



# Institute of Infrastructure, Technology, Research and Management. Ahmedabad.

Ph.D. Admission for Autumn Semester (2024-25)

Potential List of Supervisors and Research Area

## DEPARTMENT OF BASIC SCIENCES

Sr. No.	Name of Faculty Member	Research Area	Discipline
1	Dr. Prakash Dabhi	Banach Algebras and Harmonic Analysis on weighted (semi)groups	Mathematics
2	Dr. Sudhakar Chaudhary	Numerical Methods for Inverse Problems in Partial Differential Equations	Mathematics
3	Dr. Mohit Kumar Sharma	Multicriteria Decision Making, Fuzzy set theory & Fuzzy Logic with real-life applications.	Mathematics
4	Dr. Manoj Choudhuri	Number Theory, Dynamical Systems, Lie Groups & Topological Groups.	Mathematics
5	Dr. Brajesh Tiwari	Layered Materials, Perovskites in energy applications Strongly Correlated Materials	Physics
6	Dr. Sourav Das	Electrocatalysis and Molecular Magnetism	Chemistry
7	Dr. Mahuya Bandyopadhyay	Material Chemistry, Nano Materials, Heterogeneous Catalysis, CO <sub>2</sub> utilization, Wastewater Treatment, Machine learning	Chemistry

**DEPARTMENT OF MECHANICAL AND AERO-SPACE ENGINEERING**

<b>Sr. No.</b>	<b>Name of Faculty Member</b>	<b>Research Area</b>
1	Dr. Ajit Kumar Parwani	CFD, Heat Transfer, Climate change, IC Engines, Combustion
2	Dr. P L. Ramkumar	Material processing & characterization, Polymer & composites, CAD/CAM, Joining process
3	Dr. Kumar Abhishek	Modeling and Optimization of Production Processes, Traditional and Non-traditional Machining of Difficult-to-Cut materials, Composite Machining, Additive Manufacturing
4	Dr. Dileep Kumar Gupta	Refrigeration and Cold Chain, Climate Change, Indoor Air Quality (IAQ), CO <sub>2</sub> - trans-critical system and Eco-friendly Refrigerants, Thermal Engineering with Eco-Friendly and Energy Efficiency Systems
5	Dr. Sumit Tripathi	Experimental Fluid Dynamics, CFD, Rheology, Non-Newtonian Fluids, Fluid Machinery, Interface adsorption
6	Dr. Pramod Bhingole	Material processing & characterization, All composite materials, Processing of materials
7	Dr. Mithilesh Kumar Dikshit	Manufacturing, Metal cutting, Additive manufacturing, Molecular dynamics, Nanocomposites, Design for material and characterization, Sustainable materials, Polymer technology
8	Dr. Navneet Khanna	Additive Manufacturing, Sustainable Manufacturing, Smart Manufacturing, Subtractive Manufacturing
9	Dr. Ganesh Iyer	1. Interfacial problems using Molecular Dynamics 2. Medical device innovation
10	Dr. Kamlesh Joshi	Precision Machining, Additive Manufacturing, Non-conventional Machining, Machining of Hard to cut Materials
11	Dr. Saurabh Kumar Yadav	Fracture Mechanics, Vibration, Physics Informed Neural Network Modelling
12	Dr. Ajit Kumar	Drone Technology, Flight Mechanics and Control, Machine learning based modelling and Identification, Industrial IoT, Smart Instrumentation, Industry 4.0
13	Dr. Jagat Jyoti Rath	Machine Learning, Artificial Intelligence, Autonomous Systems, Robotics, Bioinformatics, IOT and Industrial Automation

