भारतीय प्रौद्योगिकी संस्थान कानपुर
Indian Institute of Technology Kanpur

निदेशक प्रतिवेदन

Director's Report

58वाँ दीक्षान्त समारोह
23 जून 2025

58th CONVOCATION
23 JUNE 2025

DIRECTOR'S REPORT

Honorable Shri Sanjay Malhotra, Governor of the RBI, Honorable Chairperson, Board of Governors of the Indian Institute of Technology Kanpur, Members of the Board of Governors, Members of the Academic Senate, all graduating students and their family members, and the members of faculty, alumni, staff and student community: I heartily welcome you all to the fifty-eighth convocation of the Indian Institute of Technology Kanpur. I would also like to congratulate the graduating students and their families on this joyous occasion.

ACADEMIC ACTIVITIES

The Institute is committed to maintain its high-quality teaching, well-respected academic programs, highly regarded faculty, advanced research facilities, and centers. It continues to nurture bright minds with intellectual skills, courage, and integrity to take on the biggest challenges faced by humankind. I am honoured to share a glimpse of our achievements and activities for this year.

I am happy to inform you that the total number of PhD degrees awarded at this Convocation is 302. In our efforts to encourage outstanding scholars, the Senate has approved the provision for an additional Master's degree to be awarded along with a PhD, subject to fulfilling a defined set of academic requirements. I am

glad to inform you that 29 students are graduating in this Convocation's seventh batch of MTech and PhD Joint Degrees. Additionally, 2 students are graduating with a joint MDes and PhD Degree, and 2 students are graduating with a joint MSR and PhD Degree in this Convocation. I am also happy to convey that the third batch of 361 students of the e-Master's program will be conferred a degree today in this 58th Convocation. In all, a total of 2848 degrees are being awarded at this Convocation with the following details:

GRADUATION DATA

Degree	Number of Recipients
PhD	269
MTech-PhD (Joint Degree)	29
MDes-PhD (Joint Degree)	2
MSR-PhD (Joint degree)	2
MTech	480
MBA	145
MDes	20
MS (by Research)	83
PGPEX-VLFM	40
MSc (2-yr)	194
e-Masters	361

Double Major	26
Dual Degree	93
MS-PD (MS part of the Dual Degree)	26
BTech	874
BS	204
Total	**2848**

In keeping with the flexibility that the IIT Kanpur's academic Programme is known for, 192 students are graduating with one Minor, whereas 90 students are graduating with two Minors and 30 graduating students are graduating with three Minors. You will be delighted to know that 3 graduating students are graduating with four Minors, 1 student is graduating with five Minors. In all, 479 Minors are being awarded. In addition, by spending one additional year at the Institute, 93 undergraduate students are graduating with a Master's degree and their Bachelor's while 26 of our undergraduate students are graduating with a Second Major. 33 of our postgraduate students are graduating with an additional Master's and PhD degree by earning extra credits. Out of 1197 students of the Bachelor's and Bachelor's-Master's dual degree programmes who are being awarded the degree today, 239 students are graduating with a Distinction (CPI of 8.5 and above). To keep pace with the evolving

knowledge in science, technology, and other areas, 57 new undergraduate courses and 144 new postgraduate courses were approved from June 1, 2024 to May 30, 2025.

It is a great pleasure to share that the degrees are being awarded to graduating students at the 58th Convocation today, both in the physical and digital modes. The degrees in the online mode are being shared through an in-house blockchain-driven technology developed at our Institute under the National Blockchain Project. The digital degrees are also being uploaded to the National Academic Depository.

NEW INITIATIVES

Center for Educational Research and Teaching Excellence (CERTEX)

On January 5, 2025, IIT Kanpur's Board approved the Centre for Educational Research and Teaching Excellence (CERTEX) to advance a research-backed, technology-driven educational environment. CERTEX's charter includes: 1) Driving education research to enhance pedagogy, study diverse student needs, and analyze learning technologies' impact; 2) Developing advanced facilities like lab simulations and AI/ML tools, maintaining a teaching resource repository; 3) Providing periodic staff training to uphold high standards; 4) Promoting outreach through conferences, seminars, publications, and an online repository, positioning IITK as a global leader in education while fostering innovative teaching practices.

Interface Office of Translational Activities (IOTA)

IIT Kanpur, a leader in innovation with its Startup Incubation & Innovation Center (SIIC), Centers of Excellence in AI/ML, MedTech, Drones, 5G/6G, and Cybersecurity, and Technopark@iitk, established the Interface Office for Technology and Applications (IOTA). IOTA aims to elevate technologies from our labs to TRL 7+ to address national challenges. It will source external problem statements, match them with suitable research groups, and facilitate fundraising and industry connections to drive impactful, indigenous solutions, further strengthening IIT Kanpur's innovation ecosystem.

Director's Council

The Director's Council of IIT Kanpur is established as a high-level advisory body that provides strategic counsel to the Director and assists in shaping the long-term vision and direction of the institute. This Council comprises prominent alumni, donors, and key institutional stakeholders, bringing together their expertise to drive IIT Kanpur's continued leadership in education, research, and innovation.

The members of the Council will provide guidance on critical institutional priorities, fostering excellence in Fundraising & Industry Relations, Academics, Fundamental & Translational Research, Government Relations, and Innovation & Entrepreneurship, ensuring IIT Kanpur remains at the forefront of academia, technological and scientific advancements.

ACADEMIC INITIATIVES

Academic initiatives undertaken this year are likely to strengthen our educational programs, and several others are in the pipeline.

Wadhwani School of Advanced Artificial Intelligence & Intelligent Systems (WSAIS)

IIT Kanpur took a historic step toward strengthening India's leadership in cutting-edge research and innovation with the launch of the Wadhwani School of Advanced Artificial Intelligence and Intelligent Systems for advanced AI, cyber-security, robotics and AI policy, and nurturing interdisciplinary teams of faculty, researchers, and students in state-of-the-art laboratories. Under WSAIS, a UG program in Intelligent Systems has been approved. This initiative, supported by the Wadhwani Foundation, promises to create world-class education and research centers on campus and empower a network of 50 partner hubs across India. It will also be a SuperHub, enabling and supporting "research capacity building" through research and innovation programs and activities at research institutes in the Wadhwani Innovation Network.

NEW PROGRAMMES & DEPARTMENTS

MTech program in "Artificial Intelligence for Sustainability"

The MTech program in "Artificial Intelligence for Sustainability" under the Kotak School of Sustainability has been approved. It

aims to train manpower that can take on global and local challenges in sustainability. In India, we have many educational programs on traditional science and engineering disciplines, as well as some programs on sustainability, but none addresses climate change and sustainability issues using AI.

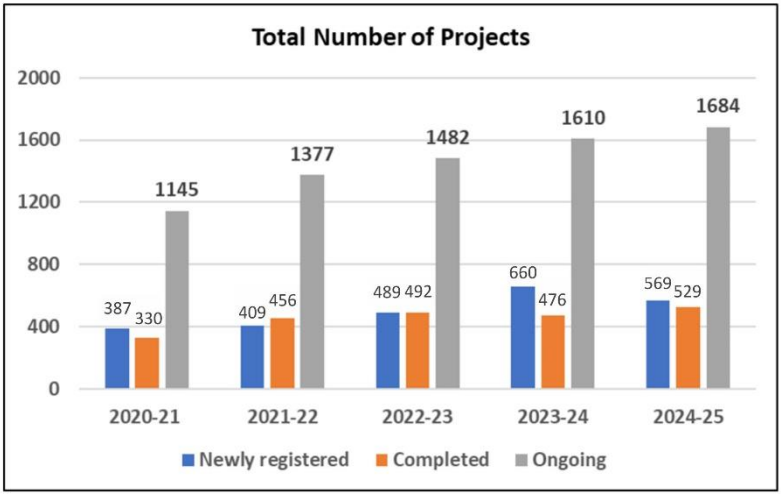
RESEARCH & DEVELOPMENT

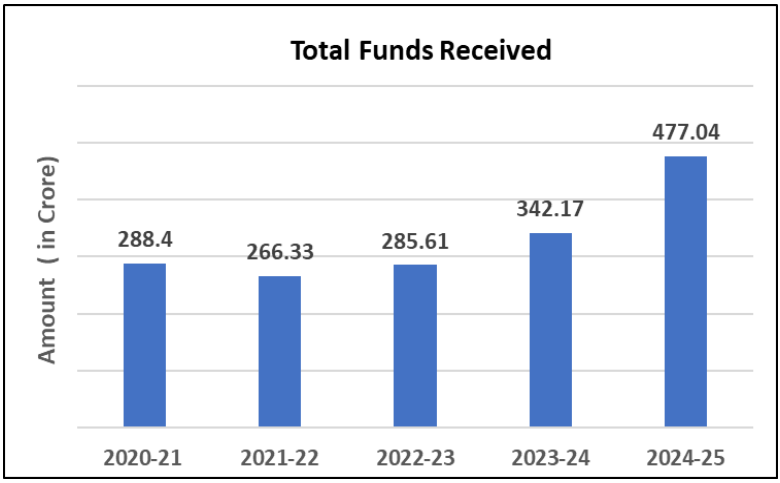
IIT Kanpur has registered steady growth in its research and development activities this year.

