NATIONAL INSTITUTE OF TECHNOLOGY

KURUKSHETRA-136119

Sponsored Research Projects Ongoing

As on 15.10.2026

Sr. No.	Year	Department	Principal Investigator & Co-Principal Investigator	Title of Project	Funding Agency	Amount (Rs.) in lakh
1	2022-23	Chemistry	Dr. Amilan Jose D. PI Dr. Vikas D. Ghule Co-PI	Smartphone assisted portable chemical sensor for the detection to toxic Heavy Metals and Pesticides in water bodies of Haryana	DST Haryana	18.14
2	2022-23	Electronics & Comm. Engg.	Dr. Ghanapriya Singh PI, Dr. Pankaj Kumar Pal , Co-PI NIT Uttarakhand	IoT-based Multifunctional Scalable Real Time Farm Monitoring System for Smart Agriculture	IIT Ropar Hub (AWaDH)	16.93
3	2022-23	Physics	Dr. Yashashchandra Dwivedi	Development of High-yield multicolor persistent luminescent ink for safety signage	DST Haryana	7.75
4	2023-24	Chemistry	Dr. Amilan Jose D.	Near-infrared (NIR) responsive liposomal nono-system composed of organolanthanide complexes for the sensing and biomaging of gaseous signaling molecule hydrogen sulfide (H2 S)	CSIR	23.39
5	2023-24	Electrical Engg.	Dr. Lillie Dewan, Chief Investigaotr,(EED) Dr. Mahesh Pal,Co-Chief Investigators,(CED), Dr. Ritu Garg, (CoE) Dr. V.G. Durgarao Rayudu, (EED)	Capacity Building for Human Resource Development in Unmanned Aircraft System (Drone and related Technology)	Ministry of Electronics & Information Technology (MeitY) Through IITDM Kurnool or CDAC Hyderabad	200.00
6	2023-24	Electronics & Comm. Engg.	Dr. Shweta Meena, PI	Development of Layered Mxene Heterostructure for Hydrogen Storage: High Capacity Sustainable Material	SERB-DST	32.96
7	2023-24	Chemistry	Dr. Avijit Kumar Paul	Harnessing Metal-organic Frameworks for Sustainable Removal of Organic Dyes, Heavy Metals and Hazardous Anions from Industrial Wastewater	DST Haryana	20.34
8	2023-24	Mechanical Engg.	Dr. Rajesh Kumar, PI Dr. Lalit Thakur, Co-PI	Development of Computational Model for High-Velocity Oxygen-Fuel (HVOF) Thermal Spray System	SERB	28.27
9	2024-25	Computer Engg.	Dr. Mayanak Dave, PI Dr. Kuldeep Kumar, Co-PI	Information Security Education and Awareness (ISEA) Project Phase-III	Ministry of Electronics & Information Technology (MeitY)	201.06
10	2024-25	Electronics & Comm. Engg.	Dr. Karandeep Singh, PI Dr. Brahmjit Singh, Co-PIs Dr. Deepa Venkitesh, IIT Madras	Design and Development of optical frequency comb source for DWDM application	ISRO	46.16
11	2025-26	Computer Engg.	Dr. Santosh Kumar, PI Dr. Himansu Sekhar,Co-PI	Automation of Social Media Engagement and Reputation Management for Optimal Market Spread	Crushaders Tech. Solution, Bhubaneswar, Odisha	5.50

