Solar-Powered EV Battery Charging *Authors:* Kamaraja A S, Karthik Kumar K
Date: 12-	12-2025	Parallel S	Session 4 Track 4 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T4-S6-P1	12:00 - 12:15	1421	Performance Evaluation and Experimental Validation of Zig-Zag PV Array Reconfiguration Under Partial Shading Conditions <i>Authors:</i> RAHUL PUKALE
			Authors: RAHOL PORALE
OS-T4-S6-P2	12:15 - 12:30	526	Hydrodynamic Modeling and Matrix Converter-Based Control of a PMLG for Ocean Wave Energy Harvesting Authors: Anupa Gugulothu, sharmili das
OS-T4-S6-P2 OS-T4-S6-P3		526 1019	Hydrodynamic Modeling and Matrix Converter-Based Control of a PMLG for Ocean Wave Energy Harvesting
	12:15 - 12:30		Hydrodynamic Modeling and Matrix Converter-Based Control of a PMLG for Ocean Wave Energy Harvesting <i>Authors:</i> Anupa Gugulothu, sharmili das Loss Analysis in String-Level Photovoltaic Systems: Impact on Energy Yield
OS-T4-S6-P3	12:15 - 12:30 12:30 - 12:45	1019	Hydrodynamic Modeling and Matrix Converter-Based Control of a PMLG for Ocean Wave Energy Harvesting <i>Authors:</i> Anupa Gugulothu, sharmili das Loss Analysis in String-Level Photovoltaic Systems: Impact on Energy Yield <i>Authors:</i> Neil Samaddar, V PRASANT, Dipankar Debnath MoS2/Barium Ferrite Nanocomposite: A Synergistic Electrode for Advanced Supercapacitor Applications













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 12	-12-2025	Parallel	Session 5 Track 3 Venue:
ID	Time Slot	Paper ID	Paper Details
OS-T3-S9-P1	12:00 - 12:15	1474	3-phase triple-boosted Multilevel Inverter for Photovoltaic Applications with Seven Levels of Switched Capacitors <i>Authors:</i> VINAYAK KUMAR, RUCHI AGARWAL, PRAVINDRA KUMAR
OS-T3-S9-P2	12:15 - 12:30	1484	A Novel Five-Level Symmetric Multilevel Inverter Design for Solar Photovoltaic Systems *Authors:* Pravindra Kumar, RUCHI AGARWAL, VINAYAK KUMAR
OS-T3-S9-P3	12:30 - 12:45	1490	Bidirectional Power Flow Control in a Grid-Connected EV Charging System Using DAB Converter *Authors: Farha Khan, Shirazul Islam, Lazhar Ben-Brahim, Adel Gastli, Farhad Illahi Bakhsh
OS-T3-S9-P4	12:45 - 13:00	1355	Enhanced Ultra Gain Cubic DC-DC Converter For EV and Grid Applications Using Dual Switch Operation Authors: Arun Polasa, Roshini Gaini, Pavani Guvvala, Phanindra Kumar Samudrala, Manikanta Kuraganti, Ramulu Chinthamalla
Date: 1	2-12-2025	Paralle	Session 6 Track 6 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T6-S6-P1	12:00 - 12:15	1389	α-Blend MPC: A Curvature-Adaptive Dual-Weight Model Predictive Control for Autonomous Vehicle Navigation <i>Authors:</i> Abhishek Thakur; Venya Gupta; Aditya Joshi; Sudhansu Kumar Mishra; Subrat Kumar Swain
OS-T6-S6-P2	12:15 - 12:30	1150	Design and Implementation of HMI by enhancing Data Logging capabilities for improved process control <i>Authors:</i> Suhas Gowda; Suresha C
OS-T6-S6-P3	12:30 - 12:45	1423	AMIGO Based Control Strategy for Frequency Stabilization of Marine Microgrid Authors: Akanksha Waghmare; V. P. Singh
OS-T6-S6-P4	12:45 - 13:00	1296	A Smart Eyewear-Based Solution for Non-Verbal Patient Communication Using Blink Detection Authors: HARINATH AIREDDY
OS-T6-S6-P5	13:00 - 13:15	1298	Dual-Factor Authentication for Industrial Machinery Access Using RFID and Fingerprint Verification Authors: HARINATH AIREDDY
OS-T6-S6-P6	13:15 - 13:30	977	Intelligent Grasp Planning using Open-Vocabulary Image Segmentation and Large Language Models *Authors:* Prithvi Raj Baskar; Bijo Sebastian; Alpana Dubey; Suma Mani Kuriakose













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 12-12	2-2025	Parallel Se	ession 7 Special Session 13 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS13-S2-P1	12:00 - 12:15	1370	Integration of Solar and Wind Power with Virtual Synchronous Generators for Improved Transient Stability and Virtual Inertia Support <i>Authors:</i> SUPARNA MAITY; Sandip Chanda; Alok Srivastava; Raja Ram Kumar; Abhinandan De
OS-SS13-S2-P2	12:15 - 12:30	230	Renewable Energy: High-Efficiency Dual-Absorber CsFAPbIBr ₃ /FAMASnBrI ₃ Perovskite Solar Cell <i>Authors:</i> RAUSHAN KUMAR; Alisha Priya; Alok Priyadarshi; Premendra Premendra; Shivam Kumar
OS-SS13-S2-P3	12:30 - 12:45	976	A Dual Input Single Output Nonisolated DC/DC Converter for Low/High Voltage Sources with Step Down/Up Capabilities <i>Authors:</i> Avisha Tah
OS-SS13-S2-P4	12:45 - 13:00	1067	Evaluating Bifacial Perovskite Solar Cell Performance Under Dual-Side Illumination **Authors:* Mustak Ahmed Ansary; Shweta Pal; Pawan Kumar; Biswajit Mandal; Gaurav Siddharth
Date: 12	-12-2025	Parallel	Session 8 Special Session 21 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS21-S1-P1	12:00 - 12:15	1366	EV Battery Charging Using Five-phase Open-End Drive With Three- phase Asymmetric Anti-Parallel Supply Configuration <i>Authors:</i> Akanksha Karlekar; Ramsha Karampuri
OS-SS21-S1-P2	12:15 - 12:30	1387	Impact Analysis of EV Drive Cycles and Types on the Optimal Management of Smart Homes *Authors:* Giriwar Chaurasia, Subho Paul, Mitresh Kumar Verma*
OS-SS21-S1-P3	12:30 - 12:45	1428	Design and Simulation of a Coupled Inductor Interleaved Buck Converter for High-Efficiency DC Power Application <i>Authors:</i> Chandika Pratap Singh, Harsh Prajapati, Narendrababu A, Naveen Yalla
OS-SS21-S1-P4	12:45 - 13:00	1449	Detection, Classification and Phase Localization of Cyber Attacks in 3- φ Standalone Inverter Systems *Authors: Tushita Das, Mitikiri Sagar Babu, Sriranga Suprabhath Koduru, Vedantham Lakshmi Srinivas, Sukumar Mishra
OS-SS21-S1-P4 OS-SS21-S1-P5	12:45 - 13:00 13:00 - 13:15	1449 1454	φ Standalone Inverter Systems Authors: Tushita Das, Mitikiri Sagar Babu, Sriranga Suprabhath













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date	: 12-12-2025	Par	allel Session 9 Track 4,5 &6 Venue :
ID	Time Slot	Paper ID	Paper Details
OL-S5-P2	12:00 - 12:15	864	Comparative Analysis of Classical MOR Methods for MIMO Hydro Power System. <i>Authors:</i> SALIK DEWANGAN
OL-S5-P3	12:15 - 12:30	1318	Scalable Road Surface Anomaly Detection System Using Apache Spark and Real-Time Data Streaming Authors: Padmakumari P; Suganya D; Sujatha M; Jaiaakaash J.S; Sowmiya K
OL-S5-P4	12:30 - 12:45	556	Optimizing Electric Vehicle Routing with Geospatial and Real-time Charging Station Data *Authors:* Roshan Kumar; Abhishek Yadav; Chndra Dev Singh; Ankit Kumar; Suddhasil De; Mala De
OL-S5-P5	12:45 - 13:00	519	Reinforcement Learning-Based Energy Management for Multi-Zone EV Charging Stations Authors: Arpana Singh, Uma Nangia, M. Rizwan
OL-S4-P1	13:00 - 13:15	1113	Control and Energy Management of Fuel Cell with Hybrid Energy Storage System. <i>Authors:</i> Tirtharaj Mali, Moushumi Patowary, Probit Rabha
OL-S6-P1	13:15 - 13:30	552	Development Of Distinct Third-Order Inverse Filters Employing Single Otra. <i>Authors:</i> Shubhojit Ghosh; Aniket Mazumder; Shuvadeep Biswas; Ram Bhagat