Research Highlights:

- 1684 externally funded projects are ongoing with a total sanctioned amount of Rs. 1791.46 crore.
- 304 sponsored projects worth Rs. 633.98 crore sanctioned during 2024-25.
- 265 consultancy projects worth Rs. 107.38 crore sanctioned during 2024-25.
- During 2024-25, total funds received for sponsored projects are Rs. 363.43 crore, and for consultancy projects, Rs. 113.61 crore.

SPONSORED RESEARCH





LEADING FUNDING AGENCIES

Funding Agency	Amount Sanctioned (In Crore)
Department of Science & Technology	₹269.93
National Mission for Clean Ganga	₹ 47.12
Department of Biotechnology	₹19.89
National Security Council Secretariat	₹16.38
Samagra Shiksha Department of Education-Govt of Uttarakhand	₹9.20

Table capturing five major funding agencies with sanctioned amount

LEADING FUNDING PARTNERS FROM INDUSTRY

Hindustan Zinc Limited Udaipur, GE India Industrial Private Limited, Chittaranjan Locomotives Words (CLW), Indian Railways, Unilever Limited and Moswave Russia.

MAJOR PROJECTS SANCTIONED

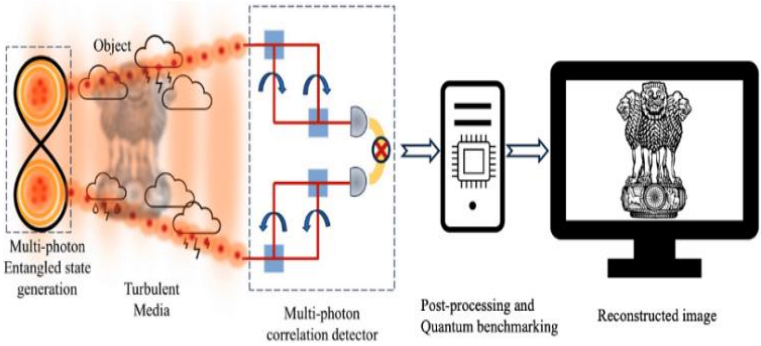
Mission Coordination Cell, National Quantum Mission funded by the Department of Science and Technology

The Mission Coordination Cell (MCC), established at IIT Kanpur, is designated as the coordinating body for the National Quantum Mission (NQM). NQM aims to build indigenous quantum capabilities and position India among global leaders in quantum technology. The MCC, with its main office at IIT Kanpur's Outreach Centre in Noida, oversees collaboration between Technical Hubs (T-Hubs), ministries, industries, and other stakeholders. It also aligns NQM with national initiatives like Digital India and Make in India. Through effective communication with the Mission Secretariat, DST, MCC at IIT Kanpur seeks to foster the necessary coordination at all levels to ensure the success of the National Quantum Mission.

Design and development of quantum entanglement-enhanced imaging systems

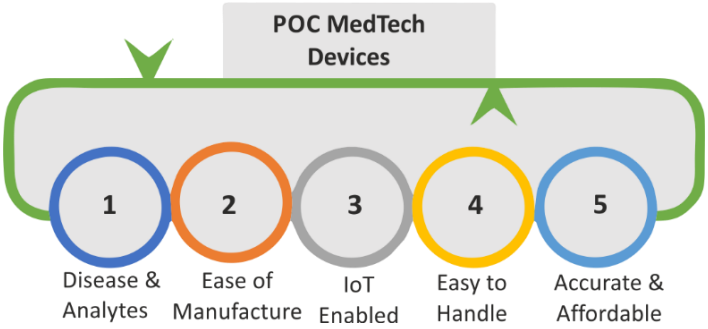
The project is to develop quantum-entanglement-enhanced imaging systems. This project has funding of about 94 crores with 8 PIs across 4 different institutions. The main objective of this project is to design and develop enhanced imaging and microscopy systems that are based on harnessing the quantum correlations of entangled photons. Such quantum-enhanced imaging and microscopy systems are expected to provide increased imaging resolution and sensitivity, enhanced signal-to-noise for

low-light level imaging, improved methods for non-invasive imaging, and enhanced imaging capabilities in the presence of turbulent and scattering media.



Point-of-Care Devices in Healthcare Technologies funded by the Ministry of Education (under the SPARC program)

Technological advancements in the field of MedTech devices are transforming diagnostics into a crucial role for rapid and accurate screening, prognosis, and patient monitoring. Point-of-Care (POC) devices offer verifiable data & integrated healthcare to clinicians for effective treatment. The following objectives are being pursued through collaborative efforts with the Faculty of



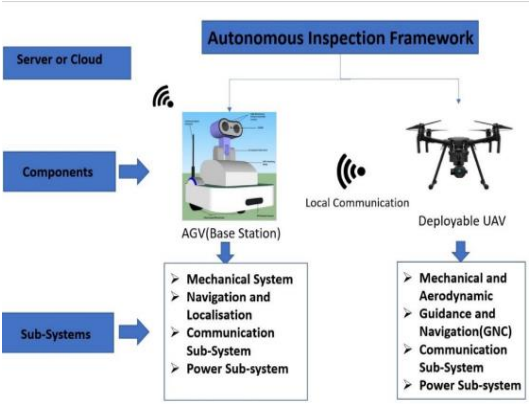
Medicine, Dentistry, and Health Sciences, University of Melbourne, Australia, and Amrita Vishwa Vidyapeetham, Coimbatore, India.

- IoT Enabled Clinical/Physiological Analyzers
- Biosensing Modules for Patient Care
- AI-Powered Handheld MedTech Devices: Sepsis, Cancer, Neurodegeneration
- Compilation of a monograph on POC devices in healthcare

Electronics & ICT Academy Scheme - Phase II, funded by Ministry of Electronics and Information Technology

Electronics & ICT Academy (EICTA) Phase II is a joint initiative of the Indian Institute of Technology Kanpur and the Ministry of Electronics & Information Technology (MeitY) as a continuation of the earlier EICTA Phase I (2015-2024). EICTA II, in continuation of its earlier mandate, is tasked with designing, developing & delivering specialized, highly subsidized Faculty Development Programs (FDP) in emerging technologies/ niche areas/ specialized modules for specific research areas for Faculty in Higher Education Institutions (HEI). In addition to this, FDPs on multi-disciplinary areas connected with ICT tools and technologies and other digital hybrid domains, covering a broader spectrum of engineering and non-engineering colleges, polytechnics, ITIs, and PGTs educators, are to be conducted. The mode of delivery is specific to IITK's EICTA, which is set by the ministry in synchronous, asynchronous, and hybrid modes.

Design and Development of an Integrated Inspection Framework Comprising of UGVs (Unmanned Ground Vehicle) with Deployable UAVs (Unmanned Aerial Vehicle) for Critical Power Infrastructure Inspection funded by Central Power Research Institute



Operational efficiency and preventive maintenance are essential to ensure smooth and uninterrupted functioning of components of the power infrastructure. In order to achieve this, an effective autonomous inspection framework that inculcates autonomous robots (UGVs + UAVs), which can continuously monitor the environment and inspect the components for failure, is essential. AI-based algorithms can detect the faults occurring in the critical infrastructure using the sensory data obtained by the robots.

The proposed system consists of two essential collaborative robots that form the backbone of the integrated framework of the Non-destructive inspection of critical infrastructure. An autonomously guided vehicle (AGV/UGV) acts as a base station from where an Unmanned Aerial Vehicle (UAV) can be deployed as

the task demands. Further, there will be two such sets of collaborative robots to create a swarm-like environment and distribute the inspection work in case of urgent failure.

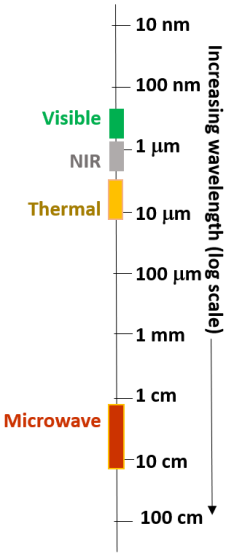
Methods of Artificial Intelligence and Magneto-electric Effects in the Dynamics and Motion Control Problems of Telecommunication Spacecraft funded by the Department of Science & Technology

The proposed research aims to study efficient translation and attitude control using geomagnetic forces for satellite swarms, focusing on coordinated control. The project explores the orbital and attitude motion control of charged spacecraft interacting with Earth's magnetic field, employing mathematical models to capture spacecraft dynamics. Various control strategies will be tested through simulations to optimize satellite performance.