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12	2025-26	Electrical Engg.	Dr. Lillie Dewan,Chief Investigaotr (EED) Dr. V.G. Durgarao Rayudu, PI (EED) Dr. Monika Mittal, Co-PI (EED)	Crop Biomass Estimation Using Deep Learning with Drone Imageries	Ministry of Electronics & Information Technology (MeitY) Through IITDM Kurnool or CDAC Hyderabad	2.50
13	2025-26	Computer Engg.	Dr. Pratishtha Verma	SmileScope: Enhancing Early Autism Diagnosis Through Digital Behavioral Phenotyping	ANRF	31.00
14	2025-26	Mechanical Engg.	Dr. Chandrashekara M, PI	Increasing Power Output and Lifespan Panel with Natural Evaporative Cooling Using Earthenware Devices	ANRF	52.93
15	2025-26	Mechanical Engg.	Dr. V.S. Nagendra Reddy B	Computational Structural Study and analysis of a folding wind of canister-launched UAV with Glass fiber reinforcement	VU-DYNAMICS Pvt. Ltd. Kanpur	2.00
16	2025-26	Electronics & Comm. Engg.	Dr. TN. Sasamal	Neural Archiectures Study and implementation of object detection algorithm for low SNR target and its real time implementation in on-board FPGA hardware	ISRO (RAC-S)	1.58
17	2025-26	Electronics & Comm. Engg.	Dr. Poonam Jindal	Deep Learning-based algorithm for spoofing detection and classification for GNSS	ISRO (RAC-S)	1.53
18	2025-26	Electronics & Comm. Engg.	Dr. Brahmjit Singh	Classification of hazardous asteroids and space debris identification	ISRO (RAC-S)	1.62
19	2025-26	Electronics & Comm. Engg.	Dr. Pankaj Verma	Development of AI based approaches for early detection of retinal diseases in astronauts	ISRO (RAC-S)	1.62
20	2025-26	Mechanical Engg.	Dr. Rajeev Rathi	Development of AI based lean supply chain framework for workflow management of electro mechanical fabrication facility	ISRO (RAC-S)	1.62
21	2025-26	Business Administration	Dr. Mohammad Firoz, PI Dr. Priyanka Sihag, Co-PI Dr. Mohit Kumar Ojha, Co-PI	Green Finance and Industrial Sustainability: The Interplay between Carbon Emission Reduction, ESG Scores, and WACC	Poonam Drums & Containers Packaging Pvt. Ltd., Mumbai	6.60
22	2025-26	ANRF-PAIR Program NIT Kurukshetra- Spoke and IIT Indore -Hub	Dr. Chetti Prabhakar, PI	SAKSHAM - Scientific Advancements in Knowledge for Sustainabiligy Healthcare and Materials	ANRF-PAIR SAKSHAM	1,769.43
		Physics	Dr. Than Singh Saini, Lead Co-PI	Mid-IR Light Generation in Nonlinear Materials using Four Wave Mixing.		

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		Mechanical Engg.	Dr. Lalit Thakur, Lead Co-PI	Development and Optimization of Ultrasonic Assisted Stir Cast Rare Earth-Modified Magnesium Alloy Hybrid Composites for Aerospace and Automotive Applications.		
		Mechanical Engg.	Dr. Dinesh W Rathod , Lead Co-PI	Development of Residual stress-free welding consumables for dissimilar metal and ferritic steel welding.		
		Mechanical Engg.	Dr. Ravi Pratap Singh , Lead Co-PI	Sustainable Fabrication and Real-Time Monitoring of Miniaturized Lab-on-a-Chip Devices for Biomedical Applications.		
		Electronics & Comm. Engg.	Dr. Dharmendra S Yadav, Lead Co-PI	Development and Optimization of 2D Materials and Devices for Quantum Electronic Applications		
		Chemistry	Dr. Chetti Prabhakar , Lead Co-PI	Engineering of optoelectronic properties in low dimensional Systems: A combined experimental and computational study.		
		Physics	Dr. Awnish Kumar Tripathi , Lead Co-PI	Engineering of functional properties of nanomaterials for Photo sensing applications.		
		Humanities & Social Sciences	Dr. Geeta Sachdeva, , Lead Co-PI	Evaluating the Comprehensive Impacts of Jal Jeevan Mission on Rural Transformation: A Study of Haryana and Madhya Pradesh.		
		Mechanical Engg.	Dr. Rajeev Rathi , Lead Co-PI	Empirical investigation on the impact of Smart operational excellence initiatives on Green House Gases (GHGs) emission in Manufacturing sector and their mitigation actions.		
		Chemistry	Dr. M. Senthil , Lead Co-PI	Development of Catalyst Systems for the Hydrogen Economy		
		Electrical Engg.	Dr. Shashi Bhushan, Lead Co-PI	Zero-carbon Challenges with Secure Integration of 100% Renewable Energy Sources in Future Cities of India.		
		Electrical Engg.	Dr. Shivam , Lead Co-PI	Development of Micro grid Laboratory for Educational and Research Purposes.		
		Electrical Engg.	Dr. V.G. Durgarao Rayudu, Lead Co-PI	Crop Monitoring with UAVs/Drones		
		Civil Engg.	Prof. N.K Tiwari, , Lead Co-PI	Hydrodynamic Design and Development of Venturi- Flumes/ Weirs for improved Aeration in Waste Water Treatment.		
		Business Administration	Dr. Chandra Sekhar, , Lead Co-PI	Barriers and Enablers to Integrating Indigenous Knowledge into Climate Change Mitigation Policies.		
		Computer Applications	Dr. Munish Bhatia, Lead Co-PI	Next-Gen e-Waste Management: Quantum Computational Intelligence for a Cleaner Future.		