Day 4	Date: 13-12	-2025	Oral Session – 7	Time: 08:30 to 10:00
Date	: 13-12-2025	Pa	rallel Session 1 Track 1	Venue:
ID	Time Slot	Paper ID	Pap	per Title
OS-T1-S7-P1	08:30 - 08:45	879	A Comparative Analysis of HDLO Profiles for DLMS/COSEM-Base Authors: Dhanavath Shankar	
OS-T1-S7-P2	08:45 - 09:00	916	Technique for Enhanced Power Q	rthak Mohanty, Pravat Kumar Rout,
OS-T1-S7-P3	09:00 - 09:15	1139	Cooperative Energy Exchange Of Microgrids For Mutual Economic <i>Authors:</i> DURGA GUDAVALLI	Energy Share
OS-T1-S7-P4	09:15 - 09:30	1144	Adaptive Analytical Control and Fed Transmission Lines under Ou <i>Authors:</i> Chetan Jambhulkar Tul	
OS-T1-S7-P5	09:30 - 09:45	1248	Frequency Response Analysis of Circuit-Based Modeling and Driv <i>Authors:</i> Mithun Mondal, Manoj	
OS-T1-S7-P6	09:45 - 10:00	1500	Tensile Strength and Thermal De Composites for High Voltage Inst <i>Authors:</i> Sreelekha V, Pradeepku Sankar	ulation













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-12-2	025	Parallel Se	ession 2 Special Session 04 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS04-S1-P1	08:30 - 08:45	424	Enhanced State of Charge Estimation for Electric Vehicle Batteries Using Temperature-Integrated Coulomb Counting Method *Authors:* Venkatesh Boddapati; Prakash DB; Nindra sekhar; Nethravath S
OS-SS04-S1-P2	08:45 - 09:00	458	Optimal Sizing and Siting of Solar Distributed Generators in a Radial Distribution System using Whale Optimisation Algorithm <i>Authors:</i> Prakash DB; Venkatesh Boddapati; Chethan Raj D
OS-SS04-S1-P3	09:00 - 09:15	532	A Novel Single Leg Switch Based Non-Isolated Multi-Port DC-DC Converter for PV-Battery Hybrid Energy Systems *Authors:* Jayamurugan Mookkan; Saravanan Kaliyaperumal; Narayanamoorthi R; Sivaprasad Athikkal; Vivekananandan Subburaj
OS-SS04-S1-P4	09:15 - 09:30	775	Low-Power High-Speed Approximate Ternary Half Adders and Multipliers Multiplier Circuit Design using Carbon Nanotube Field Effect Transistors. <i>Authors:</i> Murali P
OS-SS04-S1-P5	09:30 - 09:45	455	An Optimal Compensation Topology to Improve Efficiency in Bidirectional Wireless Power Flow Systems. <i>Authors:</i> Venkata Madhava Ram Tatabhatla; Ravulakari Kalyan; Nindra Sekhar
OS-SS04-S1-P6	09:45 - 10:00	466	A New Single Switch Fault Tolerant Multilevel Inverter for RES Applications. <i>Authors:</i> Busireddy Hemanth Kumar
OS-SS04-S2-P1	10:00 - 10:15	1229	Structural Analysis of Piezo electric Sensor for Low Power IoT Applications Authors: Hemant Narayan; Prakash Marimuthu; Shakila Baskaran
Date: 13-12	2-2025	Parallel	Session 3 Venue:
ID	Time Slot	Paper ID	Paper Details
OS-T3-S7-P1	08:30 - 08:45	257	Design and Analysis of a Uni-Switch Quadratic Boost Converter with Three-Winding Coupled Inductor for Efficient Solar-Powered EV Battery Charging *Authors:* Karthik Kumar K, Kamaraja A S
OS-T3-S7-P2	08:45 - 09:00	310	Enhanced Dynamic Wireless Charging Circuits for E - Mobility : A Comparative Study *Authors:* Amizhdhiniy Rajalingam Sudha, Josephine R L
OS-T3-S7-P3	09:00 - 09:15	355	Performance Analysis of a Modified Single-Phase Split-Source Inverter Achieving Reduced Commutation Loss and Enhanced Voltage Gain. <i>Authors:</i> Haricharan Nannam, Sai manohar Majji, Angel babita muppidi, Surya A
OS-T3-S7-P4	09:15 - 09:30	434	Performance Analysis of a Boost-Type Five-Level MLI Driven by a PEM Fuel Cell Stack. <i>Authors:</i> Praveen Bansal, ANUJ LODHI
OS-T3-S7-P5	09:30 - 09:45	199	Enhanced Ripple Reduction Strategies for Parallel-Operated AC-DC Converters: A MATLAB/Simulink Study <i>Authors:</i> Ilango Karuppasamy, Harun Kumar M
OS-T3-S7-P6	09:45 - 10:00	807	Design and Performance Analysis of Vienna Rectifier as the Input Stage for EV Charger. <i>Authors:</i> Aman Deep, Yadvendra Singh, Krishna Kumar Gupta, Sunil Kumar Singla, Shakti Singh, Pallavee Bhatnagar













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-	12-2025	Parall	lel Session 4 Track 4 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T4-S7-P1	08:30 - 08:45	213	A Synergistic Neural–Kalman Hybrid Approach for Real-Time State Estimation *Authors: Tasadeek Dar, Satyavir Singh*
OS-T4-S7-P2	08:45 - 09:00	541	A Novel Dissipativity-Based Observer for State of Charge Estimation in Lithium-Ion Electric Vehicle Batteries: An Experimental Approach <i>Authors:</i> Manivannan R, Vinothini K
OS-T4-S7-P3	09:00 - 09:15	756	Data-Driven Multi-Objective Optimization of Perovskite Solar Cells Using SCAPS-1D, Gaussian-Process Surrogates & NSGA-II <i>Authors:</i> leeladevi velpuri
OS-T4-S7-P4	09:15 - 09:30	820	Enhancing the Life Expectancy of Storage Device in a Solar PV based Microgrid Authors: Saqib Wani, Sofi Jan, Rabiya Bhat, Mubashar Zargar, IKHLAQ HUSSAIN
OS-T4-S7-P5	09:30 - 09:45	1183	Adaptive Step Size Implementation for P&O MPPT Algorithm Using Particle Swarm Optimization <i>Authors:</i> SEEMA DIWAN
OS-T4-S7-P6	09:45 - 10:00	1305	Improvement Uncertainity in Renewable Energy Sources using Monto Carlo optimization technique Authors: Dr.HIMA BINDU ELURI
Date: 13-12-2	2025	Parallel S	Session 5 Special Session 07 Venue :
Date: 13-12-2	2025 Time Slot	Parallel S Paper ID	Session 5 Special Session 07 Venue : Paper Details
ID	Time Slot	Paper ID	Paper Details Energy Management in Renewable-Integrated Smart Grid with Electric Vehicles, Battery Storage, and Consumer Incentives
ID OS-SS07-S1-P1	Time Slot 08:30 - 08:45	Paper ID 763	Paper Details Energy Management in Renewable-Integrated Smart Grid with Electric Vehicles, Battery Storage, and Consumer Incentives Authors: Sampatirao Nanibabu; Shakila Baskaran; Prakash Marimuthu Improving Grid Compliance and Economic Efficiency Using Energy Storage Under DSM Regulation 2024
OS-SS07-S1-P1 OS-SS07-S1-P2	Time Slot 08:30 - 08:45 08:45 - 09:00	763 781	Paper Details Energy Management in Renewable-Integrated Smart Grid with Electric Vehicles, Battery Storage, and Consumer Incentives Authors: Sampatirao Nanibabu; Shakila Baskaran; Prakash Marimuthu Improving Grid Compliance and Economic Efficiency Using Energy Storage Under DSM Regulation 2024 Authors: Ravindra Kuhada; Bharat Singh Rajpurohit Design and Analysis of a ZVS Buck Converter with Comparative MPPT Algorithms for Photovoltaic Systems Authors: Souvik Mondal; Arnab Ghosh; Pravat Kumar Ray; Riju
OS-SS07-S1-P1 OS-SS07-S1-P2 OS-SS07-S1-P3	Time Slot 08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	763 781 799	Paper Details Energy Management in Renewable-Integrated Smart Grid with Electric Vehicles, Battery Storage, and Consumer Incentives Authors: Sampatirao Nanibabu; Shakila Baskaran; Prakash Marimuthu Improving Grid Compliance and Economic Efficiency Using Energy Storage Under DSM Regulation 2024 Authors: Ravindra Kuhada; Bharat Singh Rajpurohit Design and Analysis of a ZVS Buck Converter with Comparative MPPT Algorithms for Photovoltaic Systems Authors: Souvik Mondal; Arnab Ghosh; Pravat Kumar Ray; Riju Nandi Cross-Tied BIPV Hybrid Interconnections with enhanced GMPP and reduced Mismatch loss for extreme Shading resilience in Smart Buildings













