



DEPARTMENT OF ELECTRICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY KANPUR

PhD Admission 2025-26 Semester-II

Department of Electrical Engineering, IIT Kanpur invites applications for admission to the PhD programme from eligible candidates

SPECIALIZATIONS

-  Control and Automation (CA)
-  Microelectronics and VLSI (MVLSI)
-  RF and Microwave (RF)
-  Signal Processing, Communication and Networks (SPCOM)
-  Optoelectronics and Optical Communication (OPTEC)
-  Power Engineering (PE)

WHO CAN APPLY?

- Master's degree in engineering
OR
- BTech/BS (4 years) degree in relevant discipline with
 - minimum 7.5 CPI or 75% marks
 - valid GATE score for graduates from non-CFTIs (Waiver of valid GATE score for graduates from CFTIs)OR
- MSc degree in an allied area with
 - minimum 6.5 CPI or 65% marks
 - first division in Bachelor's degree
 - JRF/valid GATE score (Waiver of valid JRF/GATE score for graduates with a minimum CPI of 8 from CFTIs.)

(Eligible candidates in BTech/MTech final semester can also apply)

HIGHLIGHTS

- Institute assistantship upto INR 42,000 per month
- Eligible for applying for Visvesvaraya fellowship and PMRF fellowship
- Travel support > Rs 2.5 Lakhs for national and international conferences
- Be part of cutting edge research in exciting areas
- Opportunities to work with international universities/ exchange programs
- Startup/incubation via Student Entrepreneurship Policy

IMPORTANT DATES



Application submission
November 10, 2025 (Monday), 02:00 PM

IMPORTANT LINKS

PG Portal: www.iitk.ac.in/doaa/pgadmission

EE Webpage: www.iitk.ac.in/ee

EE Admission: www.iitk.ac.in/ee/admission



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DEPARTMENT OF ELECTRICAL ENGINEERING

SIGNAL PROCESSING, COMMUNICATIONS & NETWORKS

Signal Processing, Communications, and Networks Group (SPCOM) at IITK's Electrical Engineering Department focuses on cutting edge research problems in the area of signal processing, machine learning, communications, bio-medical signal processing, wireless technologies and networks. It has state-of-art research facilities including a speech processing lab with multi-channel audiovisual testbeds, a digital signal processing lab, computer vision labs with microscopes, chroma keying and cameras, and wireless communications labs with the 5G testbed lab.

SIGNAL PROCESSING, COMMUNICATIONS & NETWORKS



Prof. V. Arora



Prof. A. Banerjee



Prof. Nikunj Arunkumar Bhagat



Prof. R. Budhiraja



Prof. A. K. Chaturvedi



Prof. Abhishek K Gupta



Prof. Rajesh M. Hegde



Prof. K. Vasudevan



Prof. Aditya K Jagannatham



Prof. Koteswar Rao Jeripothula



Prof. Washim Uddin Mondal



Prof. Naren Naik



Prof. S. S. Peruru



Prof. Ketan Rajawat



Prof. Tushar Sandhan



Prof. Y. N. Singh



Prof. Nishchal K. Verma

RESEARCH AREAS



- Communication and Information Theory
- 5G and 6G Wireless Technologies
- UAVs: Swarms, Trajectory design and
- Peer-to-peer Networks
- Computer Vision
- Computational Cardiology, Molecular Communications
- AI/ML for Audio Processing, speech recognitions
- Neural & Bio-signal processing

AWARDS & RECOGNITIONS

- IEEE SPS scholarship, 2023, 2024
- QIF India, 2020, 2022, 2024, 2025
- CNR Rao faculty award for indigenous 5G network design
- TCS Research Fellowship, 2023
- INAE Young Associate Award, 2024
- IEI Young Engineer Award, 2022, 2023
- IEEE SPS UP Chapter Academic Leadership Award, 2023
- Multi-institutional project on intelligent spectrum innovation

FACILITIES



- Multimedia Wireless Networks Lab
- Perception and Intelligence Lab
- 6G OTFS Technology Platforms
- 6G ISAC Models and Simulations
- CoE on AI in Healthcare
- Advance Imaging and Computing Facility
- Intelligent Networks Lab
- Neural Engineering and Motor Rehabilitation Lab



COLLABORATIONS





DEPARTMENT OF ELECTRICAL ENGINEERING

CONTROL AND AUTOMATION

Control and Automation facilities at IITK's Electrical Engineering Department include a Robotics Lab with 7-DoF manipulators, mobile robots, and visual systems for autonomous navigation and multi-robot control. The Control Systems Lab supports microprocessor-based PMDC motor control, multimotor coordination, networked control, and electric vehicle control. The Distributed Systems and Control (DiSCo) Lab offers quadcopters, UAVs, a flight simulator, 3D printers (PLA/PETG), and an in-house DC microgrid setup. The Distributed Control and Decision (DCoDe) Laboratory explores applications of swarm intelligence in the control of dynamical systems and also offers a hardware testbed to conduct multi-robot swarm experiments. The Dynamics and Control Lab explores control theory in systems biology, microrobotics, and power systems, with molecular biology equipments, micro/nano robots, and simulation platforms.

