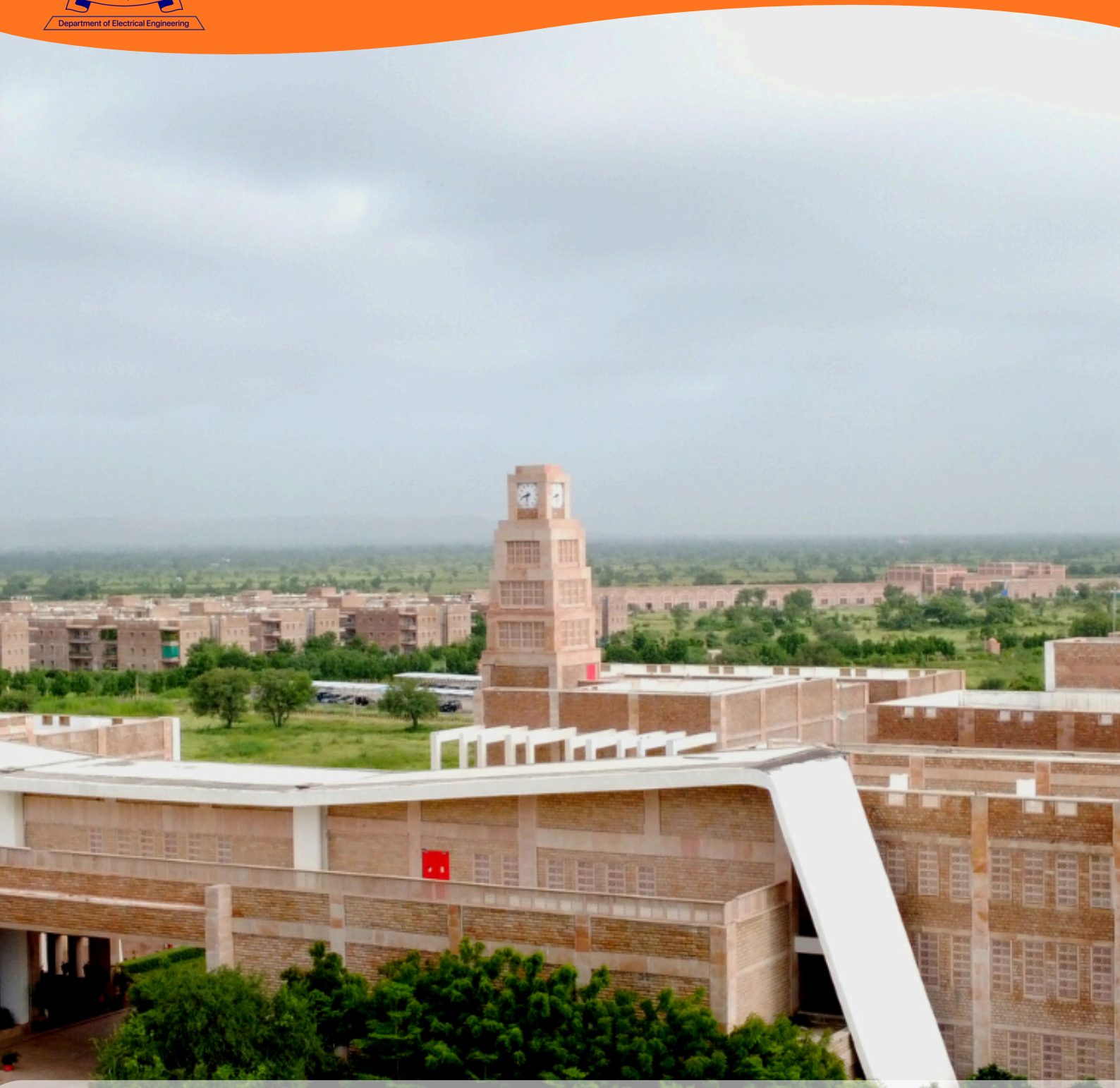
Department of Electrical Engineering



NEWSLETTER
2025 - 2026
DEPARTMENT OF
ELECTRICAL ENGINEERING
Indian Institute of Technology Jodhpur

www.iitj.ac.in/electrical-engineering

Electrical Engineering IIT jodhpur

From Head's Desk

Electrical Engineering is the backbone of modern technology, driving advancements in energy, communications, electronics, and automation. At IIT Jodhpur, we focus on building a deep understanding of core principles while fostering hands-on learning and translational research to address real-world challenges. Our curriculum is designed to equip students with strong analytical skills, systems-level thinking, and practical expertise to develop cutting-edge solutions.

The Department has the vision to generate & disseminate knowledge and develop technologies in emerging domains of Electrical Engineering to meet national & global needs which guides our programs to be industry-relevant and future-driven.

The department emphasizes key areas such as power and energy systems, control and automation, AI and VLSI design, and semiconductor technologies. Through state-of-the-art laboratories, industry collaborations, and interdisciplinary projects, we ensure our graduates are not only industry-ready but also capable of pioneering technological transformations.

Innovation thrives at the intersection of strong fundamentals and practical application. By bridging theoretical knowledge with experimental research and entrepreneurial thinking, we prepare engineers to lead in an evolving technological landscape. We invite students, researchers, and industry partners to collaborate in shaping the future of Electrical Engineering—where robust foundations fuel impactful innovations.

Prof. Bharat Singh Rajpurohit
Head, Electrical Engineering IIT jodhpur

I warmly welcome the new faculty and non-teaching staff and look forward to their valuable contributions to research and academic development. I wish them a successful and fulfilling journey with us.

I hope this issue keeps you informed and inspired, and I look forward to our continued growth and success together.

DEPARTMENT VISION

VISION

To generate and disseminate knowledge, and to develop technologies in emerging domains of Electrical Engineering to meet national and global needs.

MISSION

- To **impart education** with an emphasis on fundamental **knowledge** and its applications through pedagogical innovations, including experiential learning and both synchronous and asynchronous instructional delivery.
- To **make significant contributions** to fundamental research and advance technology in various areas of Electrical Engineering, with a focus on **Cyber-Physical Systems, Artificial Intelligence of Things** (AIoT), 5G and **Beyond Systems**, and **Smart Grids**.
- To **contribute** towards **innovation**, technology development, intellectual property (IP) generation, and entrepreneurship in the thrust areas of Electrical Engineering.
- To **collaborate** with various organizations in research, teaching, and technology development, aligning efforts to drive transformational changes in the Electrical Engineering landscape.
- To enhance the department's visibility through multiple avenues and contribute to continuing education and upskilling programs.

DEPARTMENT SPECIALIZATION

The Department of Electrical Engineering at the Indian Institute of Technology Jodhpur offers M.Tech, Executive M.Tech, and Ph.D. programs focused on advanced learning, research excellence, and strong industry engagement, supported by modern laboratories and computational facilities. The department will further expand its academic offerings from July 2026 with new M.Tech programs in Electrical Power Engineering and Microwave and Photonics, reinforcing its commitment to future-ready engineering education.

The Department of Electrical Engineering at the IIT Jodhpur has announced Ph.D. admissions for 2025–26, inviting applications from candidates interested in advanced, interdisciplinary research. The program provides state-of-the-art research facilities, strong industry–academia collaboration, and training in patents, translational research, and entrepreneurship.

Selected scholars receive financial support of ₹37,000 per month (UGC fellowship) or ₹40,000 per month (Industry Assistantship), with the possibility of an additional fellowship year after thesis submission.

Key research areas include smart grids and power systems, nanoelectronics and RF/mixed-signal design, 5G and optical communications, cooperative control and robotics, and multimedia signal processing, computer vision, AR/VR, IoT, and biomedical applications. Interested candidates can apply through the official admissions portal.

NEW FACULTY JOIN (2025-2026)

Dr. Abhishek Sharma (Assistant Professor)

abhisheksharma@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Kanpur

Antennas, Metamaterials, Metasurfaces, Electromagnetics, Millimeter-Wave/THz Circuits

Dr. Bandi Ravi Kumar (Assistant Professor)

ravik@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Kanpur

Power system protection, Power system monitoring (State estimation, Low frequency oscillations monitoring, etc), Synchrophasors and their applications for power system, Optimization.

Dr. Lavi Tyagi (Assistant Professor)

lavityagi@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Bombay

II-IV, II-VI Materials & Devices (Visible, NIR Detectors); Terahertz Generation & Detection Devices; Nanophotonic & Plasmonic Metamaterials; Microelectronic Interfaces of Hardware Security (Non-Invasive, Semi-Invasive, Invasive)

Dr. Saurav Kumar (Assistant Professor)

sauravk@iitj.ac.in

PhD. –The University of Texas at Dallas

Wearable Robotics, Nonlinear Control, Modeling of legged robots, Prosthetic Legs, Exoskeletons, Biomechanics.

NEW FACULTY JOIN (2025-2026)

Dr. Manoj Gupta (Assistant Professor)

manojgupta@iitj.ac.in

Ph.D. – Nanyang Technological University, Singapore

Terahertz Communication, In-Plane Silicon Photonics, Metamaterials, Low-Dimensional Materials, Sensing Technologies, Hybrid Electronic-Photonic Integration

Dr. Vineeth V (Assistant Professor)

vineeth@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Kanpur

Power Systems, Active Distribution System Operational Planning, Smart Grids, Distributed Energy Resources, Optimization

Dr. Viswanathan Ramachandran (Assistant Professor)

vramachandran@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Bombay

Information Theory, Wireless Communications, Signal Processing, Coding Theory, Privacy and Security, Statistical Learning

Dr. Pradyumna Bishoyi (Assistant Professor)

pradyumna@iitj.ac.in

Ph.D. – Indian Institute of Technology (IIT) Kharagpur

Wireless communication networks, Next-generation WiFi networks, Integrated Sensing and Communication (ISAC) networks, 5G/6G mobile networks, IoT networks, Network Economics, Game Theory and Mechanism Design.

NEW FACULTY JOIN (2025-2026)

Adjunct Faculty Members

Prof. Suresh Chandra Srivastava

scs.iitk.ee@gmail.com

Power system dynamics and stability studies, Renewable integration, DC and AC micro-grids, Optimal power dispatch and state estimation, Security analysis and control, Smart Grid and Smart Cities, Wide area monitoring and control of power systems, Power system restructuring and technical issues in the electricity market.