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-12-	2025	Parallel S	Session 6 Special Session 09 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS09-S1-P1	08:30 - 08:45	278	Shunt Active Power Filter Based on DETOGI for Self-Excited Induction Generator Under Unbalanced Loaded Condition <i>Authors:</i> Jotirmoy Samanta; Ralli Sangno; Rajen Pudur
OS-SS09-S1-P2	08:45 - 09:00	275	ANN-BASED PREDICTIVE MAINTENANCE FOR MINI GRID BLACK OUT PREVENTION Authors: R Nethra; Sahaana Shri S.K; CH. Vaishnavi Krishna; Binu Krishnan U; RAHUL S
OS-SS09-S1-P3	09:00 - 09:15	830	Integration of Solar PV System with Electric Grid for Reactive Power Control Authors: RAHUL KUMAR; Mukesh Kumar Kirar
OS-SS09-S1-P4	09:15 - 09:30	592	Grid-Connected PV System Using Isolated DC-DC Converter for MPPT With Power Quality Enhancement <i>Authors:</i> Rahul Kumar Verma; Rajan Kumar
OS-SS09-S1-P5	09:30 - 09:45	790	Disruptive Event Classification with the Help of Power Quality Features Extracted from µPMU Measurement <i>Authors:</i> Partha Kayal
OS-SS09-S1-P6	09:45 - 10:00	857	LTO Battery Fading Prediction using Deep Learning Authors: SREENU SREEKUMAR
Date: 13-1			
Date. 13-1	2-2025	Paralle	el Session 7 Special Session 20 Venue :
ID	2-2025 Time Slot	Paralle Paper ID	Session 7 Special Session 20 Venue : Paper Details
			-
ID	Time Slot	Paper ID	Paper Details Cascadable Second-Order Universal Filter With CMOS-Based DX-MOCCII For Control Engineering
ID OS-SS20-S1-P1	Time Slot 08:30 - 08:45	Paper ID 691	Paper Details Cascadable Second-Order Universal Filter With CMOS-Based DX-MOCCII For Control Engineering Authors: Aamir Suhail Taray; ASHOK KUMAR Scalogram-Histogram Driven CNN Approach for Classifying Power System Disturbances in PMU Data.
OS-SS20-S1-P1 OS-SS20-S1-P2	Time Slot 08:30 - 08:45 08:45 - 09:00	691 692	Paper Details Cascadable Second-Order Universal Filter With CMOS-Based DX-MOCCII For Control Engineering Authors: Aamir Suhail Taray; ASHOK KUMAR Scalogram-Histogram Driven CNN Approach for Classifying Power System Disturbances in PMU Data. Authors: Pradeep Khatik; Punjan Dohare Hybrid BSO-Based Multi-Objective Optimization for Enhanced Power Management in DC Microgrids
OS-SS20-S1-P1 OS-SS20-S1-P2 OS-SS20-S1-P3	Time Slot 08:30 - 08:45 08:45 - 09:00 09:00 - 09:15	691 692 813	Paper Details Cascadable Second-Order Universal Filter With CMOS-Based DX-MOCCII For Control Engineering Authors: Aamir Suhail Taray; ASHOK KUMAR Scalogram-Histogram Driven CNN Approach for Classifying Power System Disturbances in PMU Data. Authors: Pradeep Khatik; Punjan Dohare Hybrid BSO-Based Multi-Objective Optimization for Enhanced Power Management in DC Microgrids Authors: GAURAV KUMAR Genetic Algorithm-Optimized Fuzzy Control of Battery Storage Systems for Virtual Inertia Emulation in Microgrids













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-1	2-2025	Paralle	l Session 8 Special Session 21 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS21-S2-P1	08:30 - 08:45	782	Enhancing RDN Performance with Optimized EVCS, DG, and SC Placement Using Zero-Bus Logic OR based Forward–Backward Load Flow. <i>Authors:</i> Anagha Rajendran K P, Soumyabrata Barik, Sudarshan Swain
OS-SS21-S2-P2	08:45 - 09:00	1391	Solid-State and AI-Driven Advances in EV Battery Ecosystems: Road to 2030. <i>Authors:</i> Pooja Choudhary, Anubhav Agrawal
OS-SS21-S2-P3	09:00 - 09:15	624	High-Gain Voltage-Lift Switched-Capacitor Switched Inductor based Converter for Electrified Traction Drive System <i>Authors:</i> Gaurav., Sukanta Halder, Nakka Jayaram, Nilanjan Das, Mitesh Kumar, Bharat bhai Patel, Sk Bittu
OS-SS21-S2-P4	09:15 - 09:30	625	Improved High Gain Next-Gen DC-DC Converter for DC-BUS Applications Authors: Aida Shahriardoust, Gaurav, Sukanta Halder, Kaibalya Prasad Panda, Uppalapati Sudheer Kumar
OS-SS21-S2-P5	09:30 - 09:45	1429	Three-Level NPC Operation of TS-NPC with Capacitor Voltage Balancing Control *Authors:* Devwrat Devwrat, Narendrababu A, Kishor Hirekar, Naveen Yalla
OS-SS21-S2-P6	09:45 - 10:00	942	Damping of Sub Synchronous Oscillation Serving to DFIG based Type 3 Wind System *Authors: Vijay Mohale, Sunny Sonandkar, Madhukar Waware, Rahul Chanmanwar, and Vitthal Bandal
Date: 13	-12-2025	Para	llel Session 9 Mixed Track Venue :
ID	Time Slot	Paper ID	Paper Details
OL-S6-P2	08:30 - 08:45	292	Fuzzy Logic Controlled Hybrid EV Charging Station Utilizing Solar Power and Diesel Generator *Authors:* Masadi Prashanth Kumar; Srikanth Velpula; Saiprakash Chidurala; Buddhadeva Sahoo; Kalyaani Thota
OL-S6-P3	08:45 - 09:00	934	Distributed Discrete-Time Controller for Coordinated Operation of Clustered DC Nanogrids. <i>Authors:</i> Anuradha Tomar
OL-S6-P4	09:00 - 09:15	1127	Ground Fault Detection in RES Integrated Power System Networks Using Clustering Algorithm. <i>Authors:</i> VENKATESWARLU MANDADHI; Rakesh Kumar Panda; Kumaresan N
OL-S6-P5	09:15 - 09:30	568	Modelling of Partial Discharge Detection in Power Transformer Using ZnO Material Based Piezoelectric Sensor <i>Authors:</i> Dr. Sorokhaibam Nilakanta Meitei; Saibal Chatterjee
OL-S6-P6	09:30 - 09:45	1028	Performance Analysis of 100 kWp Stand-Alone Solar PV System in North-Eastern Part of India, Manipur <i>Authors:</i> Thokchom Singh; Benjamin A. Shimray; Sanasam Dhanabanta Singh; Athokpam Bharatbushan Singh; Sorokhaibam Nilakanta Meitei
OL-S7-P1	09:45 - 10:00	711	Efficient Probabilistic Load Flow Utilising Latin Hypercube with Translational Propagation Algorithm <i>Authors:</i> Neeraj Gupta, B Rajnarayan Prusty











Smart Technologies for Power, Energy and Control



(STPEC 2025) December 10 -13, 2025 | NIT Goa, Goa

Day 4	Date: 13-12	-2025	Oral Session – 8 Time : 12:00 to 01:30
Date: 13-	12-2025	Paral	lel Session 1 Track 1 Venue :
ID	Time Slot	Paper ID	Paper Title
OS-T1-S8-P1	12:00 - 12:15	1507	Twin-Delayed DDPG-Tuned PIDF Controller for Load Frequency Control in Power Grid with Distributed Energy Resources Authors: Tumuluri Datta Venkata Sai, Sukriti Tiwari, Devesh Shukla
OS-T1-S8-P2	12:15 - 12:30	1581	Fuzzy Slope Entropy-Driven Protection Scheme for Micro-grids Incorporating ΔV - ΔI Plane-Based Fault Classification <i>Authors:</i> Chinmayee Biswal, Pravat Kumar Rout, Binod Kumar Sahu, Subhransu Ranjan Samantaray
OS-T1-S8-P3	12:30 - 12:45	166	Leveraging Extensive Feature Engineering for Robust Fault Diagnostics in DG Penetrated Distribution Networks <i>Authors:</i> Adhishree Srivastava, Neha Nidhi, Piyush Kumar Ojha
OS-T1-S8-P4	12:45 - 13:00	512	Intelligent Time-Domain Protection of Grid-Forming Microgrids Enabled by IEC 61850 GOOSE Communication <i>Authors:</i> Aditi Gupta
OS-T1-S8-P5	13:00 - 13:15	1415	Impact of Renewables on Losses and Voltage Profile in Distribution Systems. <i>Authors:</i> Prabhat Kiran, Venkatakirthiga Murali
OS-T1-S8-P6	13:15 - 13:30	1085	A Resilient Controller for Enhancement of Load Frequency Control in Multi-Area Restructured Power System with Nonlinearities <i>Authors:</i> PRANAV SINGH, Sarvesh Kumar, Ravi Shankar, S N Singh
D / 10 10			~
Date: 13-12	-2025	Parallel	Session 2 Special Session 05 Venue :
Date: 13-12 ID	Time Slot	Parallel Paper ID	Paper Details
			-
ID	Time Slot 12:00 - 12:15	Paper ID 206	Paper Details Hybrid Deep Learning Models for Real-Time Anomaly Detection in Electric Vehicle Systems Authors: Seema S; Ashima Anand; Amit Kumar; Mukesh Singh;
OS-SS05-S1-P1	Time Slot 12:00 - 12:15	Paper ID 206	Paper Details Hybrid Deep Learning Models for Real-Time Anomaly Detection in Electric Vehicle Systems Authors: Seema S; Ashima Anand; Amit Kumar; Mukesh Singh; Prasant Singh Rana Anomaly-Resilient Control for Automatic Generation Control Systems: Detection and Mitigation of Data Integrity Attacks
OS-SS05-S1-P1 OS-SS05-S1-P2	Time Slot 12:00 - 12:15 12:15 - 12:30	206 1071	Paper Details Hybrid Deep Learning Models for Real-Time Anomaly Detection in Electric Vehicle Systems Authors: Seema S; Ashima Anand; Amit Kumar; Mukesh Singh; Prasant Singh Rana Anomaly-Resilient Control for Automatic Generation Control Systems: Detection and Mitigation of Data Integrity Attacks Authors: Harshitha Puli; Jawahar Sagar; Puli Tarun BiLSTM-Based Load Forecasting for Individual Appliances in Smart Homes. Authors: Ravivarma Kamireddy; Lokeshgupta Bhamidi;
OS-SS05-S1-P1 OS-SS05-S1-P2 OS-SS05-S1-P3	Time Slot 12:00 - 12:15 12:15 - 12:30 12:30 - 12:45	206 1071 578	Paper Details Hybrid Deep Learning Models for Real-Time Anomaly Detection in Electric Vehicle Systems Authors: Seema S; Ashima Anand; Amit Kumar; Mukesh Singh; Prasant Singh Rana Anomaly-Resilient Control for Automatic Generation Control Systems: Detection and Mitigation of Data Integrity Attacks Authors: Harshitha Puli; Jawahar Sagar; Puli Tarun BiLSTM-Based Load Forecasting for Individual Appliances in Smart Homes. Authors: Ravivarma Kamireddy; Lokeshgupta Bhamidi; Ramanjaneya Reddy U Accurate State of Charge Estimation of Li-ion Battery Pack in Real Driving Conditions Using Safe Reinforcement Learning
OS-SS05-S1-P2 OS-SS05-S1-P3 OS-SS05-S1-P4	Time Slot 12:00 - 12:15 12:15 - 12:30 12:30 - 12:45 12:45 - 13:00	206 1071 578 1463	Hybrid Deep Learning Models for Real-Time Anomaly Detection in Electric Vehicle Systems Authors: Seema S; Ashima Anand; Amit Kumar; Mukesh Singh; Prasant Singh Rana Anomaly-Resilient Control for Automatic Generation Control Systems: Detection and Mitigation of Data Integrity Attacks Authors: Harshitha Puli; Jawahar Sagar; Puli Tarun BiLSTM-Based Load Forecasting for Individual Appliances in Smart Homes. Authors: Ravivarma Kamireddy; Lokeshgupta Bhamidi; Ramanjaneya Reddy U Accurate State of Charge Estimation of Li-ion Battery Pack in Real Driving Conditions Using Safe Reinforcement Learning Authors: Reeta Rana; Anju Bala; Mukesh Singh Bidirectional Gated Recurrent Unit and CatBoost for Energy Demand Forecasting using Explainable Artificial Intelligence