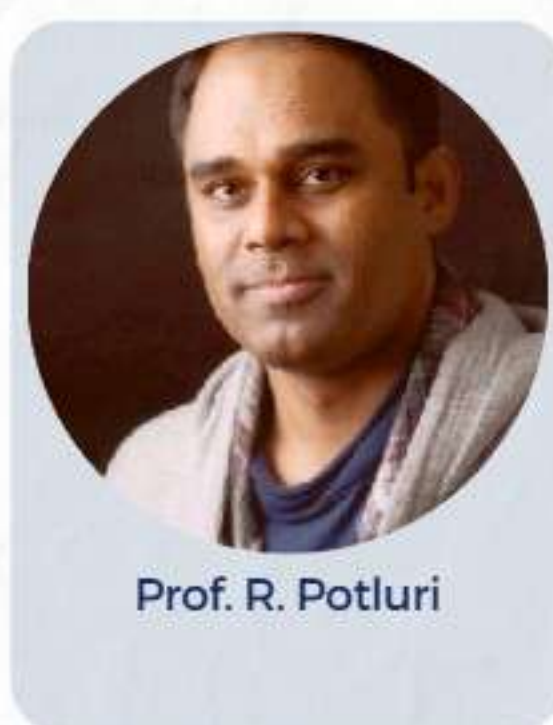
CONTROL AND AUTOMATION



Prof. L. Behera



Prof. Abhilash Patel



Prof. R. Potluri



Prof. Soumya Ranjan Sahoo



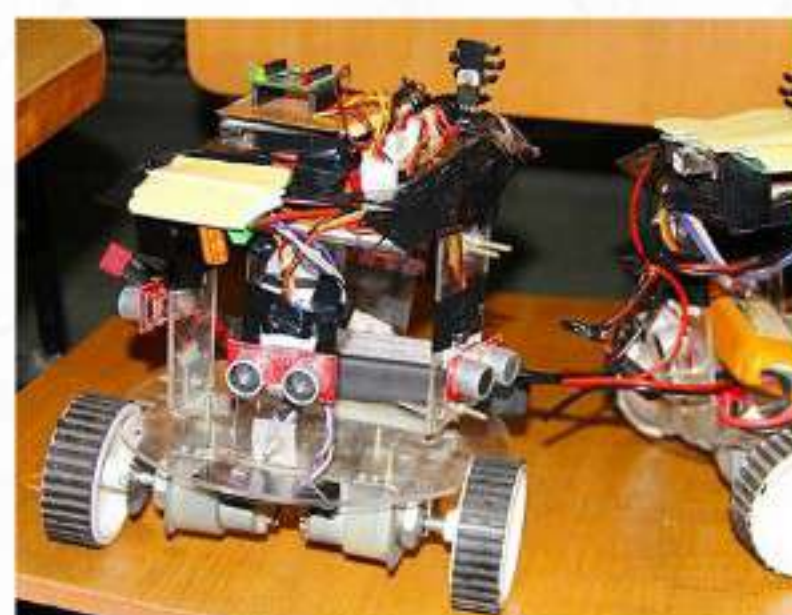
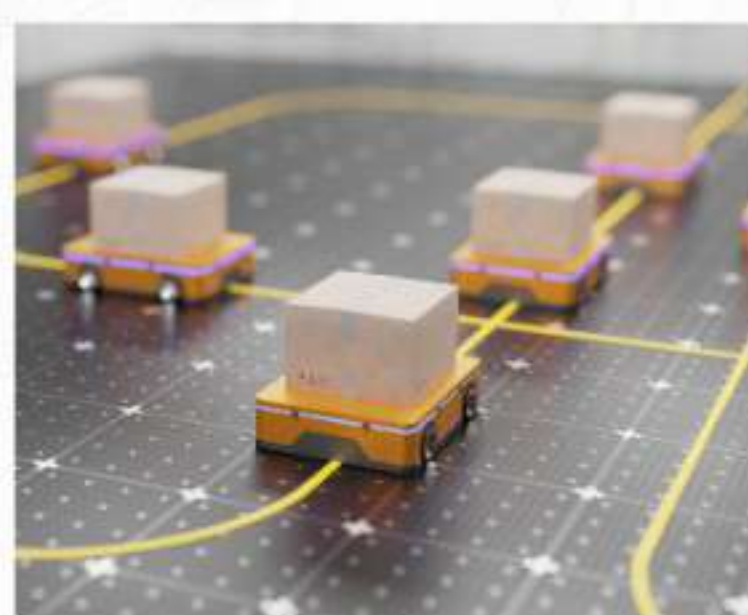
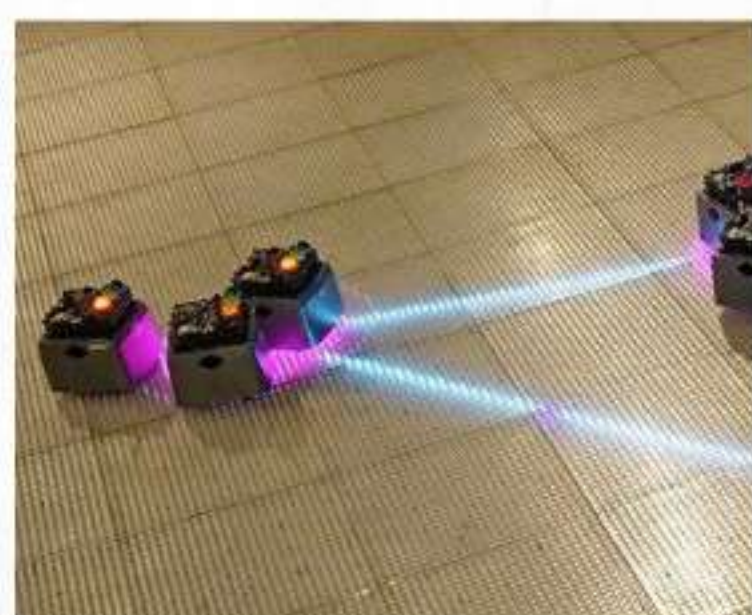
Prof. Tushar Sandhan



