IEEE UPCON 2025

12th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering

13-15 December 2025 | Department of Electrical Engineering | IIT (BHU) Varanasi | Uttar Pradesh | India

Program Schedule

Day 1: 13th December 2025 (Saturday)

Time	Program	Venue
8:00 am onwards	Registration	EED, Rampur Lawn
8:00 am – 9:00 am	Breakfast	EED, Rampur Lawn
9:00 am - 9:45 am	Keynote 1 Topic: *Advanced power semiconductor technologies that support decarbonization and sustainability initiatives* Speaker: Dr. Gourab Majmudar (Senior Fellow, Mitsubishi Electric Corporation, Japan)	Second Floor Committee Room, EED
9:45 am - 10:30 am	Keynote 2 Topic: *Electrical, Electronics, and Computer Engineering Aspects in Sustainable Mobility - EVs and Software Defined Vehicles (SDV)* Speaker: Dr. Shankar Venugopal (Vice President, Mahindra and Mahindra)	Second Floor Committee Room, EED
10:30 am – 11:00 am	Tea Break	EED, Rampur Lawn
11:00 am – 11:45 am	Keynote 3: Topic : *AI-Agent Driven Innovations in the Power Electronics* Speaker: Prof. Prasad Enjeti (Professor, Texas A&M University, USA)	Second Floor Committee Room, EED
11:45 am – 12:30 pm	Keynote 4: Topic: *Mobility Evolution and Applications of AI* Dr. Tapan Kumar Sahoo (Executive Officer, Digital Enterprises, Information & Cyber Security, Maruti Suzuki India Limited)	Second Floor Committee Room, EED
12:30 pm – 1:00 pm	Tutorial 1: Topic: *Bi-directional GaN FETs: Ushering the Next Revolution in Power Electronics* Speaker: Prof. Kaushik Basu (Associate Professor, Indian Institute of Science (Bengaluru))	Second Floor Committee Room, EED

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11:45 am – 1:00 pm	IEEE Young Professional Session Topic: *The Art of Interdisciplinary Research and Project Writing* Panellist: 1. Dr. Srikanth Pillai, IEEE IAS CMD Chair 2. Dr. Ramanuja Panigrahi (IIT Roorkee) 3. Dr. Arun Kumar Choudhary (Scientist, MNRE) 4. Dr. Subho Paul (IIT BHU) 5. Dr. Mayank Swarnkar (IIT BHU) 6. Dr. Anubrata Das (IIT BHU) and PhD Colloquium Presentation	Ground Floor Committee Room, EED
1:00 pm – 2:00 pm	Lunch Break	EED, Rampur Lawn
2:00 pm – 2:45 pm	Keynote 5: Topic: *Estimation of Grid Harmonics in the Presence of Renewable Energy Sources* Speaker: Prof. Sri Niwas Singh (Director, ABV-IIITM, Gwalior, India)	ABLT Building IIT(BHU)
2:45 pm – 4:15 pm	Tutorial 2 Topic: *Smart Grid - Basics to Advanced Technology* Speaker: Prof. Narayan Prasad Padhy (Director, MNIT Jaipur)	ABLT Building IIT(BHU)
3:15 pm – 4:15 pm	Tutorial 3 Topic: TBD Speaker: Prof. Sukumar Mishra (Director, IIT(ISM) Dhanbad)	ABLT Building IIT(BHU)
4:15 pm – 4:45 pm	Tea break	ABLT Building IIT(BHU)
4:45 pm – 6:15 pm	Inauguration of 12th IEEE UPCON 2025	ABLT Building IIT(BHU)
6:30 pm onwards	IEEE UPCON 2025 Gala Event and Cultural evening	EED, Rampur Lawn

End of Day 1

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Day 2: 14th December 2025 (Sunday)