Next, the research focuses on developing control algorithms for seamless coordination between satellites in a swarm. Artificial intelligence (AI), including reinforcement learning and deep learning, will be integrated into the control system to improve decision-making, reduce communication requirements, and enhance adaptability in uncertain conditions. These AI techniques will allow satellite swarms to adjust to dynamic mission demands autonomously. The research is expected to contribute significantly to space missions, providing innovative methods for satellite operations, including on-orbit maintenance and space exploration.

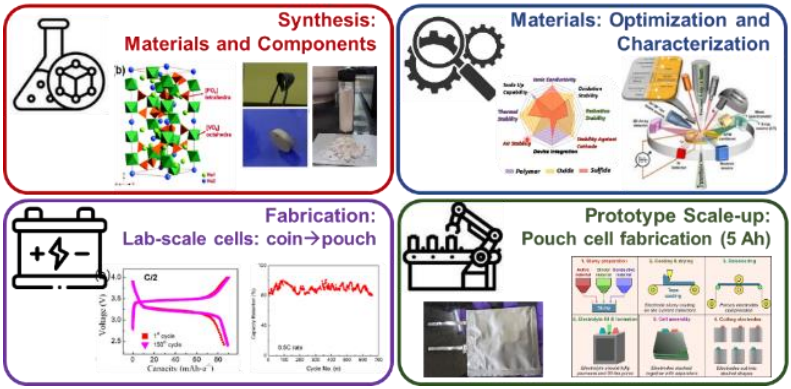
Multispectral Stealth Solutions Covering Visible, Near Infrared (NIR), Thermal, and Microwave Ranges Using Coating and Patterned Surfaces funded by DIA-COE

Military reconnaissance was conducted using various techniques that use different frequencies of electromagnetic radiation. This necessitates multi-spectral stealth solutions to protect the infrastructure from damage. In this project, funded by DRDO under the DRDO Industry Academia Centre of Excellence, an electromagnetic frequency range spanning the visible, near-infrared (NIR), thermal, and microwaves is chosen for building stealth solutions. This is an extensive range of wavelengths and will be covered by preparing specialty surfaces by the use of multiple coatings of required thickness and patterns of suitable sizes on chosen substrates. The objective is to achieve the required frequency-selective response, which ensures that the object present behind the specialty surface is not recognizable, though it is present within the field of view. This project has Defence Material and Stores Research and Development Establishment (DMSRDE), Kanpur, as a collaborating laboratory for testing defence applications.



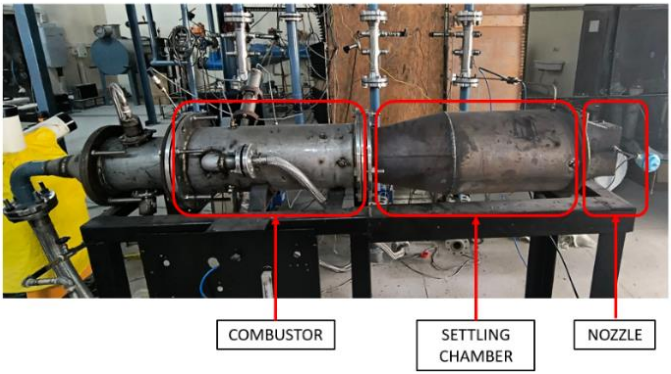
Flexible Solid-Electrolyte Alternative chemistry Batteries (Flex SEA Bat) funded by Defence R&D Organization

Sodium-ion batteries (SIBs) present a promising alternative due to their abundance, lower cost, and electrochemical properties similar to lithium, making them a viable option for next-generation energy storage.



This project, supported by DRDO and in partnership with DMSRDE-DRDO Kanpur, aims to develop high-energy density and low-cost SIBs using earth-abundant active materials and a solid-state electrolyte. The proposed prototype cells (TRL level 5) are capable of powering (up to 5 Ah) military devices such as drones, unmanned underwater vehicles (UUVs), portable energy storage/backup devices EVs, and grid- storage for renewables integration. The project also envisages the establishment of a pilot-scale battery fabrication facility for advanced material synthesis planned for scaling domestic manufacturing to support India’s Net Zero goals.

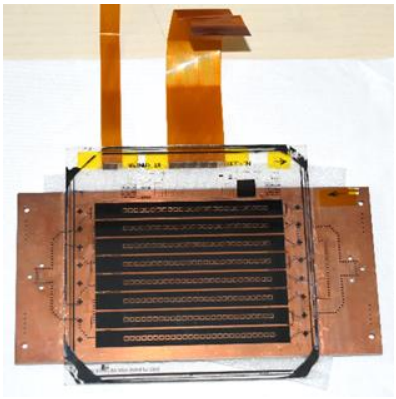
Cyclic Thermal Testing of TBC Coated Superalloys in a Burner Rig funded by Aeronautics Research & Development Board (ARDB)



Superalloy turbine blades use Thermal Barrier Coatings (TBCs) and internal cooling to withstand higher temperatures. Assessing TBC performance requires exposing test samples to hot, corrosive environments to understand contamination and damage mechanisms. This project experimentally simulates Gas Turbine engine conditions in a specially designed gas turbine combustor rig, burning ATF, to assess the oxidation and hot corrosion behavior of TBC coatings on nickel-based superalloys. The test samples will be conducted at 0.3 Mach following a specified cycle. The samples will be thermocouple instrumented to read the metal temperature captured by a thermal camera. An optical Pyrometer will measure the gas temperature just upstream of the test item, and the species concentration will be measured using an emission analyzer. TBC coatings will be

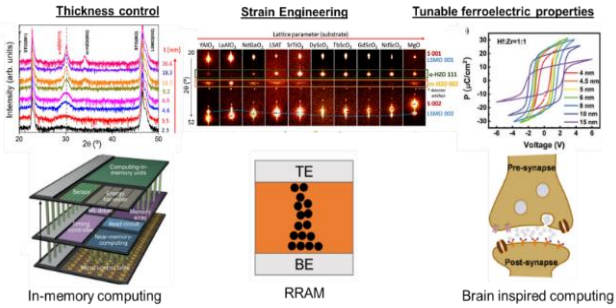
inspected, and vane weights recorded every 10 cycles, continuing until failure. The cycles to the first crack and first failure will be documented.

Processing of TFT Array and Liquid Crystal Layer and their Integration with Metasurface Antenna funded by Indian Space Research Organization (ISRO)



Space Application Centre (SAC)-ISRO is developing a reconfigurable flat-panel metasurface antenna (MSA) that utilizes thin film transistor (TFT) array technology as a backplane to change the capacitance of the liquid crystal (LC) based capacitors that are electromagnetically excited by the metasurface based waveguide array antennas, designed for Ka-band and Ku-band satellite terminals. Changes in the capacitance of liquid crystal media will enable continuous electromagnetic (EM) beam steering of metasurface-based array antennas. The National Centre for Flexible Electronics (NCFlexE) at IIT Kanpur is running a robust program for the fabrication of TFT-based circuits for flexible electronics. SAC-ISRO and NCFlexE are actively collaborating to develop flat panel MSAs with potential applications in the field of high throughput satellite communication.

Hafnium Oxide (HfO_2) based ferroelectrics for low power memory applications funded by the Airforce Office of Scientific Research



In-memory computing RRAM Brain inspired computing

Ferroelectric memory technology, particularly the discovery of ferroelectricity in HfO_2 thin films, presents a promising solution due to its complementary metal-oxide-semiconductor (CMOS) compatibility and robust electric dipoles at nanoscale thicknesses. However, these films have increased operating voltages and reduced endurance due to high retention polarization (Pr) & high coercive fields (Ec). To address this challenge, this study aims to investigate the effect of thickness on Ec in CMOS-compatible FE HfO_2 and HZO thin films, considering strain and surface energy effects. The project will leverage strain engineering, interface engineering, elemental doping, and phase composition variation to achieve thin films with low Ec, high Pr, high endurance, and low thickness. This research contributes to the development of low-power ferroelectric memory devices by advancing our understanding of thin film ferroelectric properties and facilitating the design of innovative materials and devices for future data storage applications.

Bharat-GPT A Suite of Generative AI Tech for India funded Department of Science & Technology

BharatGen, powered by the repository 'Bharat Data Sagar' is a multimodal large language model initiative to develop Generative artificial intelligence (GenAI) tailored to India's linguistic, cultural, and socio-economic diversity. By integrating text, speech, and images, BharatGen aims to build accessible AI technologies across key sectors like law, agriculture, education, and healthcare.

In addition to Generative AI for legal text models for question-answering, summarization, case retrieval, statute retrieval, and rhetorical role identification, among others, for multiple Indian languages and English are being created. Models aware of IKS (Indian Knowledge System) will also be built. More details are available at: https://bharatgen.tech.