**DEPARTMENT OF ELECTRICAL AND COMPUTER SCIENCE ENGINEERING**

<b>Sr. No.</b>	<b>Name of Faculty Member</b>	<b>Research Area</b>
1.	Prof. Dipankar Deb	Adaptive Control of Aerial Robotic Systems, Guidance, Navigation and Control of Fixed-wing, Rotary-wing and Hybrid Vehicles for Defence applications, ML and AI for Drones, E-mobility, and Renewable Energy Systems: Solar, Wind, Biomass, Microbial Fuel Cells, and Battery Energy Storage Systems
2.	Prof. Axaykumar Mehta	Sliding Mode Control, Dynamics and Control of Multi-Agent System, Guidance and Control of Autonomous Vehicles, Drone Swarm.
3.	Dr. Abhishek Rawat	Drones, Navigation and Peripheral Security
4.	Dr. Priyesh Chauhan	Microgrids, Battery Storage, Distributed Energy Resources, Renewable Energy Conversion, Ship Power Systems
5.	Dr. Krupa Shah	Condition Monitoring/Health Indexing, Fault Diagnostics of Electrical Machines, Applications of AI/ML in Electrical System Protection, Motors, and Controls for space & Transport Applications.
6.	Dr. Kshitij Bhargava	Thin Film Photovoltaics, VLSI Design, Nano-Optoelectronics, Thin Film Transistors, Bio-sensors.
7.	Dr. Raghavendra Bhalerao	Image Processing, Bio-Medical Image Processing, AI ML based solution for Image segmentation, classification. Biomedical instrumentation
8.	Dr. Dharmendra Sadhwani	Performance analysis of wireless communication systems, Use of Active Reconfigurable Intelligent Surfaces in Communication Theory, Characterization of Fading Channels
9.	Dr. K. Manjunath	Power regulation and control of VSC interfaced renewable energy sources
10.	Dr. Manish Sharma	AI,ML,IoT based Automated Systems for HealthCare/Agriculture/Defence Applications
11.	Dr. Ram Narayan Yadav	Edge/Fog and Cloud Computing: Optimization and Design Efficient Algorithms, Resources Allocations on the Internet of Things and Mobile Networks, Applications of AI/ML in real-time applications such as Emergency Responses and Smart Cities.
12.	Dr. Prasun Tripathi	Medical Image Analysis, Deep Learning, Healthcare Data Analysis, Interpretable AI
13.	Ravi Bhandari	Mobile and Pervasive Systems, Intelligent Transportation Systems, Sensor Data Analytics using AI

### DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Sr. No.	Name of Faculty Member	Research Area	Discipline
1	Dr. Meera Vasani	Eco-Criticism, Indigenous Literature, Diaspora Studies, Cultural Studies	English
2	Dr. Watitula Longkumer	Indigenous Literature, Gender Studies, Culinary Literature, Medical Humanities, Digital Humanities	English
3	Dr. Pravin Jadhav	International Business, Development Economics, Agriculture Economics, Infrastructure Planning and Management	Economics
4	Dr. Shukkoor T.	Health, Wellness & Society, Development and Social Change, Technology and Society, Infrastructure and society	Sociology
5	Dr. Saurabh Sinha	Organisational Behaviour, Human Resource Management, Technological change and Human Behaviour, Green banking Practices, and Organisational Climate	Psychology

### DEPARTMENT OF CIVIL ENGINEERING

Sr. No.	Name of Faculty Member	Research Area
1	Dr. Himanshu Sharma	Water Resource Engineering
2	Dr. Manoj Langhi	Water Resource Engineering
3	Dr. Jai Devi Jeyaraman	Environmental Engineering
4	Dr. Yogesh U. Shah	Pavement Materials
5	Dr. Anand Mehta	Remote Sensing Data Analysis
6	Dr. Mahesh Mungule	Structural Engineering
7	Dr. Mamta Sharma	Structural Engineering
8	Dr. Jiten Shah	Transportation Engineering
9	Dr. Trudeep Dave	Geotechnical Engineering
10	Dr. Veerabhadra Rotte	Geotechnical Engineering
11	Dr. Rohan Kar	Water Resource Engineering