Time	Program	Venue
8:00 am onwards	Registration	EED, Rampur Lawn
8:00 am – 9:00 am	Breakfast	EED, Rampur Lawn
9:00 am – 9:30 am	WIE Keynote 1: Topic: *Recruitment, Reskilling and Retention of Women in Engineering and Technology* Speaker: Prof. Tripta Thakur (Vice Chancellor, UTU, Dehradun)	Second Floor Committee Room, EED
9:30 am – 10:00 am	WIE Keynote 2: Topic: *Fractional Order Element: Realization and Applications* Speaker: Prof. Karabi Biswas (Professor, IIT Kharagpur)	Second Floor Committee Room, EED
10:00 am – 11:00 am	Poster Session	EED, Rampur Lawn
11:00 am – 11:15 am	Tea break and networking	EED, Rampur Lawn
11:15 am – 12:00 pm	Keynote 6: Topic : *Powering the future of EV's by Driving Power Density* Dr. Anand Sathyan (ONSEMI, Phoenix, AZ, USA, and Adjunct Assistant Professor, McMaster University, Hamilton, Canada)	Second Floor Committee Room, EED
12:00 pm – 12:45 pm	Keynote 7: Topic : *SiC Power Electronics for off-Road Vehicles* Speaker : Dr. Brij N. Singh (Technical Fellow & Region 4 Manager External Relationship, IEEE Fellow, John Deere Inc. USA)	Second Floor Committee Room, EED
12:45 pm – 1:30 pm	Keynote 8 Topic: *Wide Band Gap Power Electronics: Progress, Opportunities, and Challenges* Speaker: Prof. Akshay Kumar Rathore (Professor, National University of Singapore (NUS), Singapore)	Second Floor Committee Room, EED
1:30 pm – 2:30 pm	Lunch Break	EED, Rampur Lawn
2:30 pm – 4:30 pm	Technical Session 1	EED
4:30 pm – 4:45 pm	Tea Break	EED, Rampur Lawn

4:45 pm – 5:45 pm	WIE Panel Discussion Topic: *Women leading the energy transition: from e-mobility to microgrids* Panellists: 1. Prof. Tripta Thakur (VC, UTU) 2. Prof. Karabi Biswas (IIT Kharagpur) 3. Prof. Kalpana Chaudhary (IIT BHU) 4. Dr. Rashi Gupta (Vision Mechatronics Pvt Ltd) 5. Prof. Harivardhagini Subhadra (CVR College of Engineering)	Second Floor Committee Room, EED
5:45 pm – 7:00 pm	Industry Session	Ground Floor Committee Room, EED
5:45 pm – 7:00 pm	Tutorial 4 Topic: *Optimizing On-Board Charging Infrastructure: PFC Converter Solutions for Electric Mobility.* Speaker: Prof. Arun Kumar Verma (Associate Professor, IIT Jammu)	Second Floor Committee Room, EED

End of Day 2

Day 3: 15th December 2025 (Monday)

Time	Program	Venue
8:00 am onwards	Registration	EED, Rampur Lawn
8:00 am – 9:00 am	Breakfast	EED, Rampur Lawn
9:00 am – 11:00 am	Technical Session 2	EED
11:00 am – 11:30 am	Tea Break	EED, Rampur Lawn
11:30 am – 12:15 pm	Keynote 9: Topic: *High-Frequency Transient Stresses and Insulation Challenges in Power Grids with Renewable and EV Charging Integration* Speaker: Prof. Shesha Jayaram (Professor, University of Waterloo)	Second Floor Committee Room, EED
12:15 pm – 1:00 pm	Keynote 10: Topic - *Powering India's Green Growth Engine: Converters, Condition Monitoring, and Hydrogen Integration* Dr. Sanjeet Dwivedi	Second Floor Committee Room, EED

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	(Technical Project Manager, Siemens Gamesa Renewable Energy A/S Denmark)	
1:00 pm – 2:00 pm	Lunch Break	EED, Rampur Lawn
2:00 pm – 2:45 pm	Keynote 11: Topic: *Harmonic Challenges in Evolving Power Grids: Insights from International Standards* Dr. Dinesh Kumar (Lead, Power Electronics & Simulation Specialist, Danfoss Drives A/S, Denmark)	Second Floor Committee Room, EED
2:45 pm – 4:15 pm	Tutorial 5: Topic: *Commercialization of Power Components in Indian Universities: Walking the talk* Speaker: Prof. Santanu Kumar Mishra (Professor, IIT Delhi)	Second Floor Committee Room, EED
	Tutorial 6: Topic: Metamaterial Antennas: Fundamentals, Design Ideas and Applications Speaker: Prof. Raghvendra K. Chaudhary (Associate Professor, IIT Kanpur)	Ground Floor Committee Room, EED
4:15 pm – 4:30 pm	Tea Break	EED, Rampur Lawn
4:30 pm – 5:30 pm	Industry-Academic Panel Discussion **Panellists:** Academic: Prof. Bhim Singh (Professor, IIT Delhi) Prof. B. K. Panigrahi (Professor, IIT Delhi) Industry: Dr. Shankar Venugopal (Mahindra and Mahindra) Dr. Sanjeet Dwivedi (Siemens Gamesa Renewable Energy) Dr. Dinesh Kumar (Danfoss Drives A/S) Mr. Deepak Singh Rawal (Hioki India Pvt Ltd) Mr. Andreas Gau, (dSPACE India Solution Pvt Ltd)	Second Floor Committee Room, EED
5:30 pm onwards	Valedictory Session and Awards Distribution	Second Floor Committee Room, EED