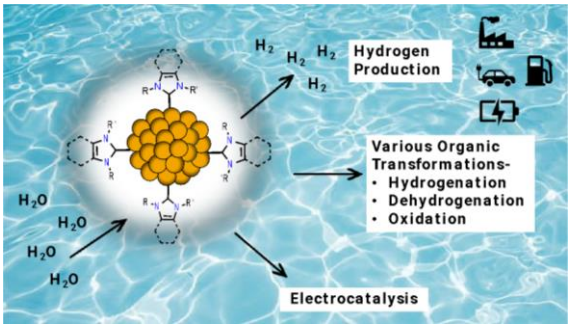
Information Security Education and Awareness (ISEA) Project Phase-III, funded by the Ministry of Electronics and Information Technology

IIT Kanpur has undertaken several impactful initiatives under the Information Security Education and Awareness (ISEA) Project Phase-III, which aims to strengthen the national capabilities in hardware security. This year, a successful bootcamp titled "Hands-On FPGA-Based System Design & Side Channel Analysis", was organized for cyber-commandos to upskill them in addressing real-time cyber and hardware-based threats. A three-day Faculty Development Program (FDP) was conducted

at Amrita Vishwa Vidyapeetham, covering advanced topics such as post-quantum cryptography, PUFs, acoustic side-channel attacks, and secure multiparty computation.

Through these initiatives, the project aims to build a strong foundation in cybersecurity and hardware security to equip the next generation of cyber defense professionals with the skills, knowledge, and practical experience required to safeguard critical digital infrastructure against evolving threats.

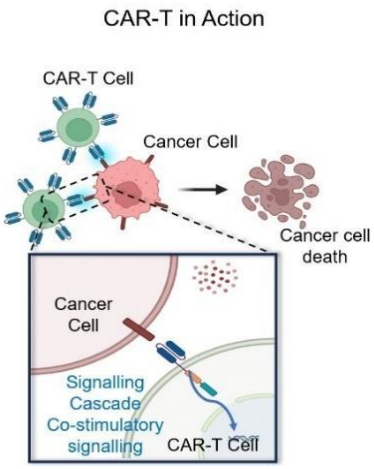
Hydrogen Production from Water Catalyzed by Functionalized N-heterocyclic carbene (NHC) - stabilized Nanoparticles and beyond funded by the Department of Science & Technology



Hydrogen production is a preferred alternative to fossil fuels, with advantages as a clean energy carrier due to its ultra-light nature, storability, and the highest energy content per unit weight among common fuels. This project focuses on utilizing N-heterocyclic carbene (NHC)-stabilized metal nanoparticles as efficient catalysts, (tunable electronic properties, strong σ-donating ligands, and ability to prevent aggregation, robust metal-ligand interactions for hydrogen production. The appended Lewis acid or Lewis base NHC-metal carbenes facilitate

hydrogen production by activating water on the surface of metal nanoparticles, thus enhancing catalytic efficiency improve hydrogen evolution reaction (HER) rates. This approach seeks to create more stable, cost-effective catalysts for sustainable hydrogen generation, addressing critical challenges in energy conversion and storage.

Switchable tandem CAR-T cells targeting tMUC1 and ROR1 for breast cancer immunotherapy funded by Indian Council of Medical Research



Triple-negative breast cancer (TNBC) is an aggressive subtype affecting up to one-third of Indian breast cancer patients. CAR-T cell therapy offers a promising immunotherapeutic strategy by harnessing tumor-specific targeting and enhanced T cell function to improve survival rates in TNBC. The project aims to develop a proof of concept on the generation of bi-specific CAR-T cells combined with knockout of PD-1 immune checkpoint protein to overcome immune suppression of T cells in the tumor microenvironment and promote TNBC tumor killing and to incorporate the safety switch (suicide gene) RQR8 into our CAR molecule,

which will allow for the selective removal of administered CAR-T cells in the event of toxicity.

COLLABORATIONS THROUGH MOU

IIT Kanpur has signed a technology transfer MoU with **Prompt Equipments Pvt. Ltd**., a leading dairy technology company, to market Lateral Flow Immunoassay Strip for the Detection of Mastitis in Bovines.

Startup Incubation and Innovation Centre, IIT Kanpur, has signed an MoU with **Canara Bank** with the aim to provide comprehensive support to entrepreneurs, including funding, promotion, and knowledge-sharing.

C3i Hub, IIT Kanpur launched the Cyber Security Vocational Program in collaboration with **Chhatrapati Shahu Ji Maharaj University, Kanpur (CSJMU)**, and

Chhatrapati Shahu Ji Maharaj Innovation Foundation (CSJMIF), by signing an MoU at IIT Kanpur.

Mr. Bhadresh Shah, Founder and Managing Director of **AIA Engineering Limited** and distinguished alumnus (BT/MME/1974), has formalized a generous philanthropic contribution towards the construction of a new hostel tower in Hall of Residence-16, by signing an MoU with Prof. Manindra Agrawal, Director IIT Kanpur.

IIT Kanpur signed an MoU with the **National Health Authority (NHA)** in New Delhi in the presence of Union Health Secretary Shri Apurva Chandra. Under the Ayushman Bharat Digital Mission, this MoU aims to revolutionize artificial intelligence (AI) in health research with innovative data platforms.

In a significant development aimed at leveraging cutting-edge technology for societal benefits, IIT Kanpur and **Bhaskaracharya National Institute for Space Applications and Geo-informatics** (BISAG-N), under the Ministry of Electronics & Information Technology, Government of India, have signed an MoU in New Delhi.

IIT Kanpur signed an MoU with the **Ministry of Statistics and Programme Implementation** to develop software for implementing seasonal adjustments for important economic indices like the consumer price index.

An MoU has been signed between the **University of Technology Sydney (UTS)** and IIT Kanpur to promote academic and research collaboration. This will include

student and faculty exchanges and joint participation in international research projects.

An MoU has been signed with **Mars Antennas & RF Systems Pvt Ltd.** to collaborate on the design, development, fabrication, and testing of Smart Electric Vehicle Chargers and Smart Hybrid Inverters for Energy Storage System applications.

IIT Kanpur signed an MoU with the **Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India**, for the establishment of a Census Data Research Workstation at its Computer Centre.

IInvenTiv-2025

IInvenTiv-2025, the third edition of the R&D Innovation Fair of Higher Education Institutes of India, was held at IIT Madras on 28th February and 1st March 2025. Dr. Sukanta Majumdar, the Hon'ble MoS for Education, formally inaugurated the event, highlighting the efforts towards technological self-reliance with the overarching theme of "One Earth, One Family, and One Future". 23 IITs, 31 NITs,7 IISERS, 6 IIITs, IISc, and the top 50 NIRF engineering institutes showcased technologies under different themes such as AI/ML Technologies, Aviation, Defence & Space, Marine Technology, Medical/Healthcare Engineering, Rural Technology, Smart Cities & Infrastructure, Advanced Manufacturing (Industry 4.0+/5.0), and Circularity & Sustainability (Energy & E-mobility) from startups and academia.

IIT Kanpur showcased a shape-morphing quadcopter drone with a gripper, a contactless Automated Crack Extension Measurement (ACEM) system, and an auxiliary metal cutting retrofit assembly with advanced safety controls alongside innovative

technologies from startups like ScaNxt (BhuParikshak), VU-Dynamics, Hacklab Solutions, H2Power Energy, and Simactricals Solutions.

PAN-IIT Global Technology Summit (PIWOT-25)

IIT Kanpur participated in the PIWOT-25, held in January 2025 at the Jio World Convention Centre, Mumbai. The institute showcased its C3i Center and innovations, including the Haptic Smartwatch for the Blind and Visually Impaired developed by Prof. Siddhartha Panda's team, and the Soil Sensing Device presented by Mr. Rajat Vardhan of ScanNXt Technologies, incubated at SIIC. The event featured participation from Prof. Manindra Agrawal, Director IIT Kanpur, Prof. Raja Angamuthu, Associate Dean of Research & Development IIT Kanpur, Prof. Siddhartha Panda, Ms. Swagat Bhandari, OSD, underscoring the institute's commitment to cutting-edge research and technologies.

IIT Kanpur's Tableau in "Amar Ujala" event

IIT Kanpur received Second Prize in the "Best Tableau Design" competition organized by Kanpur Nagar Nigam and Amar Ujala as a part of the Independence Day Celebrations. The winning tableau showcased innovative technologies of four start-ups, Lenek Technologies Medantrik, xTerra Robotics, and Endure Air Systems, which were incubated at SIIC IIT Kanpur.

