

Department of Electrical and Instrumentation Engineering
Externally Sponsored R&D Projects
Year 2025-26

Sr. No.	Project Title	PI	Co-PI	Date of Sanction	Duration	Funding Agency	Status
1	Empowering Elderly Lives with Solar PV, Water Purification, and Smart Monitoring Systems at Sai Old Age Home Patiala	Dr. Manoj Badoni	Dr. Rajesh M. Pindoriya and Dr. Robin Singla	09-09-2025	Sept. to Aug. 2026 (1 Year)	EPICS in IEEE, USA	Ongoing
2	Industrial Automation	Dr. Moon Inder Singh		21-11-2025	20-11-2026 (1 Year)	NUCON Switchgears Pvt Ltd	Ongoing
3	AICTE-Inter-Institutional Biomedical Innovations Programme (IBIP)	Dr. Sunil Kumar Singla	Dr. Sahaj Saxena	24-09-2025	23-09-2027 (2 Years)	AICTE, India	Ongoing
4	Design and development of Powertrain controller (15kW) with AIS compliance	Dr. Mukesh Singh	Dr. Manoj Badoni and Dr. Prashant Singh Rana	24-12-2025	(2 Years)	MeitY-MHI, India	Ongoing
5	Study of Materials and Methods for Performace Testing of Displacement Type Chlorinators used for Disinfection of Drinking Water	Dr. Raj Kumar Gupta	Dr. Haripada Bhunia and Dr. Souvik Ganguli	17-04-2026	6 months	BIS, India	Ongoing
6	Development and Lab-to-Market Deployment of 30 kW SiC MOSFET-based Multilevel Three-phase PFC Rectifier for Industrial Applications	Dr. Krishna Kumar Gupta	Dr. Sunil Kumar Singla and Dr. Shakti Singh, Dr. Tanu Wadhera (HIT Una); Dr. Pallavee Bhatnagar (NITTTR Bhopal)	15-06-2026	3 Years	AICTE-RPS, India	Ongoing

Year 2024-25

Sr. No.	Project Title	PI	Co-PI	Date of Sanction	Duration	Funding Agency	Status
1	Study of Safety and Performance Parameters of Electric Fans and Regulators for Use in Ships	Dr. Souvik Ganguli	Dr. Surya Prakash	21-02-2025	Feb to Jul 2025 (6 Months)	BIS, India	Completed
2	To Define Environmental Friendliness Rating for Electrotechnical Products	Dr. Surya Prakash	Dr. Souvik Ganguli	21-02-2025	Feb to Jul 2025 (6 Months)	BIS, India	Completed
3	Study of surge arresters installed in electricity distribution applications and comparison with clause 5.2.5.5.2 of IS:15086: Part 5:2020 surge arresters selection and applications recommendations	Dr SK Aggarwal	Dr Suman Bhullar, Dr Sunil Kumar Singla	21-02-2025	Feb to Jul 2025 (6 Months)	BIS, India	Completed
4	Calculation of Thermally Oermissible Short circuit current in low voltage, direct current electrical installations	Dr Pawan Kumar	Ms. Meenu, Mr. Gagandeep Singh, Mr. Priyanka Kumari and Mr. Shailendra Saroj	21-02-2025	Feb to Jul 2025 (6 Months)	BIS, India	Completed
5	Study of the cloud services ecosystem and map against existing standards, and identify the gap areas for standardization	Dr. Payal Mittal	Dr. Abhisek Pal, Dr.Anil Kumar Verma	21-02-2025	Feb to Jul 2025 (6 Months)	BIS, India	Completed
6	Elastic Insight: Advancing Early Diagnosis of Osteosarcoma, Chondrosarcoma and Ewing's through High Resolution 3D Automated Optical Coherence Elastography	Dr. Vishal Srivastava	Prof. Ajay Batish, Dr. Hemdutt Joshi. Dr. Hari Shankar Singh and Dr. Vishal Gupta	28-02-2025	Feb 2025 to Jan 2028 (3 Years)	ICMR	Ongoing

7	Developing Artificial Intelligence Algorithm by Combining Radiomics using Diffusion Tensor Imaging with molecular biomarker in Infantile spasm to detect treatment response	Dr. Jainy Sachdeva		21-02-2025	Feb 2025 to Jan 2028 (3 Years)	ICMR	Ongoing
8	Development of Simulation Platform for Reinforcement Learning based Control Engineering	Dr. Swati Sodhi		11-11-2024	10-11-2026 (02 years)	AI Strategy Consultance LLC., USA	Ongoing

Year 2023-24

Sr. No.	Project Title	PI	Co-PI	Date of Sanction	Duration	Funding Agency	Status
1	Enhancing Electric Vehicle Security-AI Powered Detection and Prevention of Cyber Attacks	Dr. Amit Kumar	Dr. Ashima Anand, Dr. Prashant Singh Rana, Prof. Mukesh Singh	05-03-2024	March 2024 -March 2027	C3iHUB IIT Kanpur	Ongoing
2	Electric Vehicle Systems Infrastructure	Dr Sunil Kumar Singla	Dr. Mukesh Singh	26-06-2024	October 2023-October 2026	DST-FIST	Ongoing
3	Artificial Intelligence Based CAD System for 3D Segmentation and Classification of Traumatic Brain Injury on CT-Angiography Images	Dr. Chirag Kamal Ahuja	Dr. Jainy	07-02-2024	February 2024-February 2027	SERB	Ongoing
4	Conceptualization, Design and Development of Next Generation Power Electronics Transformer (NGPET) with Wide Range of Intermediate DC-Link Voltage	Dr. Krishna Kumar Gupta	Dr. Shakti Singh	25-09-2023	September 2023 - February 2025	NaMPET-III	Completed
5	Remoulding Existing Buildings into Smart Carbon Neutral Buildings: A Green Cyber-Physical Approach (Green-CPS)	Dr. Mukesh Singh	Dr. Neru Jindal	11-07-2023	July 2023-June2025	DST/INDO-CANADA	Ongoing
6	Design and Development of an Improved Three Level Solar Inverter	Dr. Santosh Sonar		13-07-2023	September 2023-September 2026	CSIR	Ongoing