End of Day 3

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Technical Session 1

Track 1.1: Sustainable electric mobility and charging infrastructure

Venue: Ground Floor Committee Room, Electrical Engineering

Paper ID	Paper Title
160	**Low Voltage Ride Through Control of Grid Connected PV- Battery-Electrolyser based Systems Using Advanced Adaptive Filtering for Hydrogen and EV Charging Infrastructure** Tanu Prasad, Shailendra Kumar, and Shashank Kurm
196	**Adaptive SoC-Dependent Fast Charging Optimisation with Degradation-Aware Scheduling in DC Microgrid Architecture for Electric Vehicles** Vikram Kumar Saxena, Kundan Kumar, Benjamin A Shimray, and Sanjeet Kumar Dwivedi
207	**Optimal Planning of EV Charging Stations in Distribution Network using Metaheuristic Approach** Sneha Singh and M K Verma
316	**VIJAYA: Smart Wheel for Energy Harvesting in Next-Generation Battery Electric Two-Wheelers** Anand Kumar, Kumari Sarita, R K Saket, Sachin Kumar, and Anand S
347	**Optimal Integration and Sizing of PV BESS for Fast Charging Stations in Coupled Network** Tejavath Suresh, Varsha A Shah, and Akanksha Shukla
449	**Day Similarity Learning in EV Charging Demand Using Siamese Neural Networks for Improved Load Forecasting** Rahul Sagwal, Abhinav Sharma, Janakarajan Ramkumar, and Sri Niwas Singh

Track 1.2: Energy management of renewable energy integrated smart grid-1

Venue: Second Floor Committee Room, Electrical Engineering

Paper ID	Paper Title
222	**Optimization of Dispatchable Resources in Presence of Non-Dispatchable Distributed Generators in Distribution System** Aditya Aditya, Narayanan K, Ankur Singh Rana, Alexander Aguila Tellez, Anurag Sharama, and Tomonobu Senjyu
253	**Greening India's Data Centers: Renewable Integration and AI-Optimized Power Systems** Radhey Meena
332	**Detection of False Data Injection Attacks in Interconnected Power Networks Using Hybrid Deep Learning Approach** Prasanjit Dey, Shailendra Singh, Padmagirisan P, S. R. Mohanty, and Abhishek Gupta
357	**Small Signal Stability Analysis of Low-Inertia Power Systems with EV-Based Virtual Inertia Control** Priya Mishra, D. Saxena, and Diksha Jain
358	**Plug-in Electric Vehicles as Inertia Emulation: Genetic Algorithm Based Control and Sensitivity Evaluation** Priya Mishra, D. Saxena, and Diksha Jain
403	**Enhancing Tie-Line Utilization and Cost Efficiency in Multi-Area Dispatch via EV Integration under Renewable Energy Uncertainty** Priyanka Hooda

Track 1.3: High voltage engineering

Venue: G9 Classroom, Electrical Engineering

Paper ID	Paper Title
159	**Diffusion and Pyrolysis Studies on ZnO/BN Doped Silicone Rubber Nanocomposites** Jatoth Varun, Chaudhari Mihirbhai, and Palash Mishra
189	**Investigations on Dielectric Properties of Thermally Aged Silicone Rubber Insulation in Presence of Mineral Oil and Natural Ester oil**