Electrical Safety Test Facility

A cutting-edge EMI/EMC and Electrical Safety Test Facility, funded by BIRAC, has been inaugurated at IIT Kanpur to address the region's limited testing infrastructure. It is fully equipped to conduct both pre-compliance and compliance testing, following internationally recognized standards such as IEC 60601-1, IEC 60601-1-2, IEC 61000-4-3, IEC 61000-4-6, IEC 61010-1, CISPR 11, CISPR 14, CISPR 15, CISPR 32, and CISPR 35.

This facility will provide affordable and high-quality testing solutions to industries and start-ups, ensuring the development of safe and reliable electronic and medical devices that meet global safety and performance standards. This initiative will not only enhance India’s testing infrastructure for electrical and medical devices but also strengthen its dominance in the rapidly expanding MedTech sector.

Jeet Bindra PG Research Lab

The Jeet Bindra PG Research Lab at the Department of Chemical Engineering was inaugurated with the help of a generous support grant from our esteemed alumnus, Mr. Jagjeet Singh

Bindra (BT/CHE/1969). The state-of-the-art facility is dedicated to advancing postgraduate research in Chemical Engineering. This lab marks a significant milestone in our commitment to providing students with world-class resources and a collaborative environment for pioneering research.

National Cryo-EM Facility

The National Cryo-EM Facility at IIT Kanpur was inaugurated by Prof. Abhay Karandikar, Secretary of the Department of Science and Technology, Government of India. Established with the support of the Science and Engineering Research Board (SERB), now a part of Anusandhan National Research Foundation (ANRF), this state-of-the-art will utilize the Cryo-Electron Microscopy (Cryo-EM). This revolutionary technology enables the visualization of biological molecules, such as proteins and viruses, in their near-native states with remarkable resolution. As one of the four such high-end facilities strategically located across India, the facility, with its cutting-edge technology, will help in research on Structural and Chemical Biology, particularly in studies involving membrane proteins, drug discovery, and drug target identification with significant implications for addressing challenges related to neurodegenerative disorders and developing solutions for cancer.

SAHAJ Centre for Bio-Sensing Technologies, funded by the Department of Biotechnology

The Department of Biotechnology has funded a project at IIT Kanpur's Centre for Nanosciences under the SAHAJ program to provide cutting-edge research solutions to develop strategies for the Point of Care (POC) biosensors. This project aims to establish a comprehensive biosensor platform to develop biosensor prototypes and their translation from research to market. In addition, this initiative also aims to establish state-of-the-art resources across the country and to create skilled manpower in this emerging field.

Centre of Excellence in Specialty Chemicals, funded by the Ministry of Chemicals and Fertilizers

Specialty chemicals, such as surfactants and polymeric coatings, are vital for applications in-home care, agrochemicals, and CO_2 sequestration. The Indian surfactant industry relies heavily on imported advanced specialty surfactants, making it vulnerable to global market changes. To tackle these issues, the Department of Chemicals and Petrochemicals, under the Ministry of Chemicals and Fertilizers, has established a Centre of Excellence (CoE) for specialty chemicals, the first of its kind, at IIT Kanpur. The CoE aims to connect industry and academia to address the sector's needs, develop green and innovative surfac-

tants with local production methods, create Digital Twin platforms for advanced surfactant design, and conduct fundamental and applied research on specialty chemicals.

Centre of Excellence in Antimicrobial Resistance, funded by the Department of Science & Technology

The Centre of Excellence in Antimicrobial Resistance will investigate multipronged approaches focused on “Leads to Pre-Clinical Studies”, with machine learning aiding the development of new drug-like entities, antibiotic formulation, and controlled antibiotic delivery, drug-resistant gram-negative and gram-positive pathogen microbiology, including a sharp focus on host-derived targets and therapies, and diagnostics and development of POC (microfluidic) devices for automated detection and pathogen quantification in clinical settings.

Centre of Excellence for BioFuels, funded by the National Sugar Institute (NSI)

IIT Kanpur signed an MoU with the National Sugar Institute (NSI) to create a Centre of Excellence for Biofuels at NSI Kanpur to boost biofuel production from biomass, focusing on ethanol, methanol, Bio-CNG, Aviation Fuel, and Green Hydrogen.

Centre of Excellence in Point of Care Diagnosis Facility funded by Gangwal School of Medical Sciences and Technology (GSMST), Indian Council of Medical Research, and Department of Science and Technology

This facility has been established at the Mehta Family Centre for Engineering in Medicine with support from the seed grant obtained from GSMST and partial financial support from ICMR and DST, GoI. The facility is co-coordinated by interdisciplinary departments of IIT Kanpur, clinical collaborators from SGPGI, Lucknow, and industrial collaborators from eSniff Technologies.

It is an electrochemical biosensing chip fabrication and testing facility that houses platforms and instruments for fabricating and evaluating the efficiency of electrochemical biosensing chips using non-invasively collected biofluids. It has instruments such as electrometers, femtoamp remote sourcemeter and digital multimeters, and a portable read-out unit. Centre has already generated biosensing platforms such as CoRAPS, SP^2-sensor, C-Sensor, T-Sensor, and readout units like PRuCSor (Portable readout unit for Chemiresistive Sensor), a portable handheld, battery-operated device of ~180 g weight with dimensions <10 cm and resolution of 50.3 µV best suited for remote site sensing in rural settings. The center's facilities are available to members of IIT Kanpur and industries on the basis of suitable user charges.

INNOVATION AND INCUBATION

IIT Kanpur has filed for 156 IPRs in the financial year 2024-25, setting a new record for the highest IPRs filed by the institute in a single year. This remarkable achievement highlights the institute's dedication to pioneering research and marks the fourth consecutive year of surpassing its milestones in IPR filings.

Among the 156 IPRs filed, the different prospects include 123 Indian patents, 15 design registrations, 2 copyrights, and 6 trademark applications, along with 6 US, 1 Taiwan, 1 China, 1 Malaysian, and 1 European patent. A total of 148 IPRs have been granted in the financial year 2024-25, and 6 technologies have been licensed.

IIT Kanpur has not only achieved the consecutive milestone of filing a century of patents in a financial year but has also reached a total of 1240 Intellectual Property Rights (IPRs) over time. The exceptional licensing rate of around 12.33 % to date, out of which 871 have been granted so far, along with 153 technologies licensed for commercialization, bear testimony to the flourishing and dynamic R&D ecosystem of the Institute.

Technology Transfer to Prompt Equipments Pvt. Ltd., a dairy tech company

A technology titled "*Lateral Flow Immunoassay Strip and Method for Detection of Mastitis in Bovines*" helpful in the area of animal health developed by Prof. Siddhartha Panda (ChE & NCFlexE) and Dr. Satyendra Kumar (Sr. Proj. Scientist, SCDT) at the National Centre for Flexible Electronics (NCFlexE) at IIT Kanpur, has been licensed to "Prompt Equipments Pvt. Ltd", a leading dairy tech company having its business in 70,000+ villages across the country. The Indian Patent Office has granted the technology an Indian Patent no. 455232.

A Convertible School Bag, Re-licensed to PROSOC Innovators Pvt. Ltd.

IIT Kanpur has re-licensed the technology titled "*School Bag Convertible to Study Table*", having Design Registration No. 287945, to Prosoc Innovators Pvt. Ltd. The novel school bag is developed by Mr. Eshan Sadasivan (DP), Prof. Shantanu Bhattacharya (ME), Prof. Mainak Das (BSBE), Mr. Toshib Bagde (DP), Mr. Abhinav Basak (DP) at IIT Kanpur. This unique invention integrates a foldable, height-adjustable study table

within a school bag. Already benefiting over 3,50,000 students across 19 Indian states, DESKIT has received support from numerous government bodies, corporates, and NGOs and has partners including the governments of J&K and Telangana, CSR partners like Wells Fargo, ONGC, and Aditya Birla, and NGO collaborators such as United Way, JSPL Foundation, and Diya India. By re-licensing this innovation to PROSOC, IIT Kanpur continues to champion accessible, design-led solutions that make quality education more inclusive and equitable.

Technology Transfer of a non-invasive, Oral Cancer Detection Device

The unique technology, "*Munh Parikshak*", invented by Prof. Jayant Kumar Singh and his team from the Department of Chemical Engineering, IIT Kanpur, is a portable device for detecting oral cancer. The technology is protected by Indian Patent Application No. 202411015420. The technology has been licensed to Scangenie Scientific Pvt. Ltd. It uses special lights and a cam-

era to examine the mouth. It provides instant results by analyzing mouth images and categorizing them as normal, pre-cancerous, or cancerous. The results are displayed on a smartphone app and stored on cloud servers for continuous updates, making it ideal for self-testing.

Transfer of the 'Soil Nutrient Sensing Device' to ScaNxt Scientific Technologies Pvt. Ltd., aiming to take this Made-in-Bharat innovation to global markets.