Dr. Jairam Sukumar

jsukumar@qti.qualcomm.com

High Speed System Design and Engineering, Low Power Digital Design, Signal and Power Integrity

NEW STAFF JOIN (2025-2026)

Murali B
Technical Superintendent

Ramesh Meesala
Technical Superintendent

Sanoj Kumar
Junior Technical Superintendent

Nilesh Kumar Jha
Senior Technical Assistant

Chandan Kumar Mehra
Junior Technical Assistant

Manish Kumar Sah
Junior Technical Assistant

Vijendra Kumar Meena
Junior Technical Assistant

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
1	Wang, Yifei, Pradyumna Kumar Bishoyi, and Marina Petrova. "Sensing-Oriented Reference Signal Design for Multi-Target Detection in 6G ISAC Systems." IEEE Communications Letters 30 (2025): 302-306.
2	Kaur, Parminder, and Amandeep Kaur. "A Fully Reconfigurable Low Offset Asymmetric Sense Amplifier Implementing Multiple Logic Gates for In-Memory Computing." IEEE Transactions on Circuits and Systems I: Regular Papers (2025).
3	Dubey, Richa, et al. "Multi-robot Segregation using Finite-time MPC with Chernoff bound-based Asynchronous Motion Smoothing." IEEE Robotics and Automation Letters (2025).
4	Gaurhar, Sudhanshu, Tushar Shinde, and Anil Kumar Tiwari. "Resource-Efficient ECG Foundation Networks via Layer-wise Adaptive Compression." NeurIPS 2025 Workshop on Foundation Models for the Brain and Body.
5	Singh, Ritesh Kumar, et al. "Grass/gum composite based triboelectric flexible nanogenerators for sustainable human-machine interaction." Chemical Engineering Journal (2025): 170089.
6	Sharma, Shubham, Aashish Mathur, and Ravi Bhandari. "On the Performance of OIRS-Aided VLC Systems With Random UE Orientation for Indoor Consumer IoT Applications: Analysis and Optimization." IEEE Internet of Things Journal (2025).
7	Kniss, Christopher, et al. "Temperature-compensated multi-level CMOS modulators operating from 10 K to 300 K for cryogenic interconnects." IEEE Journal of Microwaves (2025).
8	Vijayan, Vineeth, Ali Arzani, and Satish M. Mahajan. "Network Reconfiguration in Electric Power Distribution Networks: A Review." IEEE Transactions on Industry Applications (2025).
9	Singh, Ritesh Kumar, et al. "Based Flexible UV Radiation Monitoring Devices with an IGZO Sensing Layer for Wearable Electronics." ACS Applied Electronic Materials (2025).
10	Yadav, Ravi, and Ashok Kumar Pradhan. "Mean-Shift Cross Energy Operator for Spectral Change Detection in Low Quality Harmonic Signals." IEEE Transactions on Power Delivery (2025).

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
11	K. V. Katariya, R. Yadav, S. Kumar, A. K. Pradhan and I. Kamwa, "Wide-Area-Measurement-System-Based Event Analytics in the Power System: A Data-Driven Framework for Disturbance Characterization and Source Localization in the Indian Grid," in IEEE Power and Energy Magazine, vol. 23, no. 1, pp. 35-46, Jan.-Feb. 2025
12	Krishna, Idury Satya, Amar D. Chaudhari, and Soumava Mukherjee. "Closed-Form Equations for Substrate Integrated Coaxial Lines and Its Application to Dual-Frequency Coupler With Wide Bandwidth and Out-of-Band Rejection." IEEE Journal of Microwaves 5.4 (2025): 1015-1025.
13	Shukla, Saurabh, and Soumava Mukherjee. "A Low Cost 24–32 GHz Down Converter Mixer Using SICL Technology." IEEE Microwave and Wireless Technology Letters (2025).
14	Biswas, Arpita, et al. "Bimetallic nanoparticles anchored CVD grown SnS 2 flakes based Chemiresistive Ascorbic Acid Sensor." IEEE Sensors Journal (2025).
15	Maity, Priyanka, et al. "Joint Angle and Velocity-Estimation for Target Localization in Bistatic mmWave MIMO Radar in the Presence of Clutter." arXiv preprint arXiv:2506.11497 (2025).
16	Gupta, Awadhesh, et al. "Bayesian Learning Aided Parameter Estimation and Joint Beamformer Design in mmWave MIMO-OFDM ISAC Systems." IEEE Transactions on Communications (2025).
17	Lalani, Champalal, Aashish Mathur, and Nitin Bhatia. "Experimental and analytical investigations of a MIMO-based FSO-fiber communication network under the combined effects of fog and turbulence." Optics Express 33.16 (2025): 33363-33383.
18	Chalka, Vandana Kumari, et al. "TiO2/PSi Heterostructure Based Multi-Wavelength Photodetector System for AIoT Applications." IEEE Internet of Things Journal (2025).
19	Singh, Jitendra, et al. "Spectral Efficiency Maximization for mmWave MIMO-Aided Integrated Sensing and Communication Under Practical Constraints." IEEE Transactions on Vehicular Technology (2025).
20	Idury, Satya Krishna, Amar D. Chaudhari, and Soumava Mukherjee. "A Self-Packaged SICL-based Integrated Antenna-Diplexer System Featuring High Isolation and selectivity." IEEE Open Journal of Antennas and Propagation (2025).

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publication
21	Gupta, A., Srivastava, S., Jagannatham, A. K., & Hanzo, L. (2025). Beam-Squint Aware Sparse Techniques for Massive MIMO-OFDM Integrated Sensing and Communication. IEEE Transactions on Vehicular Technology.
22	Maity, Priyanka, et al. "Variational Bayesian Learning for 3D Localization of Extended Targets in mmWave MIMO OFDM ISAC Systems." IEEE Open Journal of the Communications Society (2025).
23	Satapathy, Bibhudutta, Karan Jadhav, and Amandeep Kaur. "An Adaptive Body Tuned Sense Amplifier for Energy Efficient In-Memory Computing." IEEE Transactions on Circuits and Systems II: Express Briefs (2025).
24	Kisku, Wilfred, Amandeep Kaur, and Deepak Mishra. "Efficient Edge-AI with Binarized Neural Networks and CMOS Image Sensors: A Sparsity-Driven Approach." Circuits, Systems, and Signal Processing (2025): 1-17.
25	Kumawat, Naresh Kumar, and Nishant Kumar. "Comprehensive component health monitoring of 3-phase 2-stage grid connected PV system via digital twin." IEEE Transactions on Industrial Electronics (2025).
26	A. Kumar, A. Prajapati, N. Kumar, and J. Dhayal, "Single-Phase Two-Stage Grid Integrated Solar PV System with OSO-AI Control and PSPO MPPT," IEEE Transactions on Industry Applications. doi: 10.1109/TIA.2025.3584292.
27	Kumar, Arun, and Nishant Kumar. "State-Space Driven Digital Twin for Condition Monitoring and Predictive Health Assessment in Grid-Integrated Power Converter System." IEEE Transactions on Industrial Cyber-Physical Systems (2025).
28	Chaudhary, Saurabh, Niladri S. Tripathy, and Suril V. Shah. "SGP-Based Stochastic Predictive Control of Free-Floating Space Robot in Pre-Capture Phase." IEEE Transactions on Aerospace and Electronic Systems (2025).
29	Chaudhari, Amar D., and Soumava Mukherjee. "A Compact SIW-Based Co-designed (3.5, 26) GHz MIMO Antenna for Indoor Small-Cell Base Stations." IEEE Antennas and Wireless Propagation Letters (2025).
30	Kumar, Hemant, Abdul Gafoor Shaik, and Ravi Yadav. "Fuzzy logic-based automatic voltage regulator integrated adaptive vehicle-to-grid controller for ancillary services support." Energy Informatics 8.1 (2025): 59.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
31	Jafri, Meesam, et al. "Robust Hybrid Beamforming in Cooperative Cell-Free Mmwave MIMO Networks Relying on Imperfect CSI." IEEE Transactions on Vehicular Technology (2025).
32	Mehrotra, Anand, et al. "Multi-dimensional Sparse CSI Acquisition for Hybrid mmWave MIMO OTFS Systems." IEEE Transactions on Communications (2025).
33	Yadav, Chetali, and Bhupendra Singh Reniwal. "Spatially Invariant Convolutional Spiking Neural Network For Resource-Constrained IoT Devices." Circuits, Systems, and Signal Processing 44.5 (2025): 3005-3026.
34	S. Singh, R. Yadav and A. K. Pradhan, "Phasor-based Identification of CVT ferroresonance with Divergent Density Distribution of Intrinsic Modes," in IEEE Transactions on Industry Applications, doi: 10.1109/TIA.2025.3529800.
35	Chaudhary, Saurabh, et al. "Data-Driven Event-Triggered Predictive Post-Impact Control of Space Robot with Uncertainties." Journal of Guidance, Control, and Dynamics 48.2 (2025): 358-373.
36	Gupta, Nidhi, et al. "Nanostructured porous silicon biosensor and smartphone integrated ELISA for sensitive detection of breast cancer biomarker." Chemical Engineering Journal (2025): 172236.
37	Zheng, Paul, et al. "Joint Communication Scheduling and Resource Allocation for Distributed Edge Learning: Seamless Integration in Next-Generation Wireless Networks." arXiv preprint arXiv:2505.08682 (2025).
38	A. K. Srivastava, B. S. Rajpurohit, and S.N. Singh "A New Approach for Fast and Accurate Harmonic/Interharmonic Parameter Estimation in Modern Power System", IEEE Industry Applications Magazine, vol. 31, no. 05, pp. 14-24, 2025.
39	V. Tejan, R. M. Pindoriya, B. S. Rajpurohit, and Narsa Reddy, "Sensorless Speed Control of PMSM Drive using Non-Linear Sliding Mode Observer with Position Estimation based on Quadrature-PLL" Electrical Engineering, vol. 107, pp. 7893-7907, 2025.
40	V. Srivastava, S. Dubey, R. Vaish and B. S. Rajpurohit, "Rapid fabrication of flexible copper-plated circuit boards on cotton fabrics and conductive threads for textile materials using pencil-drawn technique," Material Today Electronics, vol. 11, 2025.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
41	Monika Gadhewal, Ritesh Kumar Singh, Sourav Maity, and Shree Prakash Tiwari "Biosustainable Flexible Devices with Edible Sensing Material for Real-Time Breath Rate Monitoring" ACS Applied Electronic Materials, Vol. 7, pp. 6646-6654, 2025.
42	Ritesh Kumar Singh, Monika Gadhewal, Sourav Maity, and Shree Prakash Tiwari "Paper-Based Flexible UV Radiation Monitoring Devices with an IGZO Sensing Layer for Wearable Electronics" ACS Applied Electronic Materials, Vol. 7, pp. 6196-6206, 2025
43	Sourav Maity, Ritesh Kumar Singh, Monika Gadhewal, and Shree Prakash Tiwari "Highly biodegradable piezoelectric flexible wearable tactile sensors with amino acid crystals: a paradigm shift towards smart transient electronics, Chemical Engineering Journal" Vol. 512, pp. 162531(1-13), 2025.
44	Ritesh Kumar Singh, Monika Gadhewal, Mohd Saqib, and Shree Prakash Tiwari "Low-Cost Flexible Piezoelectric Sensors for Real-Time Tactile Monitoring and Energy Harvesting" IEEE Sensors Journal, Vol 7, pp. 18081-18089, 2025.
45	Anurag Dwivedi, Harshit Agarwal, and Shree Prakash Tiwari "Demonstration of a RRAM-CMOS Random Number Generator Circuit for Flexible Hybrid Electronics" Flexible and Printed Electronics, Vol. 10, pp. 015013, 2025.
46	Somnath Bhattacharjee, Gargi Konwar, Anurag Dwivedi, and Shree Prakash Tiwari "Flexible Organic Transistors for Color Recognition and Nature-Inspired Synaptic Function Simulation: Performance and Stability" ACS Applied Electronic Materials, Vol. 7, pp. 2065-2074, 2025.
47	Gargi Konwar, Albert Heinrich Lanthaler, Ritesh Kumar Singh, Federica Catania, Niko Munzenrieder, Giuseppe Cantarella, and Shree Prakash Tiwari "Flexible InGaZnO Thin-Film Transistors with Gelatin Gate Dielectric for Non-Volatile Memory" IEEE Journal on Flexible Electronics, Vol. 4, pp. 188 - 193, 2025.
48	Somnath Bhattacharjee, Anurag Dwivedi, and Shree Prakash Tiwari "Development of Biodegradable Substrates and Synaptic Transistors for Next-Generation Transient Electronics, Advanced Materials Technologies" Vol. 10, pp. 2401494(1-11), 2025.
49	A. Gupta, P. Ganji, S. Srivastava and A. K. Jagannatham, "Data-Aided Bistatic Sensing and Communication for mmWave MIMO-OFDM ISAC Systems", IEEE Transactions on Communications, vol. 73, pp. 9720-9734, Apr. 2025