Prof. Twinkle Tripathy



Prof. Nishchal K. Verma



RESEARCH AREAS



- Control of Dynamical Systems
- Robotics
- Networked Control and Electric Vehicle Control
- Electronic and Virtual Instrumentation
- Neural Networks and their applications
- Fuzzy Logic
- Missile guidance
- Formation control problems in multi-agent systems
- Opinion formation in social networks
- Controllability in large-scale networks

AWARDS & RECOGNITIONS



- Best Poster Award: National Youth Conference on Indian Knowledge Systems, G-20 University Connect, 2023
- AWSAR award by DST
- POSOCO Power Systems Award, 2023
- INAE Young Associate, 2024
- Best Woman Professional, IEEE India Council & Hope Foundation, 2025

FACILITIES



- Networked Control Systems Laboratory
- Intelligent Systems Laboratory
- Intelligent Informatics and Automation Laboratory
- Distributed Systems and Control Lab
- Distributed Control & Decision Lab
- Dynamics and Control Lab

COLLABORATIONS



Technology Innovation Hub of IIT Delhi





DEPARTMENT OF ELECTRICAL ENGINEERING

OPTOELECTRONICS AND OPTICAL COMMUNICATION

Photonics facilities at IITK's Electrical Engineering Department include a Fiber Optics Lab with a spectrum analyzer (600–2000 nm), a clean room for optoelectronic fabrication, and a photonic measurement lab. The Advanced Fiber Optics Lab supports 40–100G optical links with WDM components and high-bandwidth sampling oscilloscopes. The Networks Lab provides a testbed for network simulations, WiFi, and QoS. The Wireless Communications Lab uses NI USRPs, and the Quantum Photonics Lab enables nanophotonic testing with a high-resolution spectrometer, CCD, and FDTD simulation.

OPTOELECTRONICS AND OPTICAL COMMUNICATION



Prof. Rajshekhar Gannavarpur



Prof. Shilpi Gupta



Prof. Pradeep Kumar K.