IIT Kanpur has licensed its innovative "Soil Nutrient Sensing Device" to ScaNxt Scientific Technologies Pvt. Ltd. Developed by Prof. Jayant Kumar Singh and his team from the Department of Chemical Engineering, this patent-pending technology (Indian Patent Application No. 202311039511) offers a pocket-sized, smartphone-compatible tool for real-time soil nutrient analysis. Designed for portability and ease of use, the device can assess multiple soil parameters simultaneously, storing data on a cloud server with a single charge supporting up to 250 tests. ScaNxt plans to introduce this Made-in-Bharat innovation internationally, aiming to empower farmers globally. Additionally, a joint MoU between IIT Kanpur & ScaNxt Scientific Technologies Pvt Ltd. was signed to foster collaborative research on advanced

soil testing technologies, focusing on integrating micro and secondary nutrient analysis into ScaNxt's BhuParikshak device using NIR Spectroscopy, IoT, and AI/ML.

Trademark licensed to Alcraftist

For the first time in the history of IIT Kanpur, a trademark bearing the IIT Kanpur logo (Registered Trademark No. 3555542, Class 16) has been licensed to a company named Alcraftist.

AWARDS

IIT Kanpur bags National Intellectual Property Award 2024

IIT Kanpur, breaking the records in patent filing, has secured a position of honor with the prestigious "National Intellectual Property (IP) Award 2024 for Indian Academic Institution - Patents". The award ceremony took place at Bharat Mandapam, New Delhi, on 26th March 2025.

PRODUCT LAUNCH

IIT Kanpur launches Analakṣhya, a revolutionary metamaterial cloaking system licensed to Meta Tattva Systems Pvt. Ltd.

'Analakshya', a stealth technology introduced in a public launch event on 26th Nov 2024, has been collaboratively developed and licensed to an industry partner, Meta Tattva Systems Pvt. Ltd., with an aim to transform defense systems worldwide. The technology based on textile metamaterials has primary applications in military aircraft, ships, and missiles, which act as a shield using absorbing layers to cover & make an object invisible to opponents. By offering near-perfect wave absorption across a broad spectrum, Analakṣhya MSCS significantly enhances the ability to counter Synthetic Aperture Radar (SAR) imaging and will also give adequate protection from missiles that use radar guidance. Tailored for modern warfare, this cutting-edge innovation strengthens operational capabilities, providing India's armed forces with advanced tools to maintain strategic superiority and ensure national security. Its advanced design is tailored for operational imperatives, making it a crucial asset in modern warfare and surveillance.

IIT Kanpur Launches Phase-Change Material-Based Thermal Management System, Empowering Cold Chain Logistics and Local Vendors

IIT Kanpur is proud to announce that one of its latest technologies, *a Phase Change Material-Based Thermal Management System,* has been launched as a product in the market.

Prof. Sri Sivakumar has developed the novel technology with IPA No. 202511003401 from the Department of Chemical Engineering, IIT Kanpur. This PCM-based thermal management system was unveiled at Abhivyakti'25, an event held on 17th January 2025 at IIT Kanpur. This innovative technology is designed to ensure energy efficiency and sustainability by offering higher thermal conductivity and energy storage density, making it ideal for applications such as ice cream storage, food preservation, and refrigeration.

STARTUP INCUBATION & INNOVATION CENTRE IIT KANPUR

EVENTS AND PROGRAMS IN THE YEAR 2024–25

SIIC IIT Kanpur executed a broad spectrum of strategic and capacity-building activities and events during FY 2024–25. These efforts, spanning acceleration programs, international collaborations, innovation showcases, and policy dialogues, collectively advanced India's startup ecosystem and enhanced SIIC's impact at national and global levels.

- AIIDE CoE Investor Connect Program (May 30th, 2024, Noida): Hosted investor sessions for AI/ML startups under the third cohort, enabling strategic investments and reinforcing the AIIDE CoE's five-year vision.
- Launch of UDAAN – Drone Acceleration Program (May 31st, 2024): Drone Acceleration Program (May 31st, 2024): Initiated in collaboration with the Drone Federation of India, UDAAN supports UAV startups through mentorship, advanced labs, and government support.
- Biotechnology Industrial Training Program (May 14th – June 4th, 2024): Hands-on biotechnology exposure for Fergusson College students, including lab training, DNA analysis, and interaction with SIIC startups.
- Healthcare Innovation Program – Clinical Immersion (June 10th, 2024): Fellows explored clinical challenges at Sree

Chitra Tirunal Institute, developing prototypes for improved healthcare delivery.

- India at ASEAN Scale Hub 2024 (July 3rd–5th, 2024, Bali): Forty startups represented India in Bali, building ties with the ASEAN industry.
- Leadership Dialogue with Chief Secretary, GoUP (July 24th, 2024): The Director, IIT Kanpur, met the Chief Secretary to discuss sustainable development and institutional partnerships.
- Indo-Korean Startup Knowledge Exchange (July 30th, 2024): Facilitated a dialogue between Indian and Korean startups on IP frameworks and market access strategies.
- SIIC at Global Bio-India 2024: Networking and showcase of Biotech innovations.
- UP International Trade Show (September 25th, 2024): SIIC startups, including EndureAir and Gudhgrams, gained recognition from top government officials.
- CAD Design Workshop for MedTech Startups (September 26th, 2024): Equipped startups with design and prototyping skills using AutoDesk Inventor.
- India Mobile Congress 2024 (October 15th–18th, 2024): Seven SIIC-backed startups showcased IoT and AI technologies, attracting investor attention.
- 65th Foundation Day – Defence Startup Showcase (November 2nd, 2024): 23 startups demonstrated innovations in defence tech; DRDO project sanction letters were distributed.

- CITI Social Innovation Lab 2.0 Workshop (November 11th–13th, 2024): Supported 75 cleantech and agritech startups with deep tech sessions and commercialization strategy.
- Healthcare Symposium with La Trobe University (November 19th, 2024): Promoted Indo-Australian collaboration and showcased Medantrik's healthcare innovations.
- ASEAN-India Startup Festival (November 28th–30th, 2024): Engaged 100+ startups in pitch contests and cross-border networking.
- FICCI FLO Women Entrepreneurs Visit (December 2024): 30 women entrepreneurs interacted with founders and explored SIIC's inclusive ecosystem.
- National Startup Day Webinar on Equity Sharing (January 2025): Dr. Avijit Bansal provided practical guidance on equity distribution for founders.
- Abhivyakti 2025 – Flagship Innovation Festival (January 17th–19th, 2025): 100+ startups participated in demos and panels celebrating emerging innovations.
- Startup Gateway for Garbage-Free Cities – Cohort 2: Onboarded 38 waste management startups in partnership with MoHUA for sustainable city development.
- Mahakumbh 2025 Security Review (360° Review): Prof. Deepu Philip led disaster readiness efforts for the Mahakumbh event.
- AIIDE CoE Visit by Shri Anurag Yadav: Principal Secretary, GoUP, reviewed AI startup innovations, emphasizing state support.

- Skill Development Programs for MSMEs (Feb–Mar 2025): Trained 250+ stakeholders in legal, agri-tech, and sustainable enterprise development.
- Launch of AIIDE CoE Cohort-4 (February 2025): Expanded the AI/ML startup pipeline with institutions across India.
- Drone Capability Assessment Workshop (February 24th–25th, 2025): National experts discussed UAV advancements and policy during a strategic workshop with MP-IDSA.
- Launch of AMRIT – Pharma Innovation Initiative (February 27th, 2025): Joint effort with NIPER and Boehringer Ingelheim to translate pharma research into ventures.
- Lab-to-Market Webinar – National Science Day (February 28th, 2025): Highlighted how startups at SIIC convert academic research into viable commercial products.

INCUBATOR HIGHLIGHTS

- Expansion of AIIDE CoE with Cohorts 3 & 4 and state government engagement
- Launch of UDAAN for UAV/Drone startups
- Continued support to Healthcare Innovation, Cleantech, AgriTech, and Women-led startups: SIIC nurtured startups in high-impact sectors, including partnerships through CITI Lab and initiatives promoting gender inclusion.
- Collaborations with La Trobe University, Drone Federation of India, NIPER, and MoHUA.

- The second cohort of the Startup Gateway for Garbage Free Cities program launched & collaborated to support 38 sustainability-oriented startups.
- Robust participation in national/international events (ASEAN, Shark Tank, IMC, etc.)
- Successfully hosted a Capability Assessment Workshop on Drones and Autonomous Systems in collaboration with MP-IDSA, bringing together key stakeholders from the Government of Uttar Pradesh, CSIR-NAL, DGCA, NAQAS, DGQA, ADB, the Air Force, Army, Navy, MHA, DACIDS, ADE, BSF, DRDO, and various drone-tech startups, to position IIT Kanpur as India's premier integrated drone technology hub.
- Sectoral focus in MedTech, Defence, Drones, Agri-Tech, and Cleantech: Dedicated programs, funding access, and technical support ensured tailored growth for startups in emerging sectors.