	Brahma Swarup Laha, Sayanti Nayak, Soumya Chatterjee, Arup Kumar Das, Palash Mishra
224	**Performance Evaluation of Aqueous HNO3 Diffused RTV Silicone Rubber/ZnO Nanocomposites for High Voltage Applications** Sambari Mahesh, A Sri Harshini, Chabungbam Sheetal, Ashish Paramane, Palash Mishra, and Arup Kumar Das
298	**Measurement of Electrical Conductivity of Pressurized Gaseous Helium at Cryogenic Temperature** Spencer Martin, William Touza, Arup Das, Nagaraju Guvvala, Peter Cheetham, and Sastry Pamidi
342	**Thermal Aging of HTV Silicone Rubber Dipped in Transformer Oil** Alok Verma, Deepesh Singh, and Naveen
420	**Investigating Streamer Induced Mechanical Degradation in Liquid-Immersed Solid Dielectric** Mihir Bhatt, Praghnesh Bhatt, Chirag Parekh, and Rahul Soni

Track 1.4: Applied machine learning and deep learning-1

Venue: G8 Classroom, Electrical Engineering

Paper ID	Paper Title
192	**Enhanced Cropland Change Detection using HSV and Ensemble Learning** Jenila Vincent M, Varalakshmi P, Adri Jovin John Joseph, Ajaykumar K, Santhosh D, Velmurugan S, and Vasantharaj Rajagopal
217	**Data-Driven Monitoring of Power Distribution Systems Using Machine Learning** Sakshi Kumar, Chhavi Jhari, and Subho Paul
241	**Non-Invasive Automated Anaemia Detection Framework from Eye Conjunctiva Images Using YOLOv8** Pradipta Chakrabarty, Aniruddha Bera, Rudrava Tripathi, Sukanya Mitra, Sayanjit Singha Roy, and Soumya Chatterjee
277	**Quantum-Entangled Salp Swarm Optimization: A High-Dimensional Benchmark Study** Sanjai Pathak and Amlan Chatterjee
356	**Dual Attention Based ConvNeXtTiny for Crop Classification**

	Shivam Dubey, Akshay Pandey, and Aparajita Ojha
Invited	**ThreatNet: Multimodal Firearm Threat Assessment Network** Albert Mundu, Satish Kumar Singh, and Shiv Ram Dubey

Track 1.5: Signal Processing, communication and EM wave propagation

Venue: G10 Classroom, Electrical Engineering

Paper ID	Paper Title
138	**Numerical Modeling of Radiosonde-Assisted Compact Ranges for Electromagnetic Propagation under Atmospheric Variability** Sujit Kumar Chakravarty
345	**CNN-BiLSTM based Channel Estimation in RIS-NOMA System for 5G and Beyond** Sandeep Singh, Aman Kanwar, Aryan Mittal, and Akash k
350	**OMP-LMMSE Based Double-Stage Channel Estimation for Uplink RIS-Aided mmWave MIMO** Sandeep Singh, Amit Agarwal, and Amitabh Kumar
360	**Frequency-Weighted Square-root Truncated Realization based Design of 2-D Discrete filters** Deepak Kumar
364	**Frequency-limited Gramian Framework and Model Reduction using Square-root Truncated Realization** Deepak Kumar
375	**A Hybrid Digital Filter based Framework for Enhanced Exon Prediction** Amit Kumar Singh, Anurag Tiwari, Pratosh Kumar Pal, and Vinay Kumar Srivastava

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Technical Session 2

Track 2.1: Energy management of renewable energy integrated smart grid-2

Venue: Ground Floor Committee Room, Electrical Engineering

Paper ID	Paper Title
108	**A Reliable Sensor less Speed Estimation Technique for PMSG under Distorted Grid Conditions** Rahul Kumar, Amit Kumar, Shaista Praveen, and Dhirendra Kumar
184	**Single Rotor- Double Stator (SR-DS) Axial – Flux Coreless Permanent Magnet Synchronous Generator for Wind Turbine** Samarendra Singh, Sri Niwas Singh, Ankit Gupta, Deepak Gupta, Sandeep Chowdhary, and Prabahkar Tiwari
202	**Physics-Guided Anomaly Detection using Mixture Discriminant Analysis in PV Systems** Apoorva Choumal
293	**Distribution Network Energy Loss Cost Minimization by Network Reconfiguration** Prashant Singh, Ajay Singh, and Subho Paul
314	**A Comprehensive Review of Maritime Microgrid Operation** Kanendra Naidu, Puspendu Ghosh, Subho Paul, and Lilik Jamilatul Awalin
368	**Investigation of Static PV Array Configurations Under Partial Shading Conditions** Rushabh Dukare, Narendrababu A, and Naveen Yalla