tand Control

Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-12	-2025	Parallel	Session 3 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-T3-S8-P1	12:00 - 12:15	982	Design and Development of a Single-Stage LED Driver Using Boost Converter with Dimming Control Algorithms <i>Authors:</i> Vijayalakshmi A L
OS-T3-S8-P2	12:15 - 12:30	1501	Five-Level Fault-Tolerant Inverter With Preserved Output Under Multiple Switch Failure Authors: PRAJESH NIRANJAN
OS-T3-S8-P3	12:30 - 12:45	1344	Modelling and Analysis of Multi-stage Acceleration Grid Power Supply Dual Control for Neutral Beam Injector Authors: Ashok Mankani, Aditya Naugraiya, Aritra Chakraborty, Saurabh Kumar, Amal S, Meddi Tharun, Suryakant Gupta, Priyesh Chauhan
OS-T3-S8-P4	12:45 - 13:00	1394	Emerging Trends in Voltage Source Converters: A Topological Review on Thyristor Integration Authors: Ayushi Gupta, Shourya Sharma, Siba Kumar Patro
OS-T3-S8-P5	13:00 - 13:15	1425	Design and Control of a Self-Balanced Quadruple Boost 17-Level Switched Capacitor-Based Inverter <i>Authors:</i> Abdul Nadeem
OS-T3-S8-P6	13:15 - 13:30	1434	A 13-,19-, and 25-Level Switched-Capacitor Multilevel Inverter with three fold gain for Renewable Energy Applications <i>Authors:</i> Md Ashraf Ali Khan, M Saad Bin Arif, Mohd Faraz Ahmad, Abu Athar
Date: 13-1	2-2025	Parallel	Session 4 Track 4 Venue:
Date: 13-1 ID	2-2025 Time Slot	Parallel Paper ID	Paper Details
ID	Time Slot	Paper ID	Paper Details Techno-Economic Feasibility Study of a Rooftop Solar PV System for EV Charging at University Campus Building Authors: KRISHNA KUMAR SAINI, DIPTANJAN SENGUPTA, HD
ID OS-T4-S8-P1	Time Slot 12:00 - 12:15	Paper ID 1315	Paper Details Techno-Economic Feasibility Study of a Rooftop Solar PV System for EV Charging at University Campus Building Authors: KRISHNA KUMAR SAINI, DIPTANJAN SENGUPTA, HD Mathur Techno-Economic and Environmental Analysis of a Stand-Alone Hybrid PV-Wind-Diesel Microgrid for Electrification Using PSO,
ID OS-T4-S8-P1 OS-T4-S8-P2	Time Slot 12:00 - 12:15 12:15 - 12:30	1315 1357	Paper Details Techno-Economic Feasibility Study of a Rooftop Solar PV System for EV Charging at University Campus Building Authors: KRISHNA KUMAR SAINI, DIPTANJAN SENGUPTA, HD Mathur Techno-Economic and Environmental Analysis of a Stand-Alone Hybrid PV-Wind-Diesel Microgrid for Electrification Using PSO, EHO, and QPSO. Authors: RITU K R UIT Grid-Forming Inverters: Overview of Major Technologies and Their Applications in Microgrid Operation
OS-T4-S8-P1 OS-T4-S8-P2 OS-T4-S8-P3	Time Slot 12:00 - 12:15 12:15 - 12:30 12:30 - 12:45	1315 1357 176	Paper Details Techno-Economic Feasibility Study of a Rooftop Solar PV System for EV Charging at University Campus Building Authors: KRISHNA KUMAR SAINI, DIPTANJAN SENGUPTA, HD Mathur Techno-Economic and Environmental Analysis of a Stand-Alone Hybrid PV-Wind-Diesel Microgrid for Electrification Using PSO, EHO, and QPSO. Authors: RITU K R UIT Grid-Forming Inverters: Overview of Major Technologies and Their Applications in Microgrid Operation Authors: Dhavalkumar Dave, Rital Gajjar, Rakesh Gajjar, Binal Modi Three-Phase ETOSSI-Controlled Solar-Battery Grid System for Power Quality Enhancement and Seamless EV Charging Transition Authors: Sarthak Mohanty, Shubhranshu Mohan Parida, Pravat Kumar













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-12-2	025	Parallel Se	ession 5 Special Session 08 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS08-S1-P1	12:00 - 12:15	550	Design and analysis of Ultra-Gain Bi-directional DC-DC Converter <i>Authors:</i> Vansh Sharma; Porpandiselvi S
OS-SS08-S1-P2	12:15 - 12:30	576	Machine Learning Enhanced Phase-Shift Optimization Control in Bidirectional Multi-Level DAB Converter for EV Charger Application <i>Authors:</i> Subhabrata Pal; Avik Bhattacharya
OS-SS08-S1-P3	12:30 - 12:45	410	Modeling and Simulation of Single-Phase Shift Power Modulation in Isolated Bi-directional Dual Active Bridge DC-DC Converter <i>Authors:</i> Nivedika Kher; Arun Rathore; NAGESWAR BHUKYA
OS-SS08-S1-P4	12:45 - 13:00	907	Chattering Free Performance of Buck Converter using Optimized Non-linear Sliding Mode Surface *Authors: Anupam Agarwal; Man Mohan Garg
OS-SS08-S1-P5	13:00 - 13:15	1099	Reconfigurable Bidirectional Zeta–SEPIC Converter for Solar and Battery Integration with Fault-Tolerant Mode Switching <i>Authors:</i> Niwin M J; S Thangavel
OS-SS08-S1-P6	13:15 - 13:30	1509	A Novel Ultra High-Gain DC–DC Converter for Fuel Cell Electrical Vehicles. <i>Authors:</i> Yasir Bashir; Prakash Ji Barnawal; Amarendra Edpuganti
OS-SS08-S2-P1	13:30 - 13:45	384	Single-Source Boost Multilevel Inverter with a New switching Approach. <i>Authors:</i> Eddu Karunakaran; Yellasiri Suresh; Bhukya Nageswar Rao
Date: 13-12	-2025	Parallel	Session 6 Special Session 10 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS10-S1-P1	12:00 - 12:15	603	Optimized Operational Strategy for Integrated Multi Carrier Energy Systems. <i>Authors:</i> ANKIT GARG
OS-SS10-S1-P2	12:15 - 12:30	906	Data-Driven Black-Box Digital Twin for Real-Time Degradation and Failure Prediction. <i>Authors:</i> Arun Kumar; Nishant Kumar
OS-SS10-S1-P3			DI 1 1 C 131 131 1 1 1 1 1 C C C
	12:30 - 12:45	334	Physics-Informed Neural Network-based Prediction of Battery Charging Dynamics of Chaotic Energy Harvesters *Authors:* Rahash Nathasarma; Ankit Tiwari; Binoy Krishna Roy
OS-SS10-S1-P4	12:30 - 12:45 12:45 - 13:00	613	Charging Dynamics of Chaotic Energy Harvesters
OS-SS10-S1-P4 OS-SS10-S1-P5			Charging Dynamics of Chaotic Energy Harvesters *Authors: Rahash Nathasarma; Ankit Tiwari; Binoy Krishna Roy Real-Time SOC and Fault Detection via Hybrid CNN–EKF in BMS
	12:45 - 13:00	613	Charging Dynamics of Chaotic Energy Harvesters *Authors:* Rahash Nathasarma; Ankit Tiwari; Binoy Krishna Roy Real-Time SOC and Fault Detection via Hybrid CNN–EKF in BMS *Authors:* Gudipati Jawahar Sagar A Machine Learning Approach for Efficiency-Based Fault Detection in EV Batteries. *Authors:* Bhagya Satya Sri Vutukuri; Shanmukha Krishna Chaitanya M; Gowreesh Raja Dandamudi; D S R S L