STARTUP SUCCESS STORIES AT SIIC, IIT KANPUR

- LCB Fertilizers launched an organic fertilizer unit in Madhya Pradesh, partnering with FPOs in Uttar Pradesh and collaborating with ICAR-IIPR on bio-decomposers, bio-fertilizers, and nano-technology. The company showcased its innovations at the Amar Ujala Krishika Expo 2024, earning praise from dignitaries, including the Chief Minister of Uttar

Pradesh and the Principal Scientific Adviser to the Government of India.

- Royal Bengal Greentech secured a ₹2 crore deal for 10% equity on Shark Tank India Season 4, backed by four investors, for their patented BhavisyaPlast—100% biodegradable plastic made from agri-waste—and the GREEZY range of eco-friendly, petroleum-free lubricants. They signed an NDA with Berger Paints India to explore bio-plastic emulsion paints and supplied GREEZY lubricants for development. Their innovations earned them the second runner-up position at the Grand Idea Hunt by Maruti Suzuki and IIM Calcutta.
- Primary Healthtech successfully organized a Safexpress-sponsored health camp from August 5th to 12th, screening 382 individuals and conducting 5,730 tests.
- Life and Limb, a startup developing advanced prosthetics, received funding from Portescap India to make their state-of-the-art prosthetic hands accessible globally.
- Apeiro Energy emerged as one of the five winners of AVINYA'25 – The Energy Startup Challenge, was recognized by Gujarat's Chief Minister as an emerging renewable energy player, and was featured in Renewable Watch Magazine for its innovative 10 kW iWind Hygrid microgrid powering a village near Mumbai.
- Chimertech, an agri-tech startup, partnered with Milky Mist Dairy to launch "Quadmastest," a reagent-free device for

early mastitis detection and successfully secured an investment of ₹1.25 crore on Vijay Television's Startup Singam.

- Medantrik Medtech organized a free health camp on World Asthma Day (7th May) for IIT Kanpur campus residents in collaboration with GSVM and Kcare Hospital.
- Treacle Technologies secured Rs 4 crore in pre-seed funding led by Inflection Point Ventures.
- Aereo raised $15 million in its Series B funding round led by 360 ONE Asset, with participation from Startup Xseed Ventures and Navam Capital.
- Brela Innovation secured first place in both the Medtech Open Challenge Program (OCP) and the TiE Women Global Pitch Competition.
- Gudhgrams won the Agritech Vendor of the Year award at the ASEAN India Scale Hub 2024.
- Mild Cares, on World Menstrual Hygiene Day, made Aminabad, Uttar Pradesh's first "sanitary pad-free village" by distributing GynoCup menstrual cups.
- Genomiki Solutions was awarded the title of Emerging Precision Medicine Startup of the Year at the Precision Med India Awards on 31st March 2025.
- Paving+ won the Best 60-second pitch for transforming waste into high-quality construction materials. Additionally, this startup also won the Sustainability Vendor Award for its commitment to sustainable practices.
- ScaNxt Technologies licensed a novel soil nutrient sensing device from IIT Kanpur, enabling real-time, chemical-free

soil analysis via smartphone. Selected under Operation Dronagiri, part of the National Geospatial Policy 2022, the startup is driving impactful advancements in agriculture through geospatial technology.

- F2DF, a pioneering agritech startup featured on Shark Tank India, was selected for the third cohort of the Citi India–IIT Kanpur Social Innovation Lab
- CodeMate® AI, in collaboration with Qualcomm, showcased AI-assisted programming at the Snapdragon X India Launch, enabling offline natural language coding on Snapdragon X Series AI PCs—demonstrating seamless, lag-free development powered by 45 TOPS built-in NPU support.
- Dream Aerospace raised ₹3 crore in pre-seed funding from Inflection Point Ventures and won the 1st Special Award at TiE Global Summit 2024, along with a cash prize of ₹1 Lakh.
- MooRakshak BioSciences earned prestigious accolades at both national and international competitions. Recognized by organizations such as CII, Tata Social Enterprise Challenge, GITEX Global, MeitY, IIM Visakhapatnam, Low Carbon Earth Accelerator, Headstart, and BIRAC.
- RF Nanocomposites has successfully raised ₹6 crores to develop stealth and EMI shielding composite materials for India's defense and industrial sectors.

- Ensect Farm has secured a prize of INR 2 lakhs at Eureka! 2024, the flagship business model competition of IIT Bombay.
- Devnullx Technologies was selected for Startup Nexus Cohort #20, a prestigious program by the U.S. Embassy in New Delhi, running from February 3rd to April 4th, 2025.
- OpenSpectrum AI successfully launched its smart farming solution, AgroTrace, in Palla Village, Delhi. The device monitored key soil health parameters and optimized water and nutrient use, leading to notable yield improvements.
- Simactricals completed the PoC handover of their Wireless EV Charger to Toyota Tsusho India Pvt. Ltd., Gurgaon.
- Airth, a climate tech startup supported by SIIC and IIT Kanpur, secured funding on Shark Tank India from Aman Gupta and Vinita Singh for its innovative AC filters that significantly enhance indoor air quality.
- Terraqua UAV Solutions Terraqua UAV Solutions, selected under Operation Dronagiri, launched a flood disaster response initiative in Kanpur with support from NTT DATA's CSR program.
- KAFFA KUWWA INNOVATIONS won the "Best Product & Stall" award at StartUp Expo 2024, sponsored by NABARD.
- Arc Robotics is part of UNICEF's "Summit of Our Future" campaign.
- NadiPulse Prognostics signed an MoU with AIIA, New Delhi, under the ICAINE (Incubation Centre for Ayurveda Innovation and Entrepreneurship) for the clinical validation

of our Nadi Parikshan equipment, nPulse, on the 5th of July 2024.

- Pacing Grass secured first place in the SIDBI Cluster Intervention Program under the Indo-Israel Agritech Co-Incubation Program.
- Agronxt participated in the “Impact Harvest Forum” at the United Nations Conference Centre (UNCC) in Bangkok, Thailand.
- Deep Algorithms Solutions was awarded a patent for its innovative System, Method, and Device for Continuous User Authentication and Verification.
- Water and Spices, registered as e-Panipuri Kartz, successfully obtained a patent for their state-of-the-art technology, the "Automatic Panipuri Flavour Dispensing Machine.
- Aerosys Aviation was awarded a certificate by the Directorate General of Civil Aviation, Government of India, for the design, specification, construction, and performance of their unmanned aircraft system ‘Vedansh’.
- Grid-India Power System Award (GIPSA) was awarded to exceptional research in the power systems sector to Doctoral and Master’s students facilitated by SIIC-IIT Kanpur.
- Cybersecurity Startups - SIIC, IIT Kanpur, and C3i Hub launched products from six innovative cybersecurity startups—SecureDApp, Hommi, Level 7 Infosec Pvt. Ltd., Cyber Chakra Technology, Ansh Tech Labs, and xIoTz Private Limited—at the Conference on Emerging Trends in Cybersecurity.

- Genesis scheme SIIC joined the GENESIS scheme by the MeiTy to boost startup innovation in Tier 2 and Tier 3 cities across Uttar Pradesh.
- YourNest Venture Capital, incubated at IIT Kanpur's Noida Extension Centre, launched the deep tech accelerator program in collaboration with SanchiConnect and SIIC IITK as an ecosystem partner.
- IIT Kanpur's BFI-Biome Cohort, in collaboration with Blockchain for Impact, announced its inaugural awardees recognizing significant advancements in medical technologies.
- VU-Dynamics and Cyethack Solutions were pivotal in addressing key challenges at Prayagraj Maha Kumbh 2025.
- Ekarigiri (Krishi Mandi) and Stillsweb were selected under Operation Dronagiri, part of the National Geospatial Policy 2022.

C3i HUB

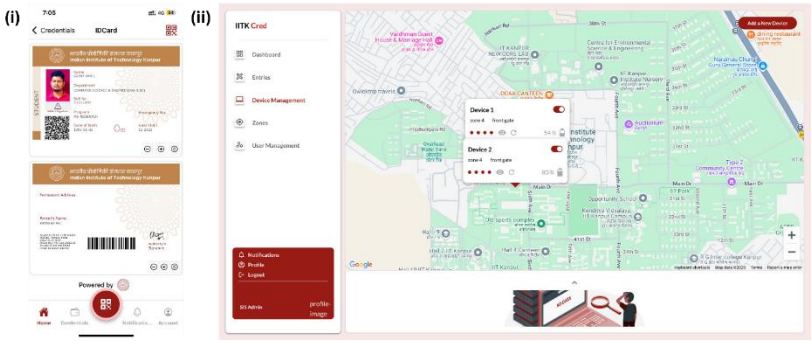
C3iHub (Cybersecurity and Cybersecurity for Cyber-Physical Systems Innovation Hub) is a Technology Innovation Hub established at IIT Kanpur in 2020, funded by the Department of Science and Technology, Government of India, under the National Mission of Interdisciplinary Cyber-Physical Systems.