Prof. Naren Naik



Prof. Debdatta Ray



Prof. Rituraj



Prof. Y. N. Singh

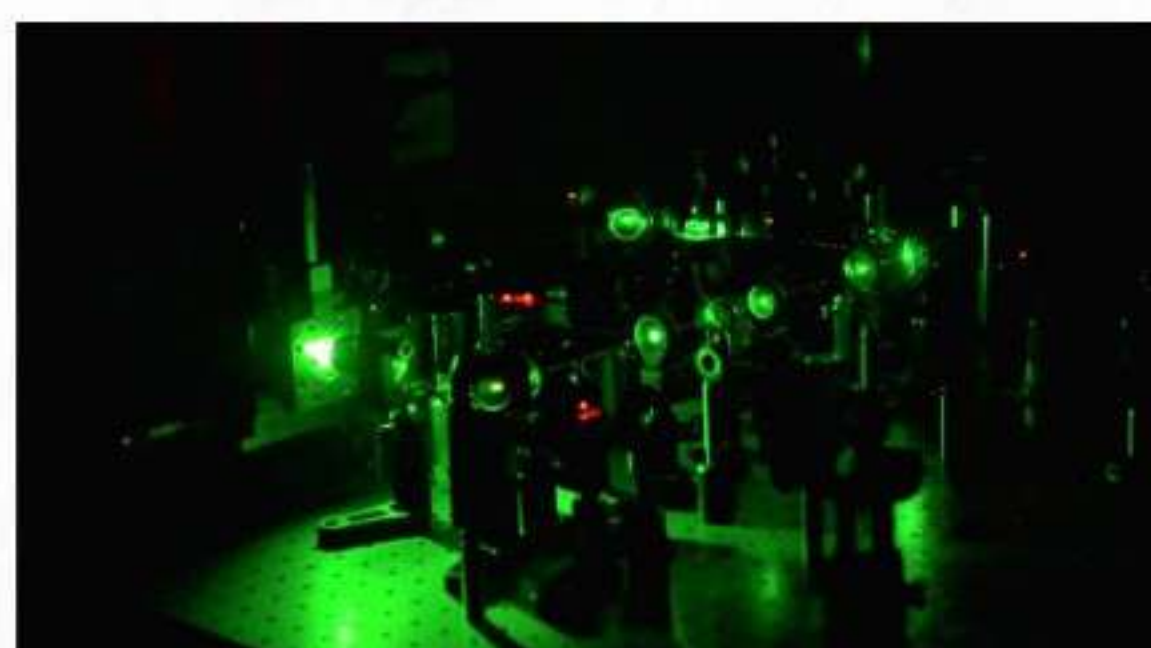


RESEARCH AREAS

- Biomedical Optics, Biosensors
- Fiber-Optic Communication
- Nanophotonics
- Quantum Cryptography
- Optical networking and switching systems
- Remote Sensing and Battlefield surveillance
- Nanofabrication
- Optical metasurfaces and metamaterials

AWARDS & RECOGNITIONS

- DST INSPIRE Faculty Fellowship
- SERB Early Career Research Award
- IEEE R10 award for major educational innovation, 2014
- IETE M.N. Saha memorial award for best application oriented paper



FACILITIES

- Tomography Imaging Lab
- Advance Fibre-Optics Lab
- Communication Networks lab
- Photonics Devices Lab
- Optoelectronics & Nanofabrication Lab
- Optical Metrology and Imaging Lab

COLLABORATIONS





DEPARTMENT OF ELECTRICAL ENGINEERING

POWER ENGINEERING

Power Engineering facilities at IITK's Electrical Engineering Department include a modern high voltage lab with AC, DC, and impulse test facilities, partial discharge monitoring, and an outdoor insulation test bay. The Power Electronics and Static Control Lab focuses on solid-state control of electric drives. The Power Systems Simulation Lab is equipped with Real-Time Digital Simulation (RTDS), Opal-RT, and other advanced tools.

POWER ENGINEERING



Prof. Swathi Battula



Prof. Saikat Chakrabarti



Prof. S. P. Das



Prof. Nandini Gupta



Prof. Piyush Kant



Prof. Utsab Kundu



Prof. Ebin Cherian Mathew



Prof. Nishchal K. Verma



Prof. Abheejeet Mohapatra



Prof. Soumya Ranjan Sahoo



Prof. P. Sensarma



Prof. Suvendu Samanta



Prof. Ankush Sharma



Prof. S. N. Singh



Prof. Alok Ranjan Verma



Prof. Gururaj Mirle Vishwanath



RESEARCH AREAS



- Wireless Power Transfer
- EV Charging Systems
- Power Management Circuits
- EMI/EMC in Power Electronics
- Transactive Energy System Design
- Smart Grid and Synchrophasors
- Active Power Filters

AWARDS & RECOGNITIONS



- POSOCO Power System Award
- Young Engineer Award
- IEEE fellow
- INAE fellow
- PMRF fellowship
- Grid India Power System Award
- Karandikar Best PhD Thesis Award

FACILITIES



- High Voltage Laboratory
- Power Management Laboratory
- NaMPET Laboratory
- Power System Simulation and Research Laboratory
- Static Controller Laboratory
- Smart Grid IoT Lab
- MEIPES Lab

COLLABORATIONS





DEPARTMENT OF ELECTRICAL ENGINEERING

RF AND MICROWAVE

RF and Microwaves Lab at IITK's Electrical Engineering Department is equipped with advanced tools, including network analyzers (up to 110 GHz), spectrum analyzers, signal generators, power meters, and a noise figure meter. It features a shielded anechoic chamber for antenna and RCS measurements, a microwave imaging and material testing facility covering a wide frequency range, a dielectric probe kit, and calibration kits for rectangular waveguide and coaxial frequencies across various bands.