Track 2.2: Modern control theory

Venue: Second Floor Committee Room, Electrical Engineering

Paper ID	Paper Title
221	**Design and Implementation of a Real-Time IoT-Based Autonomous Fire-Fighting Robot** Harivardhagini Subhadra
256	**Speed Sensorless IM Drive for Solar PV Powered Water Pumping System Utilizing Enhanced DTC Technique Based on Improved LUT**

	Anjanee Mishra and Anand Vardhan Pandey
339	**A Novel PD-ADRC Control Approach for AVR-LFC Power System and Cyber Threat** Rajdeep Kumar, Raj Kumar Yadav, Ajit Kumar, and Rajib Kumar Mandal
340	**Cyber-Resilient Load Frequency Control in PV-Thermal Hybrid System via 1+FD ADRC** Raj Yadav, Ajit Kumar, Rajdeep Kumar, and Chetna Sagar
352	**Robust Sliding Mode Control Scheme of Time Delayed 4D Hyperchaotic System** Satnesh Singh and Sandeep Kumar Gautam
431	**Robust Multi-Layered Control of Shunt Hybrid Active Power Filter Using HQC, ASMC and MPC** Kanungo Mohanty, Dikkala Akshaya, Atluri Kamesh, and Pavankumar Daramukkala

Track 2.3: Applied machine learning and deep learning-2

Venue: G10 Classroom, Electrical Engineering

Paper ID	Paper Title
198	**From Inbox to Action: An AI-Powered Framework for Automating Email Grievance Response Systems** Aditya Trivedi, Prathamesh Nadkarni, Ayush Pai, Kaiwan Vaghchhipawala, Soni Sweta, Manoj Sankhe, and Vishram Bapat
242	**HistoCNN: A Light Weight Convolutional Neural Network for Automated Lung Cancer Detection Using Histopathological Images** Rudrava Tripathi, Aniruddha Bera, Pradipta Chakrabarty, Sukanya Mitra, Sayanjit Singha Roy, and Soumya Chatterjee
226	**LPWAN Technologies for IoT based SES** Pankaj Singh
228	**Automated Snow Depth Measurement and its Transmission** Praveen mishra
279	**Hourly Energy Consumption Forecasting with LSTM, GRU, SVR, and ARIMA Models: A Comparative Study**

	Jayashankara M, Vinay S, Prasenjit Chanak, and Sanjay Kumar Singh
439	**Cognitive Agriculture: A Web-GIS Framework for High-Accuracy Crop Recommendation and Disease Detection** Shivam Dubey, Akshay Pandey, Deveshi Dwivedi, and Atharva Kanherkar

Track 2.4: Power converter technologies, modulation, and control

Venue: G9 Classroom, Electrical Engineering

Paper ID	Paper Title
219	**Integrated Multi-Output Quasi-Z-Source Converter with Buck-Boost Capability for Compact DC Distribution** Anish Ahmad, Kharan Shiluveru, Akash Singh, and Rajeev Kumar Singh
297	**Soft-Switching ZCS Commutated Current-Fed DAB DC/DC Converter with New Modulation Scheme** Akshay Kumar Rathore, Nil Patel, and Sheron Figardo
313	**A Novel Non-Isolated Semi-Quadratic Boost Converter and It's Control** Akash Roy Choudhury, Padmagirisan Paramsivam, Piyush Kant, and Anindita Jamatia
376	**Dual-Transformer-Based Fault-Tolerant Dual Active Bridge Converter** Anuj Kumar, Mayank Kumar, and Madhusudan Singh
445	**Field Oriented Control of PMSM Drive: A Comparative Study of Sinusoidal and Space Vector Pulse Width Modulation Techniques** Manish Kumar, Vinod Kumar Bussa, Tarakanath Kobaku, and Jeyasenthil R
446	**Phase Current Balance Control of Fault-Tolerant Three-Phase Interleaved Buck Converter under Non-Ideal Circuit Conditions** Saurabh Gupta and Mayank Kumar

Track 2.5: Digital twin and cyber-physical system

Venue: G8 Classroom, Electrical Engineering

Paper ID	Paper Title
206	**Design, Implementation, and Performance Analysis of MUX and Serial-Parallel Architecture-based Novel 4-bit Multiplier**