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		Chemistry	Dr. Ram Kumar Tittal, , Lead Co-PI	Green Synthesis of Medicinally Significant Organic Compounds.		
		Electrical Engg.	Dr. Kiran Kumar Jaladi, , Lead Co-PI	Design and Development of Grid Forming Control of Brushless DFIG during Grid Disturbances.		
		Chemistry	Dr. Amilan Jose, , Lead Co-PI	Carbon monoxide (CO) and Nitric oxide (NO) releasing light responsive soft materials for Antimicrobial Resistance (AMR) therapy.		
		Chemistry	Dr. Amilan Jose, , Lead Co-PI	Photo and Sono active soft materials exhibiting synergistic antimicrobial effect.		
		Computer Engg.	Dr. Kuldeep Kumar , Lead Co-PI	Derma Sight: An AI-Driven Mobile/Web App for Detection of Skin Diseases Caused Due to Antimicrobial Resistance.		
		Computer Engg.	Dr. Vikram Singh , Lead Co-PI	Deep-Test-All: A Genetic Algorithm-Based Framework for Robust Testing of Deep Learning Models in Antimicrobial Resistance Diagnostics and Therapeutics.		
		Computer Engg.	Dr. Lov Kumar , Lead Co-PI	Mental-Capsule: Predicting Stress Levels and Antimicrobial Resistance (AMR) Risk Using EEG Signals and Ambient Intelligence.		
		Electronics & Comm. Engg.	Dr. Ghanapriya Singh, , Lead Co-PI	Deep Learning Models for Antimicrobial Resistance Diagnostics from Raman Spectral Data.		
		Computer Engg.	Dr. Yogita , Lead Co-PI	Developing an Interpretable and Efficient Machine Learning Framework to Predict Antimicrobial Resistance towards Drugs.		
		Computer Applications	Dr. Sarika Jain, , Lead Co-PI	Semantic and Explainable AI Framework for Antimicrobial Resistance: Toward Smart Diagnostics and Therapeutic Knowledge Discovery.		
		Electronics & Comm. Engg.	Prof. R.K. Sharma, , Lead Co-PI	Development and Optimization of Two-Dimensional (2D) Material-Based Field-Effect Transistors for Antimicrobial Resistance Detection and Therapy Applications.		
		Mechanical Engg.	Dr. Ranjeet Kumar , Lead Co-PI	Development of Novel Refractory High Entropy Bio Implant Alloys Through Additive Manufacturing for Combating Antimicrobial		
23	2025-26	Mechanical Engg.	Dr. Manoj Kumar Sinha,PI Dr. Dilbagh Panchal, Co-PI	To Study and establish various performance safety requirement and parameters, test methods and acceptance criteria for Overlock Sewing Machine	Bureau of Indian Standards (BIS)	5.50