This year has been a tremendous year for C3iHub, as it has achieved upgradation to Technology Translation Research Park (TTRP) by the Department of Science & Technology, GoI. As TTRP, C3iHub will focus on the advancement of cybersecurity technologies in emerging risk areas and promote deep-tech start-ups while facilitating strong industry-academia partnerships.

In the past year, C3iHub has secured a prestigious order for installing the IT-OT Security Operations Centre (SOC) at Bhilai Steel Plant, SAIL, and a centralized SOC at the Indian Ports Association (IPA) for monitoring major Indian Ports. C3iHub piloted sector agnostic Cyber Security Capability Maturity Model (CSCMM) with NCIIPC at different critical sector organizations across India throughout the year, paving the stage for the launch of the model. C3iHub is also developing automated tools for maturity level assessment.

C3iHub has deployed Blockchain SSI (Self-Sovereign Identity) based Employee ID Cards and Entry-Exit Management System for IIT Kanpur. This innovative system enables seamless entry

of students and employees into hall premises and research laboratories without requiring physical ID cards.



(i) SSI Employee ID card, and (ii) SSI Credentials-based entry-exit system deployed at IIT Kanpur Campus

Additionally, C3iHub-developed SSI Airworthiness Certification for Centre for Military Airworthiness & Certification (CEMILAC), which was launched in March 2025, is empowering regulators, manufacturers, and airlines to access real-time verifiable certificates securely, leading to efficient aviation management.

Two technology inventions have been granted patents: System for Extracting Malware Capabilities and Method Thereof (Patent No. 563203, 2025) and System and Method for Cybersecurity Risk Management (Patent No. 564763, 2025).

In the past year, C3iHub has provided cybersecurity audit services to industries of diversified sectors, including IPA, Sud Life Insurance, BIT Mesra Institute, Bhilai Steel Plant, Headquarters Central Command, Lucknow, etc.

C3iHub organized an international conference on emerging trends in cybersecurity (CCETC 2024) at IIT Kanpur from October 22nd to 25th, 2024. This aimed to foster in-depth discussions on emerging cybersecurity trends and threats while exploring innovative solutions and protection strategies for real-world security incidents. The conference focused on four key domains: Electronic Warfare, Post-Quantum Cryptography, Supply Chain Security, and Advanced Persistent Threats. This event featured distinguished keynote speakers from George Mason University, MITRE Corporation, and New York University. Six start-ups launched products during this conference: Strotapanga by Ansh Tech Labs, Chakra Imager by Cyber Chakra, AccuRecon Module by Level 7 InfoSec, SecureWatch by SecureDApp, Smart Home Ecosystem by Hommi Technovation, Cloud Security Posture Management by xIoTz.

C3iHub has organized several training initiatives throughout the year 2024 - 2025 in online as well as offline mode. Several important training programs are mentioned in the schematic.

C3iHub organized a cybersecurity hackathon from December 2024 to February 2025 for awareness among youth. The hackathon enabled students across India to demonstrate their skills and innovative solutions against the real-world cybersecurity challenges designed by C3iHub researchers & start-ups. The solution track opened for UG/PG students focused on IT Security, Cybercrime Investigation, and Web3 Security, whereas the Start-up Track, open for aspiring entrepreneurs, focused on areas of IT Security, Web3 Security, Mobile Security, Privileged Access Management, Automotive Security, Security of AI-ML,

and Cybercrime Investigation. Over 7,000 registrations were received, and 201 finalists from 54 teams in the Solution Track and 11 shortlisted start-ups in the Start-up Track finally competed for the winning prizes. The grand finale of the Cybersecurity Hackathon was organized by C3iHub from February 16 to 18, 2025, at IIT Kanpur. It was sponsored & partnered by eminent organizations, e.g., BEL, SBI, AWS, Siemens, L&T Technology Services, etc. The HACK IIT Kanpur Cyber Security Hackathon, organized by C3iHub, inspired students to tackle cybersecurity risks and invent solutions to mitigate those.

IIT KANPUR RESEARCH AND TECHNOLOGY PARK FOUNDATION

Technopark@IIT Kanpur, since its inception in 2019, has actively engaged with a broad spectrum of enterprises across diverse sectors and leading industry bodies. Simultaneously, it has cultivated strong ties with internal stakeholders—faculty, researchers, students, and institutional R&D groups—enabling companies to align their innovation strategies with cutting-edge academic research.

The year 2024-25 was a milestone for Technopark@IIT Kanpur as it shifted its operations to its new Phase 1 facility located within the IIT Kanpur campus. The state-of-the-art facility is spread over two and a half lakh square feet of space and is solely dedicated to driving transformative partnerships, enabling

research translation, and building a future-ready industrial landscape rooted in academic excellence. The facility currently houses R&D centers of 23 companies - 15 fully operational and 7 in the setting up stages.

HIGHLIGHTS 2024-25

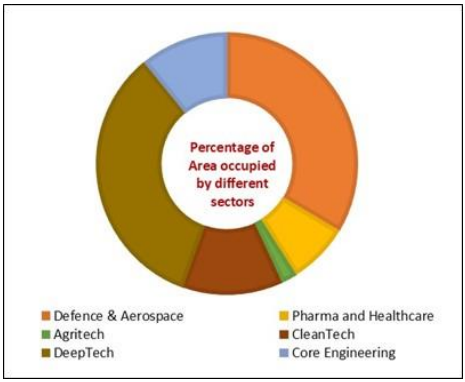
Portfolio Growth

- The trend highlights growing interest from Kanpur-based and outstation industries to co-locate at Technopark@IIT Kanpur to harness IIT Kanpur's research expertise. Of the 25 current member companies, 10 joined in 2024–25; based on the nature of the engagement model, the companies are categorized into Innovators (I) (residential), Pioneers (P) (virtual), and Enablers (E) (CoEs/Testing Labs.).
- **AVPL International (I)** is a global leader pioneering the future of agriculture with innovative drone technology, comprehensive training, and fostering entrepreneurship. The company has set up its R&D office (1680 sq. ft.) in Technopark@IIT Kanpur to conduct collaborative research on Drone Communication Systems and SWARM Drone Technologies for agricultural applications.
- **RMV Group of Companies (I)** is the first Kanpur-based resident partner of Technopark@IIT Kanpur, working in high-end manufacturing in defence, firearms, and automotive technology. Three of the RMV Group Companies (Cap-

ital Airgun Manufacturing, RMV Machines and Tools Industry, and RVB Shorlube) will have their presence in Technopark@IIT Kanpur (2898 sq. ft.) and establish a NABL-certified laboratory to meet the material testing requirements of both researchers and industry stakeholders.

- **Invariance Automation (I)** is developing AI- and ML-integrated high-precision machinery for SMT manufacturing. Initially incubated at IIT Kanpur, the company is now advancing to Technopark@IIT Kanpur for the next phase of its growth by setting up a cutting-edge R&D center (1620 sq. ft.).
- **Axiot Informatics (I),** through its R&D presence in Technopark (285 sq. ft.), the company plans to initiate collaborations in embedded systems, motor controllers, railway sensors & isolators, & clean energy.
- **Treacle Technologies (I)** is working in the areas of deception technology, active defence, detection of ransomware, APTs & active hackers in the network at the earliest stage post-intrusion and early warning system of the network.
- **DREAM Aerospace (I)** is collaborating with IIT Kanpur to develop clean and efficient propulsion methods and state-of-the-art testing facilities to ensure optimal performance under real and simulated space conditions.
- **Lenek Technologies (I)** is developing an AI-enabled handheld X-ray imaging system for Tuberculosis detection. The project is a collaboration between the Indian Council of Medical Research (ICMR) and IIT Kanpur.

- **Airawat Research Foundation (E)** is a Centre of Excellence in Artificial Intelligence for Sustainable Cities initiated by the Ministry of Education under the mission 'Make AI in India, Make AI work for India' by the Ministry of Housing and Urban Affairs, GoI. The center is focused on developing AI-driven technologies for air quality, urban mobility, flood forecasting, critical infrastructure monitoring, and energy optimization.
- **NMTronics Centre of Excellence for Electronics Manufacturing and Skills Development (E)** is planned in Technopark@IIT Kanpur to facilitate development in semiconductor technologies, embedded systems, Internet of Things (IoT), and Artificial Intelligence (AI), translating manufacturing concepts into a tangible reality.
- **JK Fenner (India) Limited (P)** is actively engaging with IIT Kanpur through CSR-funded