Smart Technologies for Power, Energy and Control (STPEC 2025)

Date: 13-12	2-2025	Parallel	Session 7 Special Session 20 Venue :
ID	Time Slot	Paper ID	Paper Details
OS-SS20-S2-P1	12:00 - 12:15	1481	Real-Time Gain-Tuned A Novel Source-Side Virtual RL Damper for DC Bus Voltage Stabilisation in Cascaded DC-DC Converters within a DC Microgrid *Authors:* Suryakant Kumar; Satadal Bhowmik; Gauri Shankar; Vedantham Lakshmi Srinivas
OS-SS20-S2-P2	12:15 - 12:30	478	Optimal Charge Scheduling for Economic Operation of Electric Vehicle Charging Station *Authors:* Samarendra Singh; Bishwajit Dey; Neeraj Kanwar; Srikant Misra
OS-SS20-S2-P3	12:30 - 12:45	1122	Control Strategy of Bidirectional AC-DC Converter using modified RBFNN Algorithm to Improve PQ in Grid Connected PV-EV based Charger Authors: SUDHANSHU MITTAL; MANOJ BADONI; PRAKASH CHITTORA; GAURAV YADAV
OS-SS20-S2-P4	12:45 - 13:00	1141	Smart, Sustainable Wireless EV Charging with Harris Hawks- Enhanced Control Strategy *Authors:* Gudipati Jawahar Sagar; Tarkeshwar Matho
OS-SS20-S2-P5	13:00 - 13:15	1401	A fuel cell and battery-based hybrid electric vehicle with super twisting sliding mode control for performance enhancement <i>Authors:</i> LAVUDYA SWATHI, Sachidananda Sen, Basetti Vedik, Kumar Shiva
OS-SS20-S2-P6	13:15 - 13:30	895	Optimized Operation of Multi-Carrier Energy Systems with Renewable and Demand Response Uncertainties *Authors:* ANKIT GARG

Day 1	Date: 10-1	12-2025	Poster Session – 1	Time: 17:30 to 18:00	
	Venue:				
ID	Paper ID		Paper Title)	
PS-S1-P1	1041	Switch Co	rical DC-Link Voltage based 51-level M bunt Uday Patel, Siddharthsingh K. Chauhan	1 6,	
PS-S1-P2	1479	Tied PV S Authors:	of Modified Leaky-LMS Algorithm base ystem using Current Error Space Phaso Urvashiben Rathod, Uday Patel Institute M. T. Shah, Prof. Dr. P. N. Tekwani	or Hysteresis Controller	
PS-S1-P3	718	Using a C	Off-Grid Hybrid Renewable Energy Sy haotic Brown Bear Algorithm Henry Blankson, Himadri Lala	stem with Hydrogen Generation	
PS-S1-P4	1371		on of Arcing Faults in Low-Voltage AC Ratnakar Nutenki, Haraprasad Badajena		
PS-S1-P5	1386	TVM	Insulation Diagnosis using Time-Varyin Somesh Ganguly	ng Capacitance Profile of Modified	













Smart Technologies for Power, Energy and Control (STPEC 2025)

PS-S1-P6	534	Parameter-Free Fault Locator for Double-Circuit Line With Essential Faulted Circuit Data *Authors:* ROHIT RAY, Kaustav Kalita, Abhineet Prakash, S. Sivasubramani, S.K. Parida	
PS-S1-P7	648	Comparative Analysis of Reconstruction-Based Loss Metrics for Attack Detection in LCDR-Based Transmission Line Protection *Authors:* RAVI PRAKASH MAHOBIA, Aidyanath Bag, Swapnajit Pattnaik**	
PS-S1-P8	880	Secure Data Exchange in Smart Metering: A DLMS/COSEM TCP/IP Wrapper Based Approach *Authors: Dhanavath Shankar*	
PS-S1-P9	1054	Advancing Grid-Forming Converter Control Using Transformer-Based Artificial Intelligence Model: A Performance Evaluation Authors: ABHAY KUMAR, DUSHYANT SHARMA, MAYUKHA PAL	
PS-S1-P10	1153	Reliability-Weighted AdaBoost Regression Model for Distribution System State Estimation Authors: HIMANI MATTOO, Anirban Dasgupta, Muneeb Mushtaq Sheikh, Sreenath J.G. Praveen Tripathy	
PS-S1-P11	1542	Design and HIL Validation of a Closed-Loop Controlled 5 kW LLC Resonant Converter for 400 V DC Output Using OPAL-RT <i>Authors:</i> Uditveer Rajput; Annu Kumari; Sanjeev Singh; Giribabu dyanamina	
PS-S1-P12	1412	Optimal Network Reconfiguration using BPSO Technique with EVCSs and DGs <i>Authors:</i> Akash Kumar, Anish Sharma, Abhishek S, Divya Bharathi Raj, Venkatakirthiga Murali	
PS-S1-P13	1508	Damping Ratio and PI Integrator Gain Estimation from Generation-Loss Disturbances in the Indian Electricity Grid <i>Authors:</i> Debanjan Mukherjee	
PS-S1-P14	1120	Economic and Operational Analysis of Virtual Energy Storage in Energy Communitie *Authors:* Vishal Sharma, Shubham Patwari, Satish Sharma, Prerna Jain	
PS-S1-P15	1323	A Modified Notch Filter SOGI-Controlled Solar-Battery Interface for Power Quality Improvement in EV-Integrated Grids *Authors:* Sarthak Mohanty, Shubhranshu Mohan Parida, Pravat Kumar Rout, Buddhadeva Sahoo	
PS-S1-P16	671	Differentiation Method Based Reduction of Interconnected Hybrid Power System <i>Authors:</i> V. P. Sharma, Akhilesh Mathur, V. P. Singh, Tarun Bashishtha	
PS-S1-P17	1566	Adaptive Field Weakening-Based Advanced DTC for IPMSM Drives With MTPA and Adaptive Flux Hysteresis Control Under Voltage-Constrained Wide-Speed Operation <i>Authors:</i> Arnab Chatterjee, Avik Bhattacharya	
PS-S1-P18	716	Alternator Stator Winding Interturn Fault Detection by Digital Twin Data Driven Technique *Authors:* MAKARAND BALLAL, Bhimrao Umare, HIRALAL SURYAWANSHI, Rashmi Singh, Tushar Vilhekar, Kanchan Ghule	
PS-S1-P19	1235	Orthogonal Deep Convolutional Neural Network for Incipient Inter-Turn Fault Diagnosis in Electric Drive System *Authors:* Jeevanand Seshadrinath, Fatimatelbatoul Husari*	













Smart Technologies for Power, Energy and Control (STPEC 2025)

PS-S1-P20	1447	Performance Enhancement of DTC in Induction Motors Using Ant Colony Optimization with Max-Min Ant System Authors: Arpita Banik, Raja Gandhi, Nabarun Biswas, Rakesh Roy
PS-S1-P21	695	Design and Performance Evaluation of an Interior Permanent Magnet Synchronous Motor for EV Applications *Authors:* Bharatiraja C, Dilsha Purushothaman, Sanjeev Guhan K S, Nagarajan V S
PS-S1-P22	1193	Electromechanical Equivalent Circuit Modelling of PMSM with Stator Winding Faults Analysis *Authors:* Raja Singh R, Brindavan T. V.
PS-S1-P23	630	Fault Diagnosis and Identification in Permanent Magnet Synchronous Motor Using Temporal Convolutional Network *Authors:* Anukriti Sharma, Khushboo Ramawat, Bharat Singh Rajpurohit, Adil Usman, Pramod J. Chaudhary
PS-S1-P24	842	Hexagonal Linear Electromagnetic Actuator for Vehicular Suspension Systems <i>Authors:</i> Ben Hur Bandeira Boff, Matheus Palm da Silva, Gabriel Behling da Silveira, Jeferson Vieira Flores, Ály Ferreira Flores Filho, Paulo Roberto Eckert
PS-S1-P25	221	Optimized Sensor-less Speed Control of Three-Phase Induction Motor using Virtual Voltage Vectors *Authors:* Vinay Kumar T, Puli Rajanikanth, Akshad S. Ganachari