RF AND MICROWAVE



Prof. Jaleel Akhtar



Prof. Raghvendra Kumar Chaudhary



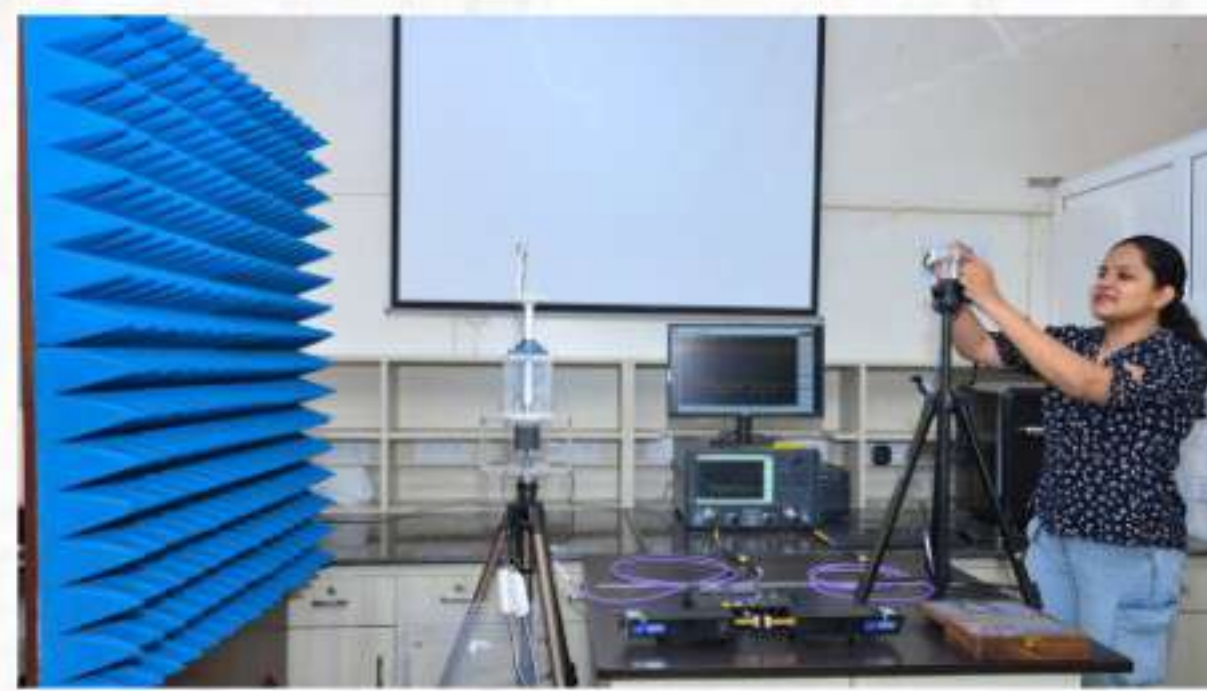
Prof. A. R. Harish



Prof. Nagaditya Poluri



Prof. Kumar Vaibhav Srivastava



RESEARCH AREAS



- Millimeter & Microwave circuits
- RFID & Computational Electromagnetics
- Microwave Antenna
- Monolithic Microwave Integrated Circuit
- Microwave Filters
- Microwave Absorbers using Functional Materials
- Microwave Imaging and Nondestructive Testing

AWARDS & RECOGNITIONS



- Best Presentation Award, ICMENS, 2024
- IEEE MTT-S Fellowship Award, 2023
- Best Paper Award, IEEE MAPCON, 2023
- Best Female Student Paper Award, IEEE MAPCON, 2022
- Motohisa Kanda Award, 2022
- IEEE AP-S Doctoral Fellowship Award, 2021
- Best Female Student Paper Award: IMaRC, 2021
- AP-S Mojgan Daneshmand Grant, 2024

FACILITIES



- Microwave Circuits Lab
- Microwave Imaging and Material Testing (MIMT) Lab
- Microwave Metamaterial Lab
- mmWave Research Lab
- Anechoic Chamber Facility
- Antenna Lab
- Radio Frequency Identification (RFID) Lab
- EMI/EMC and Electrical Safety Test Facility