	Owi Hemant Mahajan, Riya Riya, Shreya Nayak, Vishnu Padmakumar, Vimal Kumar Singh, and Thockchom Birjit Singha
260	**Design of High-Performance Hybrid Full Adder with Enhanced Speed and Power Characteristics** Dinesh Kumar and Pitchai Karuppanan
299	**PMU-Based Power System Monitoring and Evaluating Synchrophasor Vulnerabilities** Sheraza Bashir, Anmol Sardhalia, and Anup Shukla
372	**Fabrication and Characterization of Methylammonium Tin Iodide (MASI) Quantum Dot using drop-casting method-based Photodetector** Harshit Srivastava, Mohit Srivastava, Prashant Kumar, Abhinav Pratap Singh, and Satyabrata Jit
407	**Real-time Fault Detection of LLC Converter using Machine Learning and Cloud Computing** Vivek Bhardwaj, Arun Kumar Verma, and Jaideep Randhawa
441	**SafeNav-RAG: A Latency-Aware Retrieval-Augmented Generation Framework for Autonomous Vehicle Decision-Making** Abhishek Joshi, Nikhilesh Krishnakumar Verma, and Alihan Hadimlioglu

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Poster session-1

Venue: Rampur Lawn, Electrical Engineering Department

Paper ID	Paper Title
32	**Minimization of Energy Consumption for VM Placement using Normalized Three Dimensional Resources** Mahak Garg, Akanksha Tandon, and Sanjeev Patel
94	**Improving E-Commerce Recommendations with Sentiment-Aware Collaborative Filtering: A Comparative Analysis Using PySpark Framework** Aditya Bhardwaj
96	**Fault Diagnosis in Power Transformers Using Deep Learning Model Considering Imbalanced DGA Data** Gumpu Srinivasulu, Omveer Sharma, Rampelli Manojkumar, Jatoth Ranjendar, and Praveen Kumar
144	**A2CS: Advantage Actor-Critic Strategy for Task Scheduling in Cloud** Shweta Kushwaha and Ravi Shankar Singh
158	**Smart Accident Protection and Enhancing Road Safety Using IoT** Saad Ahmad, Rahul Yadav, Romit Kumar, Swapnil Srivastava, Anshu Tiwari, Vijay Kumar Dwivedi, and Mohit Saxena
167	**Insight into the prediction of specific capacitance of activated carbon-based electrode for supercapacitor using machine learning** Stuti Shrivas and Amarish Dubey
168	**IoT-Enabled Heart Disease Prediction Using CatBoost and Hyperledger Fabric** Bhavesh Kumar, Ashutosh Shukla, Tanisha Gupta, and J Sathish Kumar
171	**Design and implementation of a TFET based biosensor for breast cancer detection** Sritama Roy
172	**BFL: A Decentralized and Privacy-Preserving Framework for Lung Cancer Detection using Federated Learning and Blockchain** Aparna Kumari, Rahul Morabiya, Sudeep Tanwar, Raj Borad, Prasun Kumar, and Kripa Shah
173	**Closed Loop Bridge Type DC-DC Converter with High Voltage Gain and Lower Switching Stress**

	Abhishek Aman, Sagun Kumar, and Awadhesh Kumar
176	**IoT-Enabled Statistical Modeling for Intelligent Vehicle Immobilization and Driver Protection** Varun kumar, Jenish vasava Sureshbhai, Vaidya parth Kishor, and Tanmay Kaushal
177	**Electric Stress Relaxation in HVDC Overhead Line Insulators Using Nano-filled Functionally Graded Materials** Arjun Roy and Asha Sharma
183	**Model-Level Fusion of VAEs and EfficientNetB0 for Robust Multimodal Emotion Recognition** Tarun Rathi
188	**Bio-Inspired Ultra High Frequency (UHF) Sensor Design for Partial Discharge Measurement in High Voltage Apparatus** Jyotirmoy Paul, Soumya Chatterjee, and Arijit Baral
190	**A SASNPA Algorithm based Robust Controller for 3-Phase Grid-PV System** Dheeraj Kumar, Sanjeev Singh, Shailendra Kumar, and Rahul Arora
203	**A Multi-Criteria Decision-Making for Optimal EV Charging Station Placement in Delhi** Arpana Singh
209	**Controlling UAV Pointing Maneuver Under Lateral CG Offset: Robust Adaptive Backstepping Approach** Anukaran Khanna and Akhilesh Mishra
215	**An Empirical Study on Multi-Agent Deep Reinforcement Learning for Drone Flocking Control** Arindam Ghosh, Krishna Dhumal, and Muneendra Ojha
216	**Balancing Lexical and Semantic Models for Optimized Biomedical Retrieval** Atul Chourasia, Arindam Ghosh, and Muneendra Ojha
229	**Deep Learning for Automated Wheat Disease Detection Using Hyperspectral UAV Imagery** Tanima Bhowmik and Roshan Rateria
232	**A Rapidly Bidirectional Electric Vehicle Charger Features Grid-to-Vehicle and Vehicle-to-Grid Functionality and Extensive Voltage Range**