Day 2	Date: 11-	12-2025	Poster Session – 2	Time: 10:00 to 10:30	
	Venue:				
ID	Paper ID		Paper Titl	le	
PS-S2-P1	1293	Chargers	e Comparison of High-Gain DC-DC	Converters for PV Fed EV Off-Board	
PS-S2-P2	1495	_	orless Vector Controlled PMSM Driv nurag Savarn, Vimlesh Verma, Md. N	_	
PS-S2-P3	1030	A Seven-Level Triple-Boost Common-Ground Multilevel Inverter With Reduced Voltage Stress *Authors:* Deepak Singh, Sandeep N, Piyush Kant			
PS-S2-P4	1052	A Grid Connected PV Inverter with Subarray Level Control in MPP and non-MPP Mode *Authors:* Ayush Chauhan, Subhendu Dutta		vel Control in MPP and non-MPP	
PS-S2-P5	1076	TRIPLE SWITCH TRIPLE MODE ASL DC-DC CONVERTER FOR PV SYSTEM <i>Authors:</i> Avneet Kumar, Sushma Korra, Sahendara Kumar			
PS-S2-P6	1081	An Overlap Timing-based Control Scheme for Active Current Source Gate Driver <i>Authors:</i> Satish Belkhode, Ashish Wanode		active Current Source Gate Driver	
PS-S2-P7	1087	Ramping Po	Minimize Low-Frequency Fluctuatio ower Supplies in Booster Synchrotron ijwal Yadav, Manoj Gandhi, Aradhan		











on





PS-S2-P8	1159	Grid-Tied Multi-Stage PV Power Converter with Dual-Active-Bridge Interface for EV Applications *Authors:* Surya Prakash, Veerpratap Meena
PS-S2-P9	1231	Converter Configuration and Control for Switch Fault Detection and Clearance in PMBLDC Motor Driven EVs *Authors:* Rahul Arora, Sanjeev Singh, Ujjwal Kumar Kalla, Dheeraj Kumar
PS-S2-P10	1238	Enhanced Two-Port Model-Based Study and CCM/DCM Boundary Condition for LCC-LCC IPT Topology *Authors: Jalaj Kumar, Suvendu Samanta*
PS-S2-P11	1274	A Novel High-Gain Switched Capacitor-Based Quadratic DC–DC Converter for Fuel Cell Electrical Vehicles *Authors: Yasir Bashir, Prakash Ji Barnawal, Amarendra Edpuganti
PS-S2-P12	1547	Improved Power Conversion Efficiency of Power Electronics Converters in Discontinuous Conduction Mode for EV Chargers *Authors:* SANJAY KUMAR*
PS-S2-P13	1290	Analysis of Inner Current Loop with PI and Hysteresis Controller for DC/AC VSC in Microgrid Applications *Authors:* Sheikh Sajid Visvesvaraya, Pradyumn Chaturvedi
PS-S2-P14	1313	IoT-based Fault Diagnosis of AFE using Harmonic Distortion and Waveform Asymmetry for EV Charging Applications *Authors:* Ranesh S, Jyothilakshmi B, Arun Senthil G, Raja Singh R, Yong Wang
PS-S2-P15	1325	LEAKAGE CURRENT MINIMIZATION IN SINGLE PHASE GRID CONNECTED SOLAR PV **Authors:* Midhun Mohan, Sreeraj E S, Srikanth Kumar, Suruchi Jain, Javal Gadher, Pradip Magar
PS-S2-P16	1364	Design and Simulation of 15kV/5A DC Power Supply for Residual Ion Dump Using Modular Multilevel Converter <i>Authors:</i> Kumar Saurabh, Vivek Patel, Ashok Mankani, Aritra Chakraborty
PS-S2-P17	1426	A New Coupled-Inductor Based Quadratic Boost DC-DC Converter With Stacked Cell <i>Authors:</i> Raj Moyal, Rupesh Kumar Yadav, Mukesh Kumar Pathak
PS-S2-P18	1488	Dual Phase Shift Controlled Dual Active Bridge for 3-Stage MSCC EV Battery Charging. <i>Authors:</i> Farha Khan, Shirazul Islam, Lazhar Ben-Brahim, Adel Gastli, Farhad Illahi Bakhsh
PS-S2-P19	1489	A Low Device Count Single-Phase Five-Level Boost Inverter <i>Authors:</i> Rage Ravitheja, Priyabrata Shaw, Manoranjan Sahoo
PS-S2-P20	1563	An Incremental MPPT-Controlled Soft-Switched LED Driver Using a PV-Fed Boost Converter for Street Lighting *Authors:* Banoth Chandrasingh, Porpandiselvi S, Vansh Sharma*
PS-S2-P21	165	Enhancing LFC Systems Against Denial of Service Attacks: Detection and Resilience Strategies. <i>Authors:</i> Shaahid Mehmood, ASADUR RAHMAN, Inam ul Haq, Abdullah Ahmad
PS-S2-P22	113	Improving Active Power Generation with Multi-source Interconnected Power System with Artificial Electric Field Algorithm Supported by SMES and UPFC <i>Authors:</i> Shruthi Nookala, chandan kumar shiva, vedik basetti, sachidananda sen, Shubhashish Bhakta













Smart Technologies for Power, Energy and Control (STPEC 2025)

PS-S2-P23	805	Modelling and Analysis of a PV-Powered DC wireless UAV charging station using DIgSILENT PowerFactory <i>Authors:</i> Gopalakrishnan Renganathan, Nilanjan Tewari
PS-S2-P24	1459	Adaptive Multi-Objective Storage Planning for Flexibility Enhancement under High Renewable Variability Authors: POTHABATHULA VIJAY NAGA KRISHNA, Hemanth Kumar Raju Alluri
PS-S2-P25	1329	Power Quality and Energy Management in Grid-Tied Dual-Stage PV-Battery Systems using ASSLMS algorithm *Authors:* Mathewos Lolamo, Rajan Kumar, Veena Sharma, Aschalew Tirulo, Lukas Gebremariam, Raj Kumar Jarial

Day 2	Date: 11-	2-2025 Poster Ses	ssion – 3	Time: 17:30 to 18:00		
	Venue:					
ID	Paper ID		Paper Title			
PS-S3-P1	415	ZA-ASFE Based Advanced Technique for 1-Phase Grid Connected SPV System <i>Authors:</i> Dheeraj Kumar, Sanjeev Singh, Shailendra Kumar, Rahul Arora				
PS-S3-P2	502	Time Domain Dielectric Respo with Natural Ester Oil <i>Authors:</i> Brahma Swarup Laha		•		
PS-S3-P3	633	Boosting Planar Perovskite Sol <i>Authors:</i> Mohamed Moustafa	ar Cell Efficiency Us	sing ZrS2 as a Novel ETL		
PS-S3-P4	1026	Review <i>Authors:</i> TWINKLE PATTNA Makarand S. Ballal	IK, Devang P. Kubit	Batteries for EV Applications: A kar, Ragiree Shusmashalini, Dr.		
PS-S3-P5	1319	Development of a Real-Time B Arduino Authors: Sumit Dudhe, TIKAN Kharat, Girish MIttal		ystem for SoC Estimation Using rali Manohar, Vijay Kale, Om		
PS-S3-P6	1493	Performance Analysis of INC, VCPSO, CFPSO, CS and SSA MPPT Methods for Maximizing Power Output of Solar PV Arrays under Dynamic Shading <i>Authors:</i> Abhinav Bhattacharjee, Suresh Mikkili, Gaurav Kumar		er Dynamic Shading		
PS-S3-P7	676	Mathematical Modeling and Experimental Approach for State of Charge Estimation Samsung 30Q Li-Ion Batteries Using a Passivity Observer <i>Authors:</i> Manivannan R, Vinothini K		•		
PS-S3-P8	542	Energy Management in Grid-Continuization Algorithm Authors: HIMANSHU RAJ, St		by using Hippopotamus		
PS-S3-P9	700	FEASIBILITY AND ECONON PHOTOVOLTAIC SYSTEM U <i>Authors:</i> Jay Tembhekar, PS K	SING HOMER PRO	O SOFTWARE		













Smart Technologies for Power, Energy and Control (STPEC 2025)

PS-S3-P10	1592	Zero Sequence Voltage Control for Handling Unbalances in Multiport Charging Station Based Transformerless Series Hybrid Converter and DAB <i>Authors:</i> Jayant Kumar; Ibhan Chand Rath; Siba Kumar Patro
PS-S3-P11	284	Social Spider Algorithm assisted LSTM Network towards the SoC estimation of lithium-ion batteries *Authors:* Saneep K; Sundareswaran K; P Srinivasa Rao Nayak; Gireesh V Puthusserry; Kannan M; Midhun E K
PS-S3-P12	746	Design, Analysis and Control of Dual-Mode Voltage Equalizer using Switched-Capacitor and Fly-back Converter for Series-Connected Battery String *Authors:* ABHAYA KUMAR SAHOO; Sashwathkumar S; Lizanne Fernandes; Keerthi Saladi; V. Sankaranarayanan
PS-S3-P13	910	Thermal Analysis of Multiphase Electromagnetic Coupler for High Power Contactless Charging System Considering Core and Shielding Effects *Authors:* Apurv Kumar Yadav; Sukumar Das
PS-S3-P14	1111	Value of Lost Load Computation Framework for Vehicle to Load Applications considering Life Cycle Techno-economic Analysis *Authors: N S Ramanathan; Pallavi Bharadwaj
PS-S3-P15	1375	Performance Investigation of CLLC and DAB Modules for Configurable 400V and 800V EV Charging System *Authors:* Satish Belkhode; Shashank Dabral*
PS-S3-P16	1467	High-Efficiency Integrated Inductive-Capacitive Wireless Charging for Electric Vehicles. <i>Authors:</i> Maria Loukrakpam; Ngangoiba Maisnam; Piyush Pratap Singh; Ksh Milan Singh
PS-S3-P17	1590	Delta Cascaded H Bridge converter for STATCOM and multiport EV charging applications and its capacitor voltage balance technique during Uneven Loading Conditions *Authors: Ibhan Chand Rath; Siba Kumar Patro*
PS-S3-P18	112	Optimization of Battery Thermal Management in Electric Vehicles: A Model Predictive Control Approach Integrated with Particle Swarm Optimization <i>Authors:</i> SINDHU M R AMRITA
PS-S3-P19	1059	Real-Time Power Balancing in Bidirectional Vehicle-toVehicle Wireless Power Transfer Modulation and Control Strategy Development <i>Authors:</i> Bharatiraja C; Nakeeran R
PS-S3-P20	1082	Fuzzy-Driven Electro-Mechanical Control for Stable and Efficient Electric Car Operation *Authors:* Buddhadeva Sahoo; Sarthak Mohanty; Pravat Kumar Rout; Prakash Chandra Sahu; Manoj Kumar Debnath; Subhasis Panda
PS-S3-P21	600	State-of-Charge Estimation for EV Li-Ion Batteries Using ResNet: A Robust Deep Learning Approach with Real-World Driving Data <i>Authors:</i> Manivannan R; Vigneswar N
PS-S3-P22	889	Enhanced Modeling and Implementation of Incremental Encoder-Based FOC for PMSM Drives *Authors:* Shilpa Ranjan, Brijendra Sangar*
PS-S3-P23	764	Kalman-based Forecasting of Stock Market Trend *Authors:* Neelanshu Garg; Amit Naik; Abhinoy Kumar Singh