COLLABORATIONS



MHRD



NYU

TANDON



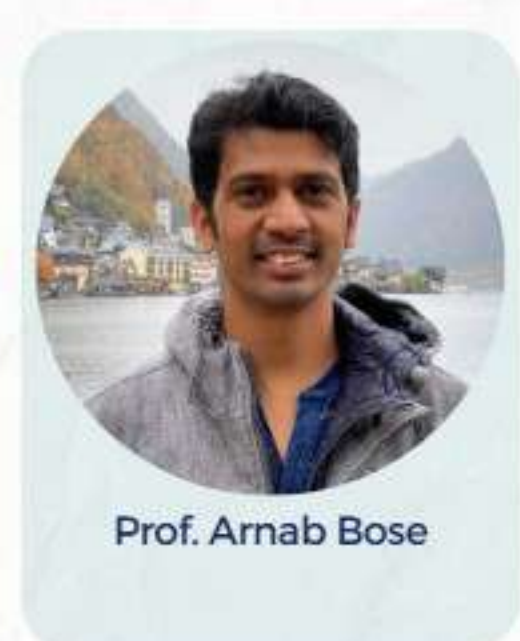


DEPARTMENT OF ELECTRICAL ENGINEERING

MICROELECTRONICS AND VLSI

Semiconductor design and manufacturing are complex and globalized processes, with VLSI & Embedded Design engineers working around the clock to bring new products to market. VLSI stands as a remarkable testament to human ingenuity and its profound impact in our daily lives. One of the major factors leading to the remarkable development in the VLSI sector is the establishment of higher education institutions imparting knowledge across the country's different states. Investing in education will significantly pay off in the future. The department has state-of-the-art research labs and support facilities in Microelectronics and VLSI. The faculty's research covers a wide spectrum, from fundamental studies to sponsored and consultancy projects, encompassing from circuit to device level, fostering interdisciplinary collaboration. Our research students are in high demand from top employers, who are eager to hire them for their skills and knowledge.