	Rajendra Prajapati
233	**A Simplified Controller for Speed and Position Sensorless Controlled PMBLDC Motor Drive** Anupam Das, Rahul Arora, Sanjeev Chauhan, and Dheeraj Kumar
255	**Advanced Fault Detection in Cascaded H-Bridge Multilevel Inverters with LS-PWM Control** Ritika Roy and Chandan Kumar
258	**Fuzzy-based Fractional Control Structure for Enhanced Load Frequency Control** Akhilesh Mishra, Anukaran Khanna, Vanya Arun, and Arpit Varshnry
287	**Performance Analysis of SemiSynchronous SAR ADC using DLL** Vikas Tiwari, Aswathi Krishnan, and R. K. Nagaria
288	**CFA based Analog Multiplier/Divider Circuit for Analog Signal Processing** Vikas Tiwari, Gouru Hemanth, and R. K. Nagaria
290	**Sensorless Induction Motor Drive with Torque Ripple Suppression Using PI-Resonant Controller in Solar PV-Based Irrigation Systems** Anjanee Mishra and Anand Vardhan Pandey
305	**Pocket Engineered Vertical TFET for Enhanced Drive Current** Khusboo Singh, Ram Awadh Mishra, and Kumari Nibha Priyadarshani
317	**A Hybrid Deep Learning-Based Remaining Useful Life Prediction for Industrial Motors** Debasis Jana, Suprakash Gupta, Sukomal Pal, and Sandip Ghosh
323	**Dual-Transformer-Based Zero-Voltage Switching of Dual Active Bridge Converter** Anuj Kumar, Mayank Kumar, and Madhusudan Singh
326	**CORAL-Based Framework for Multi-Platform Polarimetric SAR LULC Classification** Amol Sharma, Shikhar Agrawal, Hemansh Shridhar, and Himanshu Maurya
327	**Enhancing DDoS Attack Detection: Deep Learning Approaches with CNN-LSTM and Class Balancing**

	Ratnesh Kumar Choudhary, Mahee Jaiswal, Lukasha Bagde, Alok Singh, Mohd. Faizan Ul Haque, and Nitya Sherkar
335	**Design, Control, and Experimental Validation of a Regulated Flyback Converter for Automotive Auxiliary Applications** Om Prakash Bairwa, Naveen Yalla, and Narendrababu A
336	**Solar-Powered Integrated Dual Output Converter with Model Predictive Control for DC Motors Applications** Muzammil Ahmed and Olive Ray
338	**Design of Fuzzy Logic based PID Controller for LVAD** Sumit Pandey, Anindita Ganguly, and Anuradha Rai
346	**A Novel Data-driven State of Charge Estimation for Li-ion Batteries** Basant Kumar Sethi, Nivedika Kher, and Debottam Mukherjee
348	**Arduino-Based Smart Solar Tracker: A Scalable Solution for Renewable Power Optimization** Sundaram Mishra, Yamika Patel, Neevatika Verma, Gyanendra Prakash, Amit Patel, and Bhagyalakshmi Narayanapuram
362	**Improved BER Performance in Turbulent UWOC Channels using PAM-AMO Scheme** Shambhavi Tiwari and Kanchan Sharma
414	**Sign Language Recognition and Translation into Chhattisgarhi Using Deep Learning** Himanshu Thakur and Manju Pandey
433	**Enhancing Early Diagnosis of Nasopharyngeal Cancer via Explainable Deep Learning with SHAP Insights** Gaganjot Kaur, Debyanshu Tiwari, Niyaz Wani, and Jatin Bedi
437	**Masked Pretraining with Swin-ViT for Dysarthria Detection Using Spectrogram Augmentation** Mohan Bansal, Vinay Kaushik, and Ramesh Saha
443	**An IoT-Integrated ESP32 Smart IR Remote with Dynamic Learning and User-Centric Customization** Vaishnavi Khare, Akash Chaturvedi, and Tushant Kumar