December 10 -13, 2025 | NIT Goa, Goa,

PS-S3-P24	241	Series Cascade Control Loop For Double Integrating Processes Based On Smith Predictor *Authors:* Prabir Singha; Sudipta Chakraborty; Vipin Chandra Pal
PS-S3-P25	244	A Modified Smith Predictor Approach for Controlling Unstable Cascade Processes *Authors:* Prabir Singha; Sudipta Chakraborty; Vipin Chandra Pal

Day 3	Date: 12-	12-2025 Poster Session – 4	Time: 10:00 to 10:30
		Venue:	
ID	Paper ID	Paper T	Title
PS-S4-P1	713	Design and Implementation of a Multi-Protocol Architecture for Scalable IoT Systems. <i>Authors:</i> V Kavin Ishwar; Suresh Kumar Gawre	
PS-S4-P2	734	Coordinated Three-Axis Linear Slide Stage Co <i>Authors:</i> setti suresh; R Mithun Kumar; T Nan Nagahanumaiah	•
PS-S4-P3	423	Smart Accident Prevention System for Electric Drowsiness Detection <i>Authors:</i> Alok Vardhan; Dinanath Prasad; Ma Choudhary; Neeraj Maurya	
PS-S4-P4	1469	Advanced Phase-Lead Augmented PI Control Positioning Authors: Girish Lakhekar; Vivek Lingade; Dh Ohol; Ajay Lohia; Ramesh Agnihotri	
PS-S4-P5	1104	Gramian Angular Field-Assisted Deep Learnin Localization in Electrical Power Network <i>Authors:</i> Lidia Ghosh, Sayantan Das, Bisward Chakraborty	
PS-S4-P6	1297	Real-Time Vital Sign Monitoring with Dashbo <i>Authors:</i> HARINATH AIREDDY	oard Integration
PS-S4-P7	839	Distributed ledger technology enables deep co- intrusion detection to enhance the secure colle <i>Authors:</i> Sandeep Kumar Mathariya, Deepak Soni,Rishi kushwah	ection and storage of health data.
PS-S4-P8	316	Frequency Control of Multi-Area Power Syste Optimization-Based Cascaded Controller Inco and Electric Vehicles <i>Authors:</i> Hiramani Shukla; Shailendra Kuman	orporating Renewable Energy Sources
PS-S4-P9	1143	Hybrid MPPT Strategy for PV Energy Integra <i>Authors:</i> Gudipati Jawahar Sagar; Tarkeshwar	
PS-S4-P10	249	State of Health Prediction of Lithium-ion Batt Model <i>Authors:</i> BHIMIREDDY LAKSHMINARAY	C











on



Smart Technologies for Power, Energy and Control (STPEC 2025)

PS-S4-P11	574	RF-Based Detection and Classification of Drone Communications Using SDR and Machine Learning *Authors:* Leo Prasanth L; Jenila Vincent M; Susi E
PS-S4-P12	704	A Framework for Robotic Harvesting of Apples in Structured Orchards: fruit localization and robot path planning *Authors:* Somsukla Maiti; Rupnar Dutta; Deepak Yadav; Gurlovleen Phull; Firdoous Mir; Chandan Har; Soumen Sen
PS-S4-P13	780	Graph-Temporal Actor-Critic: A Hybrid Architecture for UAV Navigation in Dynamic Environments *Authors:* SELVAM E; Surya Raj; Shanmugam Palaniswamy; Kaushal Kishore**
PS-S4-P14	1239	Adaptive Control for Enhancing Fault Ride-Through in DFIG-Based Wind Energy Systems Under Variable Operating Conditions *Authors:* Jawaharlal Bhukya; Rishav Dutta
PS-S4-P15	1564	Estimation of Storage Depletion Outage Time for Energy Harvested Microgrid Systems **Authors:* Ritwik Haldar**
PS-S4-P16	1531	Assessment of Classical and Advanced Control Techniques for Battery-Integrated DAB Converter *Authors:* Jayadev Meher; Krishna Roy; Arnab Ghosh
PS-S4-P17	623	Performance Analysis of Non-Isolated Bidirectional DC-DC Converters for Renewable Energy Applications *Authors:* Riju Nandi; Arnab Ghosh; Krishna Roy
PS-S4-P18	1228	Simulation Analysis and Comparative Study of Multi beam Piezoelectric Energy Harvester in Low Power IoT Applications *Authors:* Hemant Narayan; Prakash Marimuthu; Shakila Baskaran
PS-S4-P19	570	Optimized Bidirectional Dual-Input Single-Output DC-DC Converter for Enhanced Electric Vehicle Integration *Authors:* Not Found
PS-S4-P20	1374	Cybersecurity Threats to Sampled Values and Transfer Trip Communication in IEC 61850-Based Distance Protection Systems *Authors:* Jayesh Ghumaliya; Siddhartha Deb Roy; Gumpu Srinivasulu
PS-S4-P21	621	Electricity Theft Detection Model Using CNN-BiLSTM with Attention Mechanism in Smart Grid Environment *Authors:* Ravivarma Kamireddy; Lokeshgupta Bhamidi; Ramanjaneya Reddy U
PS-S4-P22	274	Securing the Smart Drive: AI-Powered Anomaly Detection in EVs **Authors:* Shubhreet Dhaliwal; Pratham Sharma; Samrath Singh Kharbanda; Danish Sharma; Ashima Anand; Amit Kumar
PS-S4-P23	1078	Quantum Grey Wolf Optimized Hybrid Deep Net Structure for Day-Ahead Wind Speed Forecasting *Authors:* Sohom Banerjee; Dipayan Nath; Ujjal Sur
PS-S4-P24	1092	Resilient Load Frequency Control for Enhancing Power Grid Security Against Cyberthreats. <i>Authors:</i> PRANAV SINGH; Ravi Shankar; S N Singh
PS-S4-P25	529	Parameter Estimation of a PV Model through Multi-Objective Optimization: Towards an Economically Viable Identification *Authors:* Arabinda Ghosh; Kukil Khanikar; Ankita Sarmah; Arjab Roy; Omkar Singh; Anjan Kumar Ray















December 10 -13, 2025 | NIT Goa, Goa, In

Day 3	Date: 12-	12-2025	Poster Session – 5	Time: 17:30 to 18:00
			Venue:	
ID	Paper ID		Paper '	Гitle
PS-S5-P1	267	ANN-Base	d Optimization of a Low-Power Hy d Voltage and Frequency Control to Somila Hashunao; R K Mehta	brid Solar–Micro Hydro Microgrid with for Remote Electrification
PS-S5-P2	1419	Federated Multi-Stage Market Clearing with Integrated Probabilistic Forecasting for Decentralized Energy Systems *Authors:* Surya Singh; Amit kumar Singh*		
PS-S5-P3	1161	Performance Analysis of a Dynamic Multi-Loop Thermal Management System fo EVs in Diverse Ambient Conditions <i>Authors:</i> VIKAS VERMA; Bhavnesh Kumar		
PS-S5-P4	1214	and Infrastr	tion Electrification in Crisis: A 202 ructure Resilience During Disrupti Tarun puli; Jawahar Sagar; Harshitl	
PS-S5-P5	1225	_	gnetic Regenerative Shock Absorbo Siddharth Raj; Anil Jakhar; Amaren	
PS-S5-P6	1070	Electric Mo Authors: K	obility and Semiconductor Industri	onics Economy and Global Strategies for es raj; Bharatiraja Chokkalingam; Sanal
PS-S5-P7	540	phase Inver	_	hajit Dutta, Soumya Samanta
PS-S5-P8	635	_		Converter for Electric Vehicle Charging rendra Edpuganti; Shantanu Chatterjee
PS-S5-P9	876	System	Aditya Kumar; Alexander Aguila; A	e Distributed Generators in Distribution anurag Sharma; Gulshan Sharma;
PS-S5-P10	956	Photovoltai	Duty Cycle-Controlled Hybrid Mo ic Power Optimization Sampatirao Nanibabu; Shakila Basl	••
PS-S5-P11	1042	Vehicle App		ced Voltage Stress for Hybrid Electric Sanjeevikumar Padmanaban
PS-S5-P12	1553	using Hone Authors: V	Load Regulation Performance in S ey Badger Optimized PI Control /ijayasri Averneni; Arghya Chakra awahar sagar; naguru mohamood	ingle Inductor SIDO Buck Converter varthy; Tousif Khan; Sasank Das