MICROELECTRONICS AND VLSI



Prof. Arnab Bose



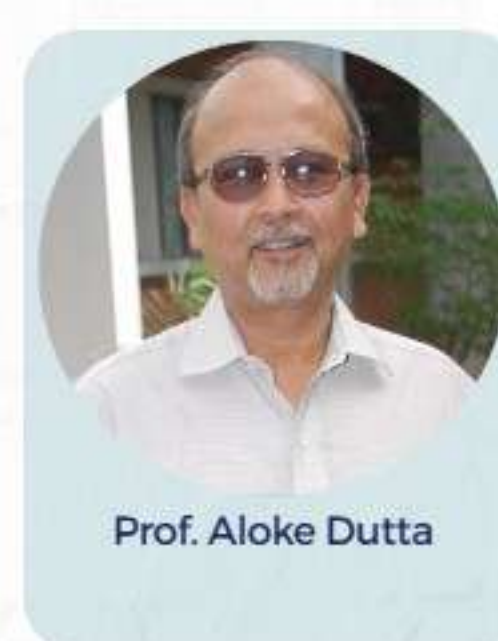
Prof. Yogesh S. Chauhan



Prof. Chithra



Prof. Rik Dey



Prof. Alope Dutta



Prof. S. S. K. Iyer



Prof. Nagarjuna Nallam



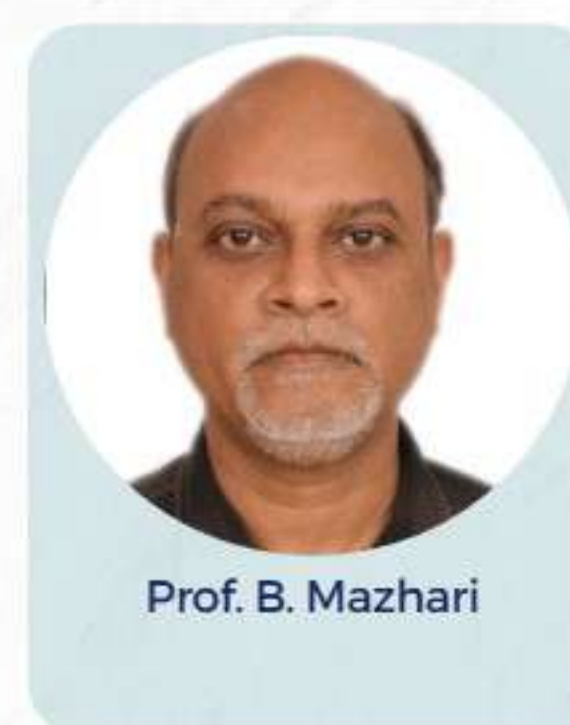
Prof. Mohit D. Ganeriwala



Prof. R. S. Ashwin Kumar



Prof. Avinash Lahgere



Prof. B. Mazhari



Prof. Imon Mondal



Prof. Rituraj



Prof. Shubham Sahay



Prof. Amit Verma

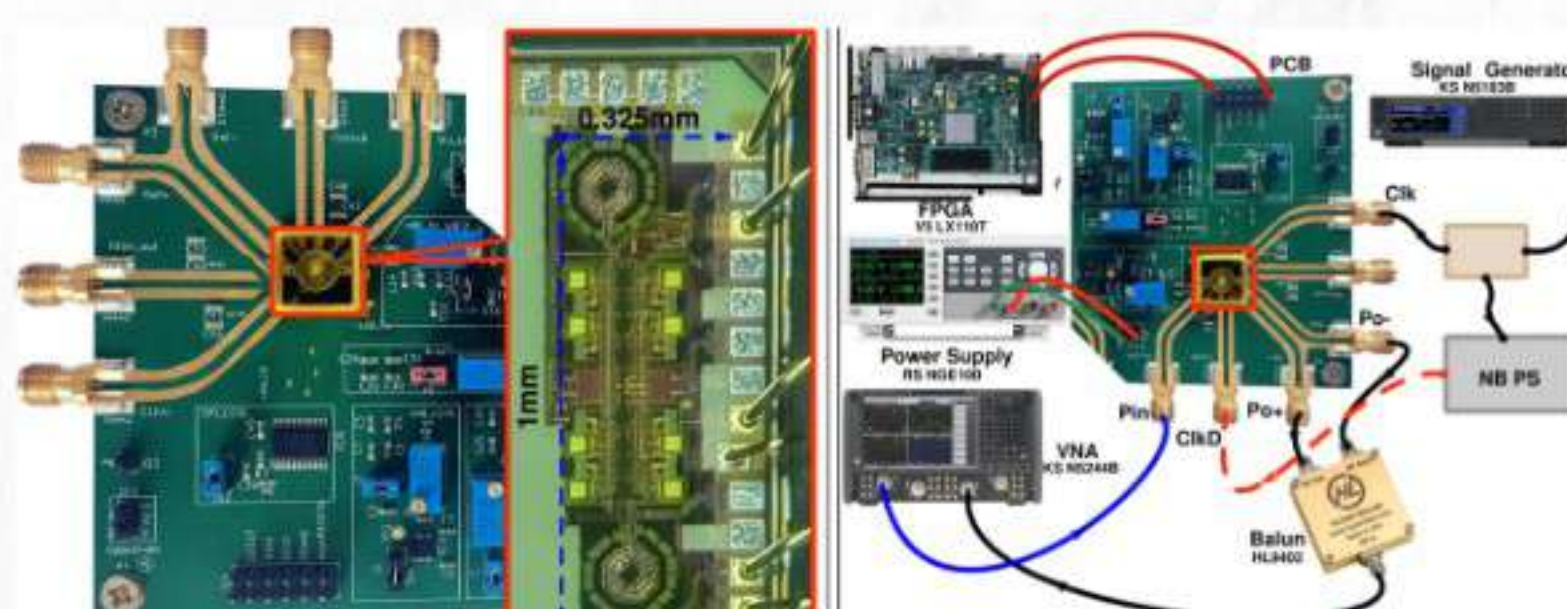
RESEARCH AREAS



- Device Design & Fabrication
- Nanophotonics & Spintronics
- Hardware Security
- Neuromorphic Computing
- Thin Film Photovoltaics
- Organic & Flexible Electronics
- Semiconductor Device Design and Fabrication
- Device Compact Modelling
- Analog and Mixed-signal IC Design
- RF and mm-Wave Integrated Circuits
- Nanophotonics & Spintronics