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
50	C. L. Lalani, A. Mathur, and N. Bhatia, "Experimental and Analytical Investigations of MIMO-Based FSO-Fiber Communication Network Under Combined Effects of Fog and Turbulence," in Optics Express, vol. 33, issue 16, pp. 33363-33383, 2025.
51	V. Mohan, D. Bhaskar, and A. Mathur*, "Ground-Aerial AAV-assisted Hybrid PLC-FSO Integrated Communication Networks: A Performance Analysis," in IEEE Internet of Things Journal, vol. 12, no. 8, pp. 11064-11080, April 2025.
52	Somnath Bhattacharjee, Naresh Jingar and Shree Prakash Tiwari "Multifunctional Organic Synaptic Transistors for Tissue-Equivalent Dosimetry" Organic Electronics, Vol. 144, pp. 107293(1-6), 2025.
53	Meghwanshi, Ravi Prakash, Amit Bhardwaj, and Himanshu Kumar. "Effect of force-rate on continuous kinesthetic force discrimination." Experimental Brain Research 243.5 (2025): 118.
54	A. K. Srivastava, B. S. Rajpurohit, and S.N. Singh "A New Approach for Fast and Accurate Harmonic/Interharmonic Parameter Estimation in Modern Power System", IEEE Industry Applications Magazine, vol. 31, no. 05, pp. 14-24, 2025.
55	Datta, Kriti, Amit Bhardwaj, and Manish Narwaria. "Does Attribute Space Driven Tactile Features Correspond to Overall Perceptual Similarity of Textures?." IEEE Sensors Journal (2025).
56	Guo, Xiangyu, Tai Fei, Zican Wang, Xiao Xu, Subhas Mukhopadhyay, Amit Bhardwaj, and Zhi Jin. "A Review of Next-Generation Sensor Technologies for Human-Machine Interaction." IEEE Sensors Journal (2025).
57	Shalu Saini and Shree Prakash Tiwari "Solution processed Ti3C2 MXene nanosheets as resistive switching layer in flexible RRAM devices for sustainable electronics" Nanotechnology, Vol. 365, pp. 385201, 2025.
58	A. Javaid, R. Achar, and J. N. Tripathi, "Knowledge-Based Bidirectional Recurrent Neural Network Approach for Efficient Prediction of Jitter in a Chain of CMOS Inverters", IEEE Journal on Multiscale and Multiphysics Computational Techniques, vol. 10, pp. 407-420, Aug. 2025.
59	Gupta, Shreyash, Niladri S. Tripathy, and Suril V. Shah. "Reinforcement Learning-Based Variable Horizon Model Predictive Control of Multirobot Systems in Dynamic Environments." Journal of Dynamic Systems, Measurement, and Control 147.4 (2025): 041013.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
60	A. Javaid, R. Achar, and J. N. Tripathi, "A Hybrid Deep-Belief and Knowledge-based Neural Network for Efficient Prediction of Jitter in the Presence of Multiple PDN Noise Sources", IEEE Transactions on Signal and Power Integrity, vol. 4, pp. 33-45, 2025.
61	A. Kumar and J. N. Tripathi, "Analytical Modeling of Eye Diagram for Jitter Estimation in Presence of Ground Bounce", IEEE Transactions on Signal and Power Integrity, vol. 4, pp. 24-32, 2025.
62	A. Munsi, S. Pradhan, K Aditya, "Design and Implementation of Wireless Charging Infrastructure for Autonomous UAV Charging" IEEE Access, vol. 13, pp. 180462-180478, 2025.
63	K. Aditya, "A high-fidelity SPICE model of an Automotive DC actuator for predicting its performance with temperature" Results in Engineering, Vol. 28, Dec 2025.
64	A. Munsi, S. Pradhan, K Aditya, "Advancements in inductive wireless power transfer: A comprehensive review" Chinese Journal of Electrical Engineering, doi: 10.23919/CJEE.2025.000136 , 2025.
65	Amrit Raj, R. Kumar, K. Aditya, "Implementing an enhanced unscented Kalman filter for SOC estimation of Li-ion cell on an embedded platform" Electrical Engineering, Springer, 2025.
66	A. Munsi, R. Kumar, and K. Aditya, "Hardware design and implementation for Class-E power amplifier for Qi compatible wireless power transfer for consumer electronics" International Journal of Power Electronics, 21:4, 398-415, 2025.
67	K. Srivastava and N. Bhatia, "Mode switching and sorting in few mode fiber ports using square core multimode optical fiber," Journal of the Optical Society of America B, vol. 10, no. 3, pp. 2163-2173, 2025.
68	C. Lalani, A. Mathur, and N. Bhatia, "Experimental and Analytical Investigations of MIMO-Based FSO-Fiber Communication Network Under Combined Effects of Fog and Turbulence", Optics Express 33, 33363-33383, 2025.
69	S. Pal, A. Khandelwal and N. Bhatia, "Stable Dual Wavelength Emission From the Buried Heterostructure Laser Using Reflectivity Modification Method for Microwave Generation," in IEEE Journal of Quantum Electronics, vol. 61, no. 3, pp. 1-10, June 2025.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
70	Kritarth Srivastava and Nitin Bhatia, "An all-fiber multimode interference device for power splitting in few mode fiber networks," IEEE/Optica Journal of Lightwave Technology, vol. 43, no. 2, pp. 799-808, Jan, 2025.
71	P. S. Nath and R. Chouhan, "Multimodal Quality Assessment of AI-Generated Images using BERT-CLIP Feature Fusion", Signal Image and Video Processing vol, 19, article number 1254, Oct. 2025.
72	Mathur, Parikshana, Saakshi Dhanekar, and B. D. Malhotra. "A review on breast cancer diagnostic techniques." Sensors & Diagnostics Journal, 2025, vol. 4, pp. 555-573.
73	Chalka, Vandana Kumari, Manpreet Singh, Nikhil Vadera, Pranjali Srivastava, Uppala Giridhar, Romi Banerjee, Saakshi Dhanekar, and Kamaljit Rangra. "TiO2/PSi Heterostructure Based Multi-Wavelength Photodetector System for AIoT Applications." IEEE Internet of Things Journal (2025), vol. 12, pp. 30933-30940.
74	Anil Lodhi, Somnath Bhattacharjee, Anurag Dwivedi, Arpit Khandelwal, and Shree Prakash Tiwari "Demonstration of synaptic behavior in flexible ReRAM devices with PVPy/TiOx bilayer for neuromorphic applications" Journal of Physics D: Applied Physics, (Special Issue on Memristive Devices for Neuromorphic Computing), Vol. 58, pp. 275104(1-10), 2025.
75	Idury, Satya Krishna, Amar D. Chaudhari, and Soumava Mukherjee. "A Self-Packaged SICL-based Integrated Antenna-Diplexer System Featuring High Isolation and selectivity." IEEE Open Journal of Antennas and Propagation, vol. 6, pp. 1358 – 1366, 2025.
76	Shukla, Saurabh, Soumava Mukherjee, and Arani Ali Khan. "Impedance mismatch approach to design rf power amplifier with harmonic suppression." Microwave and Optical Technology Letters 67.6 (2025): e70269.
77	Chaudhari, Amar D., and Soumava Mukherjee. "A Compact SIW-Based Co-Designed (3.5, 26) GHz MIMO Antenna for Indoor Small-Cell Base Stations." IEEE Antennas and Wireless Propagation Letters, vol. 24, pp. 2069 – 2073, 2025.
78	A. Mehrotra, J. Singh, S. Srivastava, R. K. Singh, A. K. Jagannatham and L. Hanzo, "Multi-dimensional Sparse CSI Acquisition for Hybrid mmWave MIMO OTFS Systems", IEEE Transactions on Communications, vol. 73, pp. 8330-8344, Mar. 2025
79	M. Jafri, P. Kumar, S. Srivastava, A. K. Jagannatham and L. Hanzo, "Robust Hybrid Beamforming in Cooperative Cell-free mmWave MIMO Networks Relying on Imperfect CSI", IEEE Transactions on Vehicular Technology, vol. 74, pp. 12590-126024, Mar. 2025