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa, India

PS-S5-P13	663	High-Efficiency Soft-Switched Multiport Bidirectional Converter for Non-Isolated EV Power Systems *Authors: ARAVIND R; Bharatiraja C; Ravi Eswar Kodumur Meesala
PS-S5-P14	882	Comparative Analysis of Phase Shift Modulation Strategies for Dual Active Bridge Converters *Authors:* Bharatiraja C; T.Dheepaswarupan T; nakeera R
PS-S5-P15	1020	High Voltage Conversion Ratio Non-Isolated Common-Ground Bidirectional DC-DC Converter *Authors:* KAIBALYA PANDA; Preeti Sharma; Jinisha Singhal; Vedant Patel
PS-S5-P16	272	Impact of Activation Functions and Optimizers on GNN-based Reduced Optimal Power Flow *Authors:* SREENU SREEKUMAR
PS-S5-P17	1308	Stability and Power Quality Reinforcement in Offshore Wind Farms Using Battery-Supported E-STATCOM **Authors:* Vivek Gedam; S.P. Gawande; Mukesh Yadav; Ajinkya Sonawane; Pradyumn Chaturvedi
PS-S5-P18	1251	Subsynchronous Oscillations Identification in Series-Compensated DFIG-Based Wind Farm Using Machine Learning Algorithms: A Comprehensive Review <i>Authors:</i> Jawaharlal Bhukya; Sameer P. Meshram; Soumyabrata Das
PS-S5-P19	800	Dynamic MPPT for PV Systems Using Advanced Interval Type 2 Fuzzy Logic Control <i>Authors:</i> V. V. Mukherjee; Nirmalya Mallick; Chandan Kumar Shiva; Sachidananda Sen; Shriram S. Rangarajan; Vedik Basetti
PS-S5-P20	998	ML-Enabled Data-Driven Digital Twin for Component Degradation Monitoring in Grid-Tied DC-AC Inverters *Authors:* NARESH KUMAR KUMAWAT INDIAN INSTITUTE OF TECHNOLOGY JODHPUR*; Nishant Kumar INDIAN INSTITUTE OF TECHNOLOGY JODHPUR
PS-S5-P21	1348	Investigation on Electric Vehicle Charging and Strategies to Mitigate its Negative Impact on Distribution Grid <i>Authors:</i> Krishan Chopra; Mukesh Kumar Shah; Laxmi Narayan Malaviya
PS-S5-P22	1090	Flexible Mode Totem Pole PFC Rectifier Using Sic-MOSFET *Authors: SRINIVAS KARATLAPELLY NIT WARANGAL*
PS-S5-P23	667	A LiDAR-Inertial Mapping and Voice-Driven Goal-Setting Framework for Autoware-Based Autonomous Vehicles *Authors:* Akshat Tambi; Aditya Jambhale; Prerna Sharma; Yashowardhan Singh; Manikandan Ganesan; Sivanathan Kandhasamy; Bharatiraja Chokkalingam
PS-S5-P24	608	Performance Enhancement of a PV Array Operating in Partial Shading Conditions using L-propagated Odd-Even Approach *Authors:* Mohd Faraz Ahmad; Mohd Faisal Jalil; M Saad Bin Arif, India; Masood Rizvi
PS-S5-P25	821	Countering Disturbances in Single Phase Grid Integrated PV System under Abnormal Grid Conditions *Authors:* Ilka Shawl; IKHLAQ HUSSAIN















December 10 -13, 2025 | NIT Goa, Goa, In

Day 4	Date: 13-	12-2025	Poster Session – 6	Time: 10:00 to 10:30	
			Venue:		
ID	Paper ID		Paper Tit	le	
PS-S6-P1	826	Modern Hybrid Cross-Tied BIPV Interconnections for Smart Infrastructures with improved Global MPP under extreme Non-uniform Shading <i>Authors:</i> Nikhil Arunrao Bodkhe; Debayan Sarkar; Risha Mal			
PS-S6-P2	1227	Protection of Battery Management System of Electric Vehicles during charging using Hyperledger Fabric Blockchain *Authors:* Gaurav Kumar; Suresh Mikkili*			
PS-S6-P3	481	Integration U	Distributionally Robust Optimization for Virtual Power Plant with Vehicle-to-Grid Integration Under Multi-Source Uncertainties *Authors:* Jibin Kuriakose; Vinay Kumar Jadoun; Jayalakshmi N.S.; Soham Dutta		
PS-S6-P4	616	DC-DC Luo	1	for Improved Dynamic Response in	
PS-S6-P5	363	A Machine Learning Framework with Synthetic Dataset of Renewables and EVs			
PS-S6-P6	400	Dynamic Simulation and Performance Evaluation of an Electric Two-Wheeler Powertrain *Authors:* Kumar Amartya Dev; Aldrin Vaz; Vinaya Basavaraaj Koradoor; Navya Hegde			
PS-S6-P7	433	Digital Twin-Based Thermo-Electric Modeling and Analysis of Lithium-Ion Ba Packs for E-Mobility Applications *Authors:* Sahitya; Mahipal Bukya; Rajesh Kumar; Jayalaxmi Rajesh Hanni			
PS-S6-P8	457	Suspension S Authors: Vir	Framework for Predictive Mainter System nay Kumar R; Pavan Kumar K.K.; nylingam L.; Aslfattahi Navid; Sada	Ramasamy D.; Noor M.M.; Harun	
PS-S6-P9	456	Enhanced Pe <i>Authors:</i> Vir		•	
PS-S6-P10	530	Temperature	e e e e e e e e e e e e e e e e e e e	Lithium-Ion Batteries with Kumar Chaudhary; Ashwini Kumar	
PS-S6-P11	1007	Optimal Site Selection for Hydrogen Production Unit using MCDM Approach <i>Authors:</i> Avinash Gaurav; Arjun Tyagi; Bhavnesh Kumar			
PS-S6-P12	572	Fusion-Based Switched Kalman Filter for State-of-Charge Estimation in Electric Vehicles Under Dynamic Conditions: A Real-Time Validation <i>Authors:</i> SAI RAM SURYA LAKSHMI AVANTHIKA DASARI; Ramanjaneya Reddy Udumula; Lokeshgupta Bhamidi			











Smart Technologies for Power, Energy and Control



December 10 -13, 2025 | NIT Goa, Goa, India

(STPEC 2025)

PS-S6-P13	886	Experimental Validation of an Intelligent Dual-Battery Hybrid EV System with PEMFC Range Extension and ML-Based Control Architecture <i>Authors:</i> Bharatiraja C; tmnavinkumar TM
PS-S6-P14	577	Data-Model Fusion Approach for Combined State of Charge and State of Health Estimation of Lithium-ion Batteries in Electric Vehicles Using Extended Kalman Filter <i>Authors:</i> Kolli Sai Kiran; D S R S L Avanthika; Ramanjaneya Reddy Udumula; Bhamidi Lokeshgupta; Naresh Kumar Vemula
PS-S6-P15	883	Computational Fluid Dynamics Driven Sensor Optimization for Early Hydrogen Leak Detection Enhancing FCEV Safety <i>Authors:</i> Bharatiraja C; J Nithish Nithish; navinkumar TM
PS-S6-P16	1219	Energy Management of a PV-Battery-Fuel Cell-Diesel Hybrid System for DC Microgrid Applications *Authors: Pranati Purohit*
PS-S6-P17	1140	1 Grid-Connected Battery Charging System Using Buck-Boost Converter and dq- Frame Inverter Control *Authors:* Gudipati Jawahar Sagar, Tarkeshwar Matho
PS-S6-P18	1404	Fuzzy Logic-based hybrid electric vehicle with battery and PEMFC source for performance enhancement *Authors:* LAVUDYA SWATHI, Sachidananda Sen, Basetti Vedik, Chandan Kumar Shiva
PS-S6-P19	1453	RTS-Based Validation of Advanced Control Strategies for Grid-Integrated Electric Vehicle Chargers *Authors:* Gaurav Yadav, SUDHANSHU MITTAL*
PS-S6-P20	1552	Efficient Frequency Regulation of Shipboard Microgrid Utilizing One-third Method Based Tuning Rules *Authors:* Akanksha Waghmare, V. P. Singh
PS-S6-P21	986	Optimal Planning of EV Charging Stations in Distribution Network using Monte Carlo-based Probabilistic EV Load Forecasting <i>Authors:</i> Giriwar Chaurasia, Sneha Singh, Subho Paul, M K Verma
PS-S6-P22	1450	A Node Specific Dynamic Image-Based Watermarking for Secure DC Microgrid Control *Authors:* Sriranga Suprabhath Koduru, Mitikiri Sagar Babu, Vedantham Lakshmi Srinivas, Sukumar Mishra,

Note: The finalization of schedules for the remaining papers will be done by 24th November 2025.