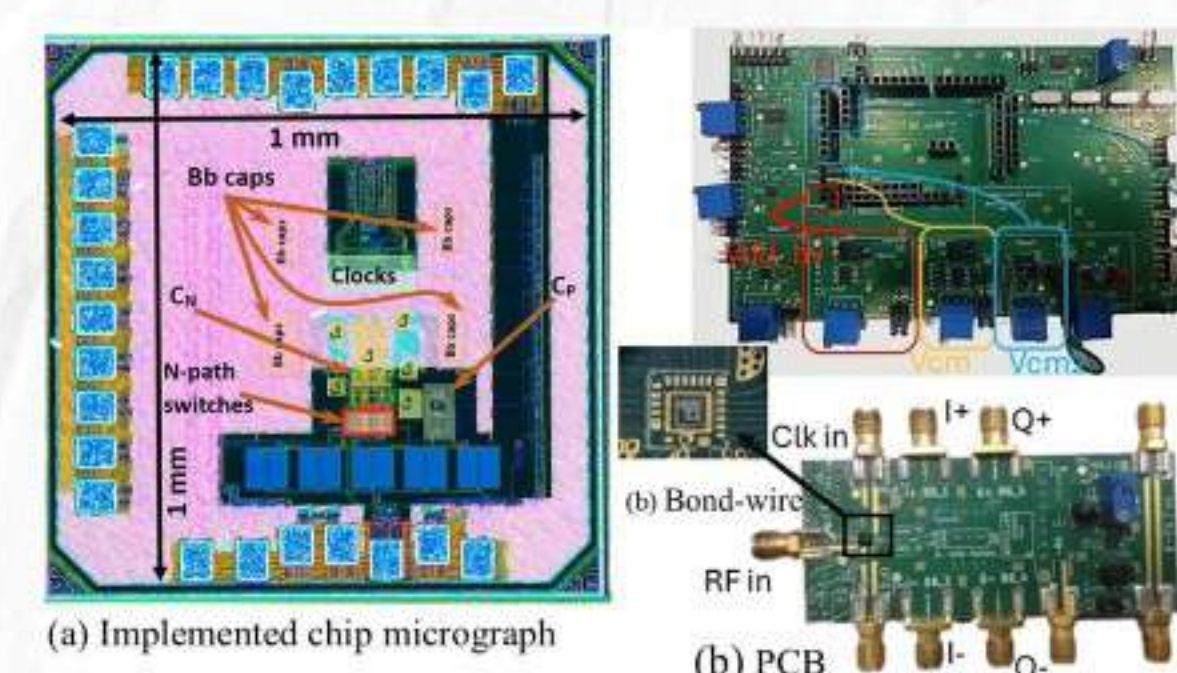
AWARDS & ALUMNI ACHIEVEMENTS

- IEEE Fellow and INAE Fellow
- Best Student Paper Award, Joint Conference on Electrostatics, 2022
- Best Poster Award, IEEE EDTM, 2023
- Qualcomm Innovation Fellowship (QIF), 2020, 2025
- IEEE Circuits and Systems society travel grant, 2025
- Best paper award, ISCAS, 2024



FACILITIES

- Semiconductor Device Fabrication
- VLSI Electronic Design Automation
- Organic Electronics Processing and Characterization Laboratory
- Thin film deposition, processing, and characterization
- Analog and RF IC design and Characterization facilities
- RF Device Characterization Laboratory



COLLABORATIONS





Spot

PhD Admission 2026-27 Semester-I

**for CFTI BTech, BS (4 years), MTech
& MSR students**

Department of Electrical Engineering, IIT Kanpur invites applications for spot admissions to the PhD programme from current BTech/BS (4 years)/MTech/MSR Students from CFTIs (Centrally Funded Technical Institutes)

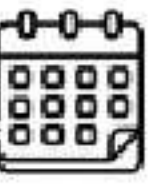
Specializations

-  Control and Automation (CA)
-  Microelectronics and VLSI (MVLSI)
-  RF and Microwave (RF)
-  Signal Processing, Communication and Networks (SPCOM)
-  Optoelectronics and Optical Communication (OPTEC)
-  Power Engineering (PE)

Who can apply?

- Fourth year BTech/BS (4 years) students in Electronics/Electrical department from a CFTI (including IITs/IISc /NITs/IIITs /IISERs) with CPI > 7.5.
- Second year MTech/MSR students in Electronics/ Electrical department from a CFTI (including IITs/IISc/NITs/IIITs/ IISERs) with CPI > 8.0.

Important Dates

 Online Interaction: 23 August, 2025
Spot interviews: Sep. - Nov., 2025

Highlights

- Spot PhD admission with on-campus interview
- No GATE score required
- Institute assistantship up to INR 42,000 per month
- Eligible for applying for Visvesvaraya and upcoming PMRF 2.0 fellowship
- Travel support ~ Rs 5 Lakhs for national and international conferences
- Be a part of cutting-edge research in exciting areas
- Opportunities to work with international universities/exchange programs
- Startup/incubation via Student Entrepreneurship Policy

Important Links

[IITK/EE webpage:](https://www.iitk.ac.in/ee/)

<https://www.iitk.ac.in/ee/>
Admission webpage

<https://www.iitk.ac.in/ee/admissionspot>