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
80	Kalra, B., Mukherjee, S., Singh, G., & Sharma, M. M. (2025). A compact dual band circularly polarized antenna using shared aperture technique for NavIC receiver. Sādhanā, 50(2), 60.
81	Kalra, Bhawna, Soumava Mukherjee, Ghanshyam Singh, M. M. Sharma, and Indra Bhooshan Sharma. "Compact Circularly Polarized Shared Aperture Antenna with Wide Axial Ratio Bandwidth for NavIC Receiver." IETE Journal of Research 71vol. 71, pp. 139-15 ,2025.
82	Srivastava, V., Dubey, S., Vaish, R., & Rajpurohit, B. S. (2025). Rapid fabrication of flexible copper-plated circuit boards on cotton fabrics and conductive threads for textile materials using pencil-drawn technique. Materials Today Electronics, 11, 100141.
83	Shubham Singh and Anoop Jain, "Möbius Transformation-Based Circular Motion Control for Unicycle Robots in Nonconcentric Circular Geofences." IEEE Transactions on Automatic Control (Early Access), pp. 1-16, November 2025.
84	Gaurav Singh Bhati, Arukonda Vaishnavi and Anoop Jain, "Safe Circumnavigation of a Hostile Target Using Range-Based Measurements," IEEE Transactions on Control Systems Technology, Vol. 33, no. 6, pp. 2483 - 2489, July 2025.
85	Suhaib Md and Anoop Jain, "Constrained Path-Following Control of a Unicycle Robot Using a Barrier Lyapunov Guidance Vector Field ," IEEE Indian Control Conference (ICC), pp. 265-270. IEEE, 2025.
86	Ranit Roychowdhury, Anoop Jain, and Jayant Kumar Mohanta, "Relative Side-Bearing Angle-Based Circumnavigation of a Target Using Unmanned Aerial Vehicle with Boundary Constraints," IEEE Indian Control Conference (ICC), pp. 111-116. IEEE, 2025.
87	Abhishek Yadav, Vyom Kumar Gupta, and Binod Kumar. "Lightweight surveillance image classification through hardware-software co-design." IEEE Embedded Systems Letters (2025).vol. 17, pp. 222 – 225, 2025.
88	Abhishek Yadav, Vyom Kumar Gupta, and Binod Kumar. "FPGA-based Medical Image Processing Using Hardware-Software Co-design Approach." IEEE transactions on biomedical circuits and systems, vol. 20, pp. 57 – 68, 2025.
89	A. Kumar and J. N. Tripathi, "Novel Observations on Impact of Ground Bounce on Logic-HIGH", IEEE Transactions on Signal and Power Integrity, vol. 4, pp. 176–184, Aug. 2025.
90	J. Singh, B. Naveen, S. Srivastava, A. K. Jagannatham and L. Hanzo, "Pareto-Optimal Hybrid Beamforming for Finite-Blocklength Millimeter Wave Systems", IEEE Transactions on Vehicular Technology, vol. 74, pp. 9910-9915, Jan. 2025

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
91	Avinash, Baruri Sai, et al. "Hierarchical Multiscale CNN With Frequency-Aware Attention for Enhanced HAR." IEEE Sensors Journal, vol. 25 ,pp. 31175 – 31184, 2025.
92	Vyom Kumar Gupta, Abhishek Yadav, Mirgender Kumar, and Binod Kumar. "On-Chip Implementation of Neural Network Based Classifier Models For E-nose With Chemometric Analysis." IEEE Transactions on Instrumentation and Measurement (2025).
93	J. Singh, A. Mehrotra, S. Srivastava, A. K. Jagannatham and L. Hanzo, "Spectral Efficiency Maximization for mmWave MIMO-Aided Integrated Sensing and Communication Under Practical Constraints", IEEE Transactions on Vehicular Technology, vol. 74, pp. 17413-17428, June 2025
94	Kumar, S., Gupta, M., Tan, T. C., Alphones, A., & Singh, R. " Dual-band Topological Filter Antenna on a Silicon Chip for Terahertz wireless Communication" IEEE Transactions on Terahertz Science and Technology, pp. 1-9 ,2025.
95	Banerjee, Rimi, Abhishek Kumar, Thomas Caiwei Tan, Manoj Gupta, Ridong Jia, Pascal Szriftgiser, Guillaume Ducournau, Yidong Chong, and Ranjan Singh. "On-chip amorphous terahertz topological photonic interconnects." Science Advances 11, no. 25 (2025): eadu2526.
96	Srivastava, Yogesh Kumar, Teng Chen Ietro Pang, Manoj Gupta, Manukumara Manjappa, Piyush Agarwal, Jérôme Lesueur, and Ranjan Singh. "YBa2Cu3O7 as a high-temperature superinductor." Nature Materials 24, no. 6 (2025): 883-890.
97	V. Srivastava, A. S. Thakur, R. Vaish and B. S. Rajpurohit, N. S. Awwad, H. A. Ibrahium, I. Kebaili & I. Boukhris, "Hand drawn capacitive proximity/touch sensors," Journal of Materials Science: Materials in Electronics, vol. 36, 2025.
98	N. Keshtiarast, P. K. Bishoyi, I. M. Lumbantobing, and M. Petrova, "When Next-Gen Sensing Meets Legacy Wi-Fi: Performance Analyses of IEEE 802.11bf and IEEE 802.11ax Coexistence," arXiv: 2505.04637, 2025.
99	Solanki, Deepanshu, and Rajendra Nagar. "Spectrum Alignment for Robust 3D Point Cloud Correspondences Estimation." IEEE Transactions on Visualization and Computer Graphics , vol. 31, pp. 10561 – 10572, 2025.
100	V. Tejan, R. M. Pindoriya, B. S. Rajpurohit, and Narsa Reddy, "Sensorless Speed Control of PMSM Drive using Non-Linear Sliding Mode Observer with Position Estimation based on Quadrature-PLL" Electrical Engineering, vol. 107, pp. 7893-7907, 2025.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
101	Kumar, S., Sivasubramanian, D., Singh, I., Palomino, A., & Wijesundara, M. B. "Reducing vibration exposure for medical evacuation of patients with adaptive vibration control of air bladder cushions" Journal of Vibration and Control, 10775463251407878.
102	Kumar, S., Gujja, P. K., Kongara, S., Tzen, Y. T., & Wijesundara, M. B. J. (2025). Smart seat cushion mobile application with on-device posture prediction using TensorFlow lite. Disability and Rehabilitation: Assistive Technology, 20(7), 2459–2473.
103	Kumar, Saurav, and Hartmut Geyer. "An Active Spring Mass Model with Biomimetic Ground Reaction Forces for Multiple Terrains." IEEE Transactions on Biomedical Engineering , vol. 73 ,pp. 510 – 517, 2025.
104	P. Maity, D. Harish, S. Srivastava, A. K. Jagannatham and L. Hanzo, "Variational Bayesian Learning for 3D Localization of Extended Targets in mmWave MIMO OFDM ISAC Systems", IEEE Open Journal of the Communications Society, vol. 6, pp. 4421-4436, May 2025
105	V. Tejan, Narsa Reddy, and B. S. Rajpurohit, "Improved Rotor Position Estimation in Sensorless SPMSM Using NSMO and QPLL-Based Frequency Control for Wide Speed Range" IEEE Transactions on Industrial Electronics, vol. XX, pp. XX, 2025.(Accepted).
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107	Saxena, Shubham, Saurabh Sharma, Suraj Srivastava, Aditya K. Jagannatham, and Lajos Hanzo. "Multiple Measurement Vector Based Bayesian Learning for Simultaneously Sparse Time/Delay-Domain Channel Estimation in ADO-OFDM Visible Light Systems." IEEE Transactions on Vehicular Technology (2025).
108	Maity, Priyanka, Deepika Harish, Suraj Srivastava, Aditya K. Jagannatham, and Lajos Hanzo. "Super-Resolution-Based Bayesian Learning for the Localization of Extended Targets in mmWave MIMO OFDM Systems." IEEE Open Journal of Vehicular Technology 6, vol. 6, pp. 3000 – 3016, 2025.
109	Gaurhar, Sudhanshu, Anil Kumar Tiwari, and Surender Deora. "A CNN-based classifier for detecting rhythm disorders, premature contractions, and conduction abnormalities from ECG." Biomedical Signal Processing and Control 113 (2026): 108834.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
110	C. L. Lalani, A. Mathur*, and N. Bhatia, "Impact of Random Fiber Coupling Efficiency on Secrecy of FSO-Fiber Communication Systems," in IEEE Communications Letters, vol. 30, no. 8, pp. 757 - 761, 2026.
111	R. P. Meghwanshi, A. Bhardwaj and H. Kumar, "A Study of Deadzone Structure for Multi-Dimensional Haptic Force Perception", ACM Transactions on Applied Perception, vol. 23, no. 8, pp. 1-18, 2026.
112	Datta, Kriti, Amit Bhardwaj, and Manish Narwaria. "Haptic-Sound Analysis of Materials' Clustering Based on Tool Tip Tapping Exploration." Multisensory Research 1.aop (2026): pp. 1-16.
113	Gupta, Nidhi, Sruti Chattopadhyay, Bommi Sarath Kumar, Aditi Kishor Dhamne, Saakshi Dhanekar, and Harpal Singh. "Nanostructured porous silicon biosensor and smartphone integrated ELISA for sensitive detection of breast cancer biomarker." Chemical Engineering Journal (2026), vol. 528, pp. 172236.
114	Pushkal Purohit and Anoop Jain, "Passivity-based Attack Identification and Mitigation via Event-triggered Observer Feedback," Systems & Control Letters, vol. 208 (106341), pp. 1-8, 2026.
115	Ramachandran, Viswanathan. "State-Dependent Fading Gaussian Channel with Common Reconstruction Constraints." arXiv preprint arXiv:2601.02802 (2026).
116	Avinash, Baruri Sai, Sakshi Thakur, and Binod Kumar. "MultimodalMamba: An Efficient DHCNN–FAM–Mamba Architecture for Human Activity Recognition." IEEE Sensors Journal (2026).
117	P. Zheng, N. Keshtiarast, P. K. Bishoyi, Y. Zhu, Y. Hu, M. Petrova, and A. Schmeink, "Joint Communication Scheduling and Resource Allocation for Distributed Edge Learning: Seamless Integration in Next-Generation Wireless Networks", IEEE Transactions on Wireless Communications, vol. 25, pp. 8032-8050, 2026.

PUBLICATION (2025-2026)

Journal Publications

S.No.	Detail of Publications
118	Machhiwar, Yogendra, Pragya Kushwaha, and Harshit Agarwal. "An Improved Nanosheet Compact Model Capturing Spacer and Epitaxial Geometry Effects for RF Applications." IEEE Transactions on Electron Devices (2026).
119	Kumar, P., El-Hajjar, M., Hemadeh, I. A., Mestrah, Y., Srivastava, S., Jagannatham, A. K., & Hanzo, L. " Amalgamated CHIRP and OFDM for ISAC" IEEE Transactions on Vehicular Technology, pp. 1-16, 2026.
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122	Tiwari, Anjali, and Niladri Sekhar Tripathy. "A Unified Framework for Robust Stabilization and Safety of Uncertain Nonlinear Systems." Journal of Dynamic Systems, Measurement, and Control (2026): 1-10.

PUBLICATION (2025-2026)

Conference Publications

S.No.	Detail of Publications
1	Singh, Ritesh Kumar, Monika Gadhewal, and Shree Prakash Tiwari. "High-Performance Triboelectric Nanogenerator Devices for Body Movement and Energy Harvesting Application." 2025 IEEE 20th Nanotechnology Materials and Devices Conference (NMDC). IEEE, 2025.
2	Meghwanshi, Ravi Prakash, Amit Bhardawj, and Himanshu Kumar. "Effect of Continuous Transition Between Force Stimuli on Haptic Force Discrimination Tasks." 2025 IEEE World Haptics Conference (WHC). IEEE, 2025.
3	Kaur, Parminder, and Amandeep Kaur. "LO-ASA: Low Offset Asymmetric Sense Amplifier for Digital In-Memory Computing in SRAM." 2025 23rd IEEE Interregional NEWCAS Conference (NEWCAS). IEEE, 2025.
4	Satapathy, Bibhudutta, Dhananjay Harish Bhalwala, and Amandeep Kaur. "An Asymmetric Static Comparator for RC Oscillator Achieving $21.6\text {ppm}/{}^{\circ}\mathrm {C} $ Temperature-Stability." 2025 23rd IEEE Interregional NEWCAS Conference (NEWCAS). IEEE, 2025.
5	Sharma, Shobhit, and Nishant Kumar. "Reactive Power Minimization in Dual Active Bridges with Varying Load Demands: A New Adaptive Modulation Scheme." 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET). IEEE, 2025.
6	Sharma, Shobhit, and Nishant Kumar. "Grid-Compliant EV Charging with DAB and EPS Modulation for Adaptive Control and PFC." 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET). IEEE, 2025.
7	Sharma, Shobhit, and Nishant Kumar. "Seamless Grid-Compliant EV Charging Using DAB with EPS Modulation for Adaptive Current Control and Power Factor Correction." 2025 IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE). IEEE, 2025.
8	Verma, Gyan Deep, Aashish Mathur, and Manav R. Bhatnagar. "Secrecy Analysis of H-ARQ Based Free-Space Optical Communication Systems." 2025 IEEE International Conference on Communications Workshops (ICC Workshops). IEEE, 2025.
9	Gautam, Nikhil, Kunwar Aditya, and Binod Kumar. "Performance Assessment of the Made-in-India Aries v3 Development Platform for Motor Control Applications: A Comparative Study with Arduino UNO." In 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), pp. 1-5. IEEE, 2025.

PUBLICATION (2025-2026)

Conference Publications

S.No.	Detail of Publications
10	Gupta, Awadhesh, et al. "Target Parameter with Gridless Doppler Estimation Using Low-Resolution ADCs in Beam-Squinted THz ISAC System." 2025 IEEE 26th International Workshop on Signal Processing and Artificial Intelligence for Wireless Communications (SPAWC). IEEE, 2025.
11	Singh, Ritesh Kumar, et al. "Low-Cost Flexible Piezoelectric Sensors with Rapid-Response for Wearable Electronics." 2025 32nd International Workshop on Active-Matrix Flatpanel Displays and Devices (AM-FPD). IEEE, 2025.
12	A. K. Srivastava, B. S. Rajpurohit, "Interharmonic detection using Random Forest Regressor in Modern Power System," 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2025), 09-12 July, 2025, Jaipur, India.
13	K. Ramawat, and B. S. Rajpurohit, "Condition Monitoring with Vibration signals for Stator Interturn Faults in Permanent Magnet Synchronous Motor on Machine Learning based Approach," 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2025), 09-12 July, 2025, Jaipur, India.
14	R. Kuhada, A. K. Srivastava, and B. S. Rajpurohit, "A comparative analysis of Transformer life expectancy using DGA and ML models," 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2025), 09-12 July, 2025, Jaipur, India.
15	R. Kuhada, and B. S. Rajpurohit, "Improving Grid Compliance and Economic Efficiency Using Energy Storage Under DSM Regulation 2024," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
16	A. Sharma, and B. S. Rajpurohit, "False Data Injection Attack Resilient LFC for Two Area Power System with Optimized Hybrid Fractional Order PID Controller," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
17	A. Sharma, K. Ramawat, B. S. Rajpurohit, A. Usman, and, P. J. Chaudhary" Fault Diagnosis and Identification in Permanent Magnet Synchronous Motor Using Temporal Convolutional Network," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
18	Yadav, A., Gupta, V., Bhati, G. S., & Kumar, B. (2025). Variational inference-aided neural architecture search for secure deep learning implementation. Neurocomputing, 131163.

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Conference Publications

S.No.	Detail of Publications
19	K. Ramawat, B. S. Rajpurohit, A. Usman, and, P. J. Chaudhary "Vibration based Incipient Inter turn Fault diagnosis in Permanent Magnet Synchronous Machine using Deep Learning Approach," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
20	K. Ramawat, A. Sharma, and, B. S. Rajpurohit, "Data-Driven Fault Severity Estimation in Permanent Magnet Synchronous Machines," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
21	K. Mathur, S. K. Yadav, and, B. S. Rajpurohit, "A Comprehensive Review on Pantograph–Catenary Arc Detection and Classification in High-Speed Railway Traction Systems," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
22	K. Mathur, S. K. Yadav, and, B. S. Rajpurohit, "A Comprehensive Review on Pantograph–Catenary Arc Detection and Classification in High-Speed Railway Traction Systems," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
23	Modi, Himani, and Deepak Fulwani. "Multi-Objective Tertiary Layer Optimization for DC Microgrids." 2025 IEEE Energy Conversion Congress & Exposition Asia (ECCE-Asia). IEEE, 2025.
24	G. D. Verma, A. Mathur, and M. R. Bhatnagar, "Secrecy Analysis of H-ARQ Based Free-Space Optical Communication Systems," IEEE ICC 2025 Eleventh Workshop on NextG (6G and beyond) Wireless Security, 2025, pp. 298-304.
25	R. P. Meghwanshi, A. Bhardwaj and H. Kumar, "Effect of Continuous Transition between Force Stimuli on Haptic Force Discrimination Tasks", in IEEE World Haptics Conference (WHC), 2025.
26	Pal, S., Khandelwal, A., & Bhatia, N. (2025, November). Direct Emission of Vector Vortex Beam (VVB) from Buried Heterostructure (BH) Laser. In 2025 IEEE Photonics Conference (IPC) (pp. 1-2). IEEE.
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PUBLICATION (2025-2026)

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S.No.	Detail of Publications
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30	Monika Gadhewal, Ritesh Kumar Singh, and Shree Prakash Tiwari, Triboelectric Nanogenerators from Incense Stick Ash Waste for Flexible Electronics, 7th IEEE International Conference on Emerging Electronics (IEEE ICEE 2025), December 13-16, 2025, Bangalore, India.
31	Ritesh Kumar Singh, Monika Gadhewal, and Shree Prakash Tiwari, Paper-Based UV Dosimeters for Sustainable Wearable Electronics, 7th IEEE International Conference on Emerging Electronics (IEEE ICEE 2025), December 13-16, 2025, Bangalore, India.
32	Monika Gadhewal, Ritesh Kumar Singh, and Shree Prakash Tiwari, Real-Time Breath Rate Monitoring System Using Edible Sensing Material, 7th IEEE International Conference on Emerging Electronics (IEEE ICEE 2025), December 13-16, 2025, Bangalore, India.
33	Monika Gadhewal, Ritesh Kumar Singh, and Shree Prakash Tiwari, Cellulose-Based Humidity Sensing Devices for Real-Time Breath Rate Monitoring, 20th IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2025), October 09 - 11, 2025, Virtual.
34	Shree Prakash Tiwari, Flexible Organic Transistors for Sustainable Electronics, 32nd International Workshop on Active-Matrix Flat Panal Displays and Devices (AM-FPD25), July 01 - 04, 2025, Kyoto, Japan.
35	Sourav Maity and Shree Prakash Tiwari, Glycine Incorporated Gelatin Composite Films for Flexible and Biodegradable Piezoelectric Sensors, 32nd International Workshop on Active-Matrix Flat Panal Displays and Devices (AM-FPD25), July 01 - 04, 2025, Kyoto, Japan.
36	Shalu Saini, Nishi Mishra, and Shree Prakash Tiwari, Investigation of Pomegranate Leaf Powder Thin Film as an Edible Switching Layer in Flexible RRAM Devices, 2025 Springer International Conference on Micro/Nanoelectronics Devices Circuits and Systems (MNDCS 2025), January 29-31, 2025, NIT Silchar, India.

PUBLICATION (2025-2026)

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S.No.	Detail of Publications
37	Abhishek Yadav, Vyom Kumar Gupta, Kethireddy Harshith Reddy, Masahiro Fujita, and Binod Kumar. "Multi-Object Detection Through Meta-Training in Resource-Constrained UAV-Based Surveillance Applications." In 2025 38th International Conference on VLSI Design and 2024 23rd International Conference on Embedded Systems (VLSID), pp. 278-283. IEEE, 2025.
38	P. Maity, M. Chakraborty, S. Srivastava, and A. K. Jagannatham "Hybrid Precoding in mmWave Multiuser MIMO Systems with Delay Alignment Modulation (DAM)", in IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), IEEE, 2025
39	P. Yadav, J. Fernandez, B. B. John, S. Srivastava, and Y. Vasavada "Sparse Matrix Precoded MIMO: A Computationally-Efficient Approach for High Throughput Wireless Links", in IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), IEEE, 2025.
40	Raja, D., Machhiwar, Y., Tripathi, K. K., Pahwa, G., & Agarwal, H. (2025, March). "Performance Analysis of Advanced Ferroelectric HfO2-ZrO2 Superlattice Gate Stack Transistor with Multi-Phase Ferroelectric Order" In 2025 9th IEEE Electron Devices Technology & Manufacturing Conference (EDTM) (pp. 1-3). IEEE.
41	Singh, Harshita, Anant Singhal, and Harshit Agarwal. "Improved Cmos-Based Noise-Immune Sigmoid Activation Function for Neural Networks." 2025 9th IEEE Electron Devices Technology & Manufacturing Conference (EDTM). IEEE, 2025.
42	Tripathi, K. K., Machhiwar, Y., Raja, D., & Agarwal, H. (2025, March). Compact Modeling of Silicon Carbide (SiC) Power Fets. In 2025 9th IEEE Electron Devices Technology & Manufacturing Conference (EDTM) (pp. 1-3). IEEE.
43	N. Keshtiarast, P. K. Bishoyi, I. M. Lumbantobing, and M. Petrova, "When Sensing Meets Communication: Coexistence analysis of IEEE 802.11bf and IEEE 802.11ax," Proc. IEEE ICC, pp. 6486-6491, 2025 .
44	N. Keshtiarast, P. K. Bishoyi, and M. Petrova, "Environment-Aware Scheduling of URLLC and Sensing Services for Smart Industries," Proc. IEEE ICC, pp. 1-6, 2025 .
45	Zheng, N. Keshtiarast, P. K. Bishoyi, Y. Zhu, Y. Hu, M. Petrova, and A. Schmeink, "Efficient Integration of Distributed Learning Services in Next-Generation Wireless Networks" Proc. IEEE ICC, pp. 4577-4582, 2025

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S.No.	Detail of Publications
46	J. Singh, S. Srivastava, and A. K. Jagannatham "Maximizing Geometric Mean Rate in RIS-Assisted Integrated Sensing and Communication Systems", in IEEE Wireless Communications and Networking Conference (WCNC), IEEE, 2025
47	J. Singh, S. Srivastava, and A. K. Jagannatham "Maximizing Geometric Mean Rate in RIS-Assisted Integrated Sensing and Communication Systems", in IEEE Wireless Communications and Networking Conference (WCNC), IEEE, 2025
48	Abhishek Yadav,, Vyom Kumar Gupta, Masahiro Fujita, and Binod Kumar. "Evolving Landscape of AI-based Drone Systems: A Mini Review." In 2025 IEEE 14th Global Conference on Consumer Electronics (GCCE), pp. 1239-1240. IEEE, 2025.
49	Thakur, Sakshi, and Binod Kumar. "Assertion-Driven Formal Verification for Custom RISC-V Core." 2025 IEEE 9th International Test Conference India (ITC India). IEEE, 2025.
50	Kumari, Manisha, Subharthi Roy, Masahiro Fujita, and Binod Kumar. "LLMCov: A Methodology for LLM-Aided DfT Coverage Improvement in Open-Source Designs." In 2025 IEEE 9th International Test Conference India (ITC India), pp. 1-4. IEEE, 2025.
51	I. M. Lumbantobing, N. Keshtiarast, P. K. Bishoyi, and M. Petrova, "A ns-3 Implementation of Wi-Fi Sensing MAC for Sub-7 GHz Bands," Proc. International Conference on ns-3 (ICNS3 '25). ACM, New York, NY, USA, pp. 46–53, 2025
52	Srivastava, Ankit K., Bharat Singh Rajpurohit, and Sri Niwas Singh. "Interharmonic Detection using Random Forest Regressor in Modern Power System." 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET). IEEE, 2025.
53	K. Ramawat, and B. S. Rajpurohit, "Condition Monitoring with Vibration signals for Stator Interturn Faults in Permanent Magnet Synchronous Motor on Machine Learning based Approach," 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2025), 09-12 July, 2025, Jaipur, India.
54	R. Kuhada, A. K. Srivastava, and B. S. Rajpurohit, "A comparative analysis of Transformer life expectancy using DGA and ML models," 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2025), 09-12 July, 2025, Jaipur, India.

PUBLICATION (2025-2026)

Conference Publications

S.No.	Detail of Publications
55	R. Kuhada, and B. S. Rajpurohit, "Improving Grid Compliance and Economic Efficiency Using Energy Storage Under DSM Regulation 2024," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
56	A. Sharma, and B. S. Rajpurohit, "False Data Injection Attack Resilient LFC for Two Area Power System with Optimized Hybrid Fractional Order PID Controller," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
57	A. Sharma, K. Ramawat, B. S. Rajpurohit, A. Usman, and, P. J. Chaudhary" Fault Diagnosis and Identification in Permanent Magnet Synchronous Motor Using Temporal Convolutional Network," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
58	K. Ramawat, B. S. Rajpurohit, A. Usman, and, P. J. Chaudhary "Vibration based Incipient Inter turn Fault diagnosis in Permanent Magnet Synchronous Machine using Deep Learning Approach," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
59	K. Ramawat, A. Sharma, and, B. S. Rajpurohit, "Data-Driven Fault Severity Estimation in Permanent Magnet Synchronous Machines," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy, and Control (STPEC 2025), 10-13 Dec., 2025, Goa, India.
60	R. Kumar, R. Jajoriya and A. Moudgil, "Highly Efficient Solid State Organic Electrochemical Transistor-Based Tactile Sensor," 2025 IEEE 18th International Conference on Nano/Molecular Medicine & Engineering (NANOMED), Hong Kong, Hong Kong, 2025, pp. 240-244.
61	A. Saha, R. Kumar, and A. Moudgil. "Highly Efficient Solid State Organic Electrochemical Transistor for Ion Sensing." *2025 IEEE 18th International Conference on Nano/Molecular Medicine & Engineering (NANOMED)*. IEEE, 2025.
62	A. Usman, Y. Chilukuri, P. J. Chaudhary, P. Dehghanian, W. J. Lee and B. S. Rajpurohit, , and, "EV Charging Mandates and Their Impact on Load Profiles in Multi-Unit Residential Buildings," 2026 13th IEEE Conference on Technologies for Sustainability (SusTech 2026), April 19-22, 2026, Orange County, California.

FACULTY RECOGNITION (2025 - 2026)

Prof Ajay Agarwal
Member Governing Council of IETE

Dr. Rajlaxmi Chouhan
Associate Editor Editorial Board of Digital Signal Processing

Prof. Deepak Fulwani
IEEE- IAS Distinguished Lecturers

Dr. Saakshi Dhanekar
Associate Editor in IEEE Sensors Magazine

Dr. Aashish Mathur
Fellow of IETE- FIETE

Dr. Soumava Mukherjee
Member of Editorial Board of Scientific Reports, Springer Nature

FACULTY RECOGNITION (2025 - 2026)

Dr. Suraj Srivastava
Fellow of IETE

Dr. Ravi Yadav
Editorial Member of Nature- Scientific Reports

Dr. Bhupendra Singh Reniwal
Associate Editor of the
Prestigious IEEE Transaction on VLSI

Dr. Nishant Kumar
Senior Individual Member of the
Indian National Academy of Engineering

FACULTY AWARDS (2025-2026)

DR. SURAJ SRIVASTAVA (ASSISTANT PROFESSOR)

Dr. Suraj srivastava received the ANRF PM-ECRG (Prime Minister's Early Career Research Grant under the Anusandhan National Research Foundation , Government of India) and the Young Researcher Award (Engineering)-2025 on 18th Foundation Day of the institute

DR. SAAKSHI DHANEKAR (ASSOCIATE PROFESSOR)

Dr. Saakshi Dhanekar, Ms. Aditi K. Dhamne, and Ms. Vandana K. Chalka secured third place in the Start-up Challenge at IEEE APSCON 2025, hosted by the Indian Institute of Technology Hyderabad.

DR. AASHISH MATHUR (ASSOCIATE PROFESSOR)

Dr. Aashish Mathur was awarded the Young Researcher Award on the 18th Foundation Day of IIT Jodhpur in August 2025.

DR. NISHANT KUMAR (ASSOCIATE PROFESSOR)

The Department of Electrical Engineering proudly congratulates Dr. Nishant Kumar, Assistant Professor, on being recognized among the World's Top 2% Scientists and receiving the Distinguished Teacher Award at Indian Institute of Technology Jodhpur in 2025.

FACULTY AWARDS (2025-2026)

DR. RAJLAXMI CHOUHAN (ASSOCIATE PROFESSOR)

Dr. Rajlaxmi Chouhan received the IETE–Prof. K. Sreenivasan Memorial Award 2025 and the Distinguished Teacher Award during the Teachers' Day Celebration at Indian Institute of Technology Jodhpur in September 2025.

DR. AKSHAY MOUDGIL (ASSISTANT PROFESSOR)

Dr. Akshay Moudgil received the 2025 Teaching Excellence Awards during the Teachers Day Celebration at IIT Jodhpur in September 2025.

DR. AMANDEEP KAUR (ASSISTANT PROFESSOR)

Dr. Amandeep Kaur received the best poster award at VLSI Design conference held at Pune, in Jan 2026.

DR. RAJENDRA NAGAR (ASSISTANT PROFESSOR)

Dr. Rajendra Nagar received the 2025 Teaching Excellence Awards during the Teachers Day Celebration at IIT Jodhpur in September 2025.

FACULTY AWARDS (2025-2026)

PROF. AJAY AGARWAL (PROFESSOR)

Prof. Ajay Agarwal received the Excellence in Research Award at the International AI Data Scientist Awards–2025 and the Distinguished Researcher in Microelectronics Award at the 11th VIRA 2025.

DR. NISHANT KUMAR (ASSOCIATE PROFESSOR)

Dr. Nishant Kumar received the Visvesvaraya Young Faculty Research Fellowship (YFRF) Award 2026 from the Ministry of Electronics and Information Technology, Government of India, and the IEEE Outstanding Chapter Engineer Award 2026 from the IEEE Delhi Section.

STUDENTS AWARDS (2025 - 2026)

Prabhanshu Yadav (PhD/EE)

won the Best Paper Award in IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)-2025

Kavitha S (PhD/EE)

Kavitha S received the Best Paper Award at the Ph.D. Forum at VDAT 2025.

Shobhit Sharma(PhD/EE)

The paper titled “Grid-Compliant EV Charging with DAB and EPS Modulation for Adaptive Control and PFC” received the Best Paper Award at the IEEE Conference on (SEFET-2025), held at MNIT Jaipur.

Sudhanshu Gaurhar(PhD/EE)

Awarded a $1500 travel grant by the BrainBodyFM Workshop for NeurIPS 2025.

STUDENTS AWARDS (2025 - 2026)

Kanchan Jha (PhD/EE)

She got selected through campus placement at Cipher Research Private Limited (Lumenci).

Ravi Prakash Meghwanshi (PhD/EE)

presented his research titled “Effect of Continuous Transition between Force Stimuli on Haptic Force Discrimination Tasks” in an oral session at the IEEE World Haptics Conference (WHC)-2025, held in Suwon, South Korea

Vinod Kumar Verma (PhD/EE)

The research paper “Power Supply Induced Jitter: Variability-Aware Modeling and Novel Observations” secured the Runner-Up position in the Academic Paper Track at Annual Tech Week 2025, organized by STMicroelectronics, India.

Akanksha Malhotra (PhD/EE)

Her research paper "Impact Assessment of Topology Attack on Power System using Graph Theory" got Best Paper Award in IEEE international Conference on Power and Energy.

STUDENTS AWARDS (2025 - 2026)

Mr. Sarvar Singh (PhD/EE)

secured first prize in the ‘Reduce E-waste’ theme of Ideas4LiFE initiative, a national competition organized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India in collaboration with UNICEF Yuvaah.

Mridul Gupta (b.Tech/EE)

'Best Student Paper' award for the paper 'A time-efficient approach for decoupling capacitors placement in a PDN using Sherman–Morrison method for matrix inversion' at IEEE EDAPS 2024

Abir Kumar Majumdar (PhD/EE)

Selected as a Technical member of CIGRE and its Study Committee B3 (Substations & Electrical Installations)

Koustav Saha (PhD/EE)

have received approval for the position of Technical member as a Specialist in the CIGRE Study Committee B3 (Substation & Electrical Installation).

STUDENTS AWARDS (2025 - 2026)

Dushyant Bhaskar (PhD/EE)

He has been nominated for the Best Teaching Assistant Award in department of electrical engineering IIT Jodhpur for the Academic Year 2025.

Rohan Kumar (PhD/EE)

He has been nominated for the Best Teaching Assistant Award in department of electrical engineering IIT Jodhpur for the Academic Year 2025.

Wilfred Kisku (PhD/EE)

He has been nominated for the Best Teaching Assistant Award in department of electrical engineering IIT Jodhpur for the Academic Year 2025.

Prateek Shrivastava (PhD/EE)

He has been nominated for the Vice Chairperson for the ACM student chapter IIT Jodhpur for the Academic Year 2025.

STUDENTS AWARDS (2025 - 2026)

Somnath Bhattacharjee (PhD/EE)

Received the Best Poster Award at the International Workshop on Active-Matrix Flatpanel Displays and Devices (AM-FPD) 2025, Kyoto, Japan in July 2025 and E-MRS Young Researcher Award (YRA), 2025, at the E-MRS 2025 Fall Meeting and Exhibit, Warsaw, Poland, in September 2025.

Arun Kumar (PhD/EE)

Awarded with Director's Fellowship of IIT Jodhpur (2026).

Naresh Kumar Kumawat (PhD/EE)

He has joined Suzlon Energy Limited as a Deputy Manager.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

Department of EE, IIT Jodhpur organized a **"IEEE EDS Summer School- Electronic Design Automation 2.0: Challenges and Prospective"** from 25th - 28th january 2025.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

Department of EE, IIT Jodhpur and TTTC India presented **"VLSI TEST WORKSHOP"** from 14th to 16th February, 2025.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

Department of EE, IIT Jodhpur organized a **"IEEE Seasonal School on Circuits and Systems for Neuromorphic and Edge AI Computing"** from 28-30 Match, 2025.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

The Department of Electrical Engineering, IIT Jodhpur, organized a two-day interactive workshop on "**Flexible and Sustainable Wearable Electronics**" from 7 to 8 December 2025.

The workshop was designed to provide participants with exposure to recent advancements in flexible and wearable electronics, with a focus on fabrication techniques and real-world applications through expert lectures. In addition, laboratory visits were organized to enable participants to gain practical insights into fabrication and integration aspects.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

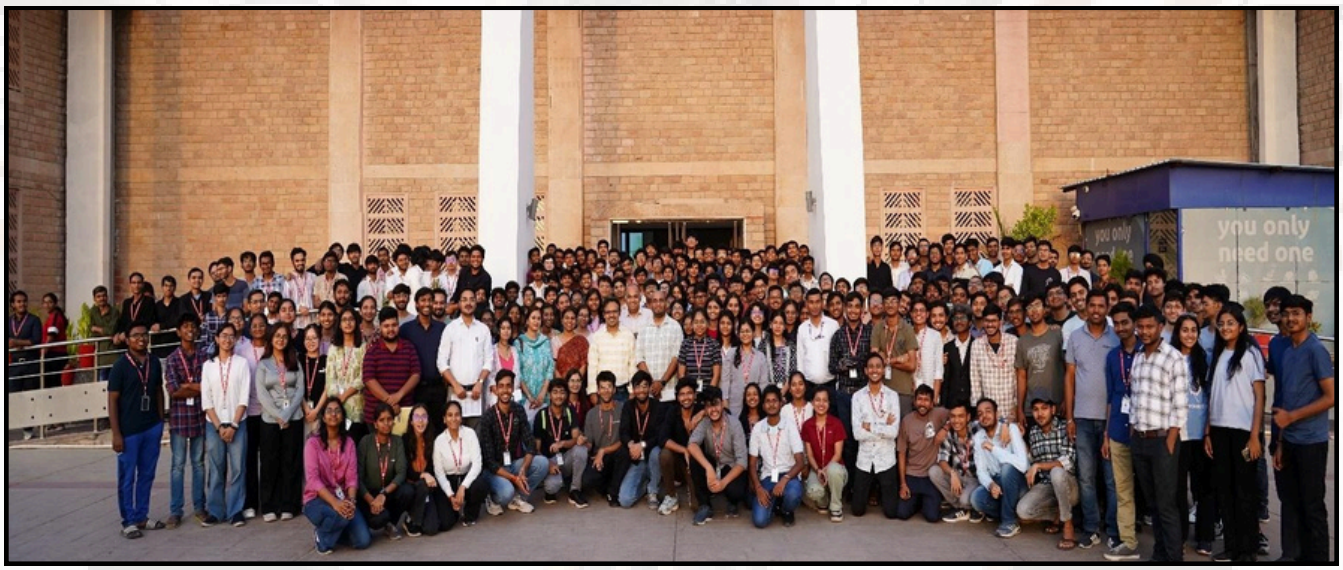
The Department of EE, IIT Jodhpur, organized an IEEE Electron Devices Society (IEEE EDS) workshop on "**VLSI Semiconductor Devices and Compact Modeling**" from 21 to 24 December 2025.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

The Department of EE, IIT Jodhpur, organized a Skill Development Program on "**MATLAB/Simulink and Software-Defined Radio (SDR)-Based Communication Systems Design**" from 21 to 24 December 2025. This intensive program aimed to bridge the gap between theory and practice by providing hands-on exposure to MATLAB/Simulink modeling and the real-world implementation of software-defined radio (SDR)-based systems.

WORKSHOPS & EVENTS ORGANIZED (2025 - 2026)

Fun and Learn Workshop - Introduction to Electrical Engineering



The Department of Electrical Engineering conducted the 1st Year UG Workshop on 17 April 2025 as part of the course "**Introduction to Electrical Engineering**." The workshop was coordinated by Dr. Saakshi Dhanekar, who served as the course instructor. Faculty members Prof. Bharat Singh Rajpurohit, Dr. Soumava Mukherjee, Dr. Abhishek Sharma, Dr. Amandeep Kaur, and Dr. Swati Rajput attended the event and evaluated the student teams.

The workshop was successfully organized with the dedicated support and teamwork of the teaching assistants and laboratory staff members. A total of 282 students participated in the event.

PROJECTS SANCTIONED (2025 - 2026)

Projects

S.No.	Principal Investigator	Project Title
1	Student- Amit Kumar Mentor-Mahesh Kumar	Power analysis of the complete power network of controller System for the Launch mechanism controller
2	Nitin Bhatia	Design and development of a low-cost, optical fiber probe based optical coherence tomography system under resource-constrained setting
3	Ravi Yadav	Grid Infrastructure Hardening Against Mega Heatwaves in India
4	Abhishek Sharma	Applied Electromagnetic Research Group
5	Lavi Tyagi	Design and Development of Hot-Electron based Plasmonic Photodetectors for NIR and MWIR Strategic Applications
6	Suraj Srivastava	Developing Computationally Efficient Sparse Signal Processing Algorithms for 6G Sub-Terahertz (Sub-THz) Joint Radar and Communication (RadCom
7	Ajay Agarwal	Intelligent IoT Systems for Sensing Application (I2S2)
8	Manoj Gupta	Millimeter-wave and Terahertz Microsystems Lab (MMμTL)
9	Viswanathan Ramachandran	Multi-party Channel Simulation via Error-correcting Codes
10	Suraj Srivastava	Intelligent Spectrum Innovation (ICON)

PROJECTS SANCTIONED (2025 - 2026)

Projects

S.No.	Principal Investigator	Project Title
11	Ajay Agarwal	Intelligent Sensor System for Early Prediction of Sepsis in Neonates and High-Risk Adults
12	Binod Kumar	High-level Synthesizable Digital Designs Modelled by using C/C++/python
13	Binod Kumar	Executive M.Tech in Intelligent VLSI Systems (AY 2025-26)
14	Harshit Agarwal	IEEE EDS Workshop on VLSI Semiconductor Devices and Compact Modelling
15	Binod Kumar	Custom Voice Command Identification
16	Vineeth V	IGNITE Lab- Phase I (Intelligent Grid and Networks for Innovative Transition in Energy)
17	Saurav Kumar	Wearable Robotics & Control (WeRoCon) Laboratotry
18	Mentor-Amit Bhardwaj Student –Ravi Prakash Meghwanshi	International Travel Support from ANRF for Mr. Ravi Prakash Meghwanshi
19	Suraj Srivastava	IIT Jodhpur Skill Development Program on MATLAB/Simulink and Software -Defined Radio (SDR)-Based Communication System Design
20	Kunwar Aditya	Power analysis of the complete power network of controller System for the Launch mechanism controller

PROJECTS SANCTIONED (2025 - 2026)

Projects

S.No.	Principal Investigator	Project Title
21	Suraj Srivastava	IIT Jodhpur Skill Development Program on MATLAB/Simulink and Software -Defined Radio (SDR)-Based Communication System Design (March 2026)

NEW FACILITIES CREATED (2025-2026)

S.No.	Quantity	Details of Equipements
1	1	Numerical relay equipment for overcurrent, directional overcurrent, and under/over-voltage protection
2	1	Generator Protection relay
3	1	Three phase line differential relay
4	1	Motor protection relay
5	1	Battery emulator and profiler
6	1	2 kW IGBT based three phase inverter module
7	2	Three-phase AC VFD output reactors with inductance values of 3 mH and 5 mH
8	1	Bidirectional DC-DC buck boost converter
9	18	212 W Quad- Channel DC Power Supply (Four Channel 32V/3A)
12	6	Digital Storage Oscilloscope (BW- 200 MHz)
13	1	Programmable DC power supply (DCX160M10, 800Watt)
14	1	2 kW IGBT based three phase inverter module
15	1	Numerical single phase distance relay

NEW FACILITIES CREATED (2025-2026)

S.No.	Quantity	Details of Equipements
16	3	Software Defined Radio (SDR) – SISO Supported Frequency Range: 10 MHz - 3.5 GHz RF Bandwidth: 40 MHz
17	3	Software Defined Radio (SDR) – MIMO supported Frequency range: 30 MHz – 3.8 GHz Bandwidth: 120 MHz
18	1	Octoclock module Frequency - 10 MHz, Coupling - AC, Impedance - 50 Ω
19	1	Ethernet pcie interface cable (dual 100 gigabit)
20	2	USRP B200 kit Xilinx Spartan 6 XC6SLX75 FPGA, Instantaneous bandwidth - 56 MHz RF coverage - 70 MHz to 6 GHz
21	1	Vector signal generator Frequency - 1MHz to 44 GHz
22	6	Benchtop Digit Digital Multimeter (5½ Digit, 1000 KHz, 3A)
23	1	NVIDIA Jetson Orin Nano Super Developer Kit
24	1	UPS 15.0 KVA / BPE Online UPS of Rating 15.0 KVA With Battery Of Backup Time 30 Minutes
25	1	High voltage differential probe

NEWLY JOINED RESEARCH SCHOLARS (2025 - 2026)

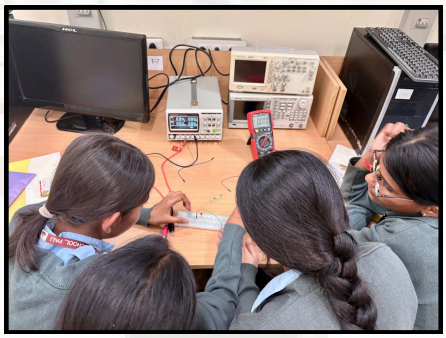
S.No.	Roll No.	List of Students
1	P25EE0001	Ajay Kumar Singh
2	P25EE0010	Sandipta Senapati
3	P25EE0009	Rahul Laha
4	P25EE0008	Puranjeet Pahari
5	P25EE0007	Narender Kumar
6	P25EE0006	Jyeshtar
7	P25EE0005	Harshita Chordiya
8	P25EE0003	Ankush Mondal
9	P25EE0002	Ankit Kumar
10	P25EE0011	Shubham Satnam Raut
11	P25EE0201	Km Jyotsana
12	P25EE0202	Naresh Meghwal

NEWLY JOINED RESEARCH SCHOLARS (2025 - 2026)

S.No.	Roll No.	List of Students
13	P25EE0203	Pankaj Lodhi
14	P25EE0204	Rina
15	P25EE0205	Sagar Prashant Shahare
16	P25EE0207	Sekharamahanthi Ananth Patnaik
17	P25EE0208	Ujjwal Vishwakarma

SCHOOL STUDENTS VISIT (2025 - 2026)

The Center for Education Technology, IIT Jodhpur, welcomed 50 students and 07 teachers from **PM SHRI Seth Mukanchand Baliya Government Girls' Senior Secondary School, Pali, on 29 January 2026** as a part of their educational tour. The students attended sessions focused on career options in STEM and hands-on electronics exercises in the Department of Electrical Engineering.



HANDS-ON LEARNING SEASON (2025 - 2026)

In March 2025, a STEM (Science, Technology, Engineering, Mathematics) activity was organized at **Government Senior Secondary School, Daijar**. During this activity, students learned basic electronics by actually building small circuits using Snap Circuits kits (easy-to-use educational tools).

INVITED TALKS & VISITS (2025–2026)

Dr. Asmita Dani

Founder of Milliwave Technology Pvt. Ltd.

Title of the Talk: RF Power Amplifier Design Methodology.

This talk presents Designing RFIC and MMIC power amplifiers (PAs) requires balancing efficiency, output power, and linearity across wide bandwidths

Mr. Balakrishna Verma

Founder & Lead Principal at VER MÁS CONSULTING

Title of the Talk: Designing for Impact: Engineering with Empathy: What if your engineering skills could solve real human problems?

Dr. Preetam Kumar

Professor at IIT Patna

Title of the Talk: 5G: Challenges and Enabling Technologies.

This talk explores the challenges and opportunities that shape 5G today and define its path forward Attention is given to whether the evolution of LTE-Advanced will be sufficient or whether entirely new radio access technologies are required to meet future demands.

Dr Satish Kumar Sharma

Professor at San Diego State University, USA

Title of the Talk: Multifunctional Antennas and Arrays for Wireless Communications.

This talk will explore the state-of-the-art in multifunctional antennas and arrays, which are capable of delivering multiple functionalities, such as frequency agility, frequency and polarization reconfiguration, and radiation patternreconfiguration.

INVITED TALKS & VISITS (2025–2026)

Dr. Anindya Nag

Junior Professor at Technische Universität Dresden, Germany

Title of the Talk: Wearable Sensors for Multimodal Applications.

The talk will provide insights into recent advances in wearable and flexible sensor technologies, with a particular focus on multimodal sensing platforms for healthcare, human–machine interaction, and smart systems.

Prof. S.C. Srivastava

Adjunct Professor at IIT Jodhpur

Title of the Talk: Few Major Grid Disturbances: Causes and Few Remedial Measures.

The lecture and talk by Prof. S. C. Srivastava provided a comprehensive overview of the Indian power sector's structure, operational challenges, regulatory framework, and ongoing transitions toward renewable integration and grid modernization, followed by an analytical discussion of major grid disturbances in India.

Dr. Yogesh B. Gianchandani

Professor at College of Engineering at the University of Michigan

Title of the Talk: Chip-scale micro gas chromatography systems: a half-century perspective.

The presentation will selectively review the trajectory of research directed at micro-gas chromatographs for collecting, separating, identifying, and quantifying VOCs. It will show how new architectural options make better use of microfabricated elements than what is possible with conventional configurations.

VISIT OF DR. JAIRAM SUKUMAR

Dr. Jairam Sukumar, **Senior Director at Qualcomm India**, visited the Electrical Engineering Department at IIT Jodhpur on 2 March 2026.

He leads the Mixed Signal Systems Engineering and Hardware Systems Group, focusing on high-speed system design, signal and power integrity, and interface commercialization. He previously worked at Texas Instruments on mixed-signal SoC design. An alumnus of Dayalbagh Educational Institute and Indian Institute of Science, he has 25+ years of industry experience, 30+ publications, and is a Senior Member of IEEE.

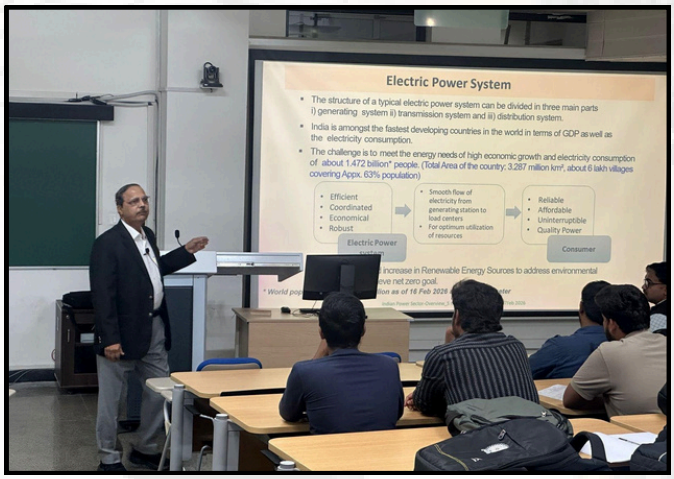
CERTIFICATE OF APPRECIATION (2025–2026)

As part of the Safety Awareness Drive held on Sunday, 8th March 2026, the Safety and Disaster Management Committee of Indian Institute of Technology Jodhpur recognized the exemplary efforts of technical staff members from the Electrical Engineering Department in maintaining the highest safety standards in the laboratory.

Mr. Gajraj Sharma, **Mr. Kailash Chander**, and **Mr. Naveen Kumar** were awarded the Certificate of Appreciation for their dedication and commitment to ensuring a safe and secure laboratory environment.

GALLERY

Visit of Prof. Yogesh Gianchandani, University of Michigan, Ann Arbor, USA



Academic Visit of Prof. S.C. Srivastava Adjunct Professor, Department of Electrical Engineering, IIT Jodhpur

GALLERY





The Electrical Engineering Department at Indian Institute of Technology Jodhpur organized the Best Teaching Assistant Award Ceremony for the Academic Year 2024–25.

NEWSLETTER

DEPARTMENT OF ELECTRICAL ENGINEERING

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