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24	2025-26	Electrical Engg.	Dr. Lillie Dewan, PI, EED Dr. Poonam Jindal, Co-PI, ECE Deptt.	Development of a Machine Learning-Based Intrusion Detection Algorithm for UAV-Assisted Agriculture	Ministry of Electronics & Information Technology (MeitY) Through IITDM Kurnool or CDAC Hyderabad (POC-4)	2.50
25	2025-26	Business Administration	Dr. Chandra Sekhar, PI, MBA Dr. Lov Kumar, Co-PI, Computer Engg. Deptt.	Smart Village CyberSafe Helpline: An ML and Generative AI-Powered Cybersecurity & Fraud Analysis System for Rural India	ICSSR	17.50
26	2025-26	Mechanical Engg.	Dr. Manoj Kumar Sinha,PI Dr. Dilbagh Panchal, Co-PI	Grinding Performance Improvement of High-Strength Materials Using Sustainable Grinding Techniques	Gravitaz Automation Pvt. Ltd. New Delhi	5.50
27	2025-26	Chemistry	Dr. Rambabu Chegondi, PI Scientist, CSIR-IICT, Hyderabad, Telangana Dr. Vikas D. Ghule, Co-PI NIT KKR	Cascade Annulations of π-Systems Enable by Copper-Catalyzed Enantioselective Strategies	ANRF	3.60
28	2026-27	Computer Applications	Dr. Munish Bhatia	Game-Theoretic Decision-Making in Digital Twin-Inspired Industry 4.0	ANRF	30.00
29	2026-27	Computer Engg.	Dr. Vishwas Rathi	AI-enabled medical image segmentation framewok for better clinical decision support	ANRF	31.92
30	2026-27	Mechanical Engg.	Dr. V.S. Nagendra Reddy B	Synthesis of Multi-Material Reinforced Contact-aided Compliant Mechanisms for Medical Applications,	ANRF	42.79
31	2026-27	Computer Engg.	Dr. Vaibhav Agarwal	Development of an Automated Emergency Evacuation System for Indoor Environments using IoT and ML	ANRF	38.07
32	2026-27	Computer Engg.	Dr. Vaibhav Agarwal	Design and implementation of a secure and scalable software defined network with federated learning-based intrusion detection	ISRO (RAC-S)	1.00
33	2026-27	Computer Engg.	Dr. Ankit Kumar Jain	Design and development of an AI-based email threat detection system	ISRO (RAC-S)	1.00
34	2026-27	Electronics & Comm. Engg.	Dr. Gaurav Verma	Performance evaluation of satellite battery systems under thermal stress conditions	ISRO (RAC-S)	1.00
35	2026-27	Electronics & Comm. Engg.	Dr. Gaurav Verma	Impact of radiation and temperature on the performance degradation of space solar cells	ISRO (RAC-S)	1.00
36	2026-27	Electronics & Comm. Engg.	Dr. T.N. Sasamal	Fault tolerant DDR4 memory controller for SEU and SEFI mitigation in space based digital system	ISRO (RAC-S)	1.00
37	2026-27	Electronics & Comm. Engg.	Dr. T.N. Sasamal	Low power AXI bus integrated RISE-V Processor with eFPGA for space applications	ISRO (RAC-S)	1.00

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38	2026-27	Electronics & Comm. Engg.	Dr. Gaurav Prateek Sharma	Development of a TSN based fully deterministic ethernet protocol for avionics multi -computer architectures	ISRO (RAC-S)	1.00
39	2026-27	Electronics & Comm. Engg.	Dr. Ghanapriya Singh	AI based emotion and stress classification from wearable physiological signals for astronaut health monitoring	ISRO (RAC-S)	1.00
40	2026-27	Mechanical Engg.	Dr. Dinesh W Rathod , PI Dr. Vikas Kumar, Co-PI	Residual Stresses and Performance Evaluation of Thick Section Welds of Ti6AI4V Alloy for Aviation Applications	AR&BD, DRDO	44.43
41	2026-27	Mechanical Engg.	Dr. Lalit Thakur	Rare-Earth Modified Ultrasonic and Squeeze Assisted Stir Casted Nano-Particulate Reinforced Magnesium Matrix Hybrid Composite for Automobiles	DST (NPNST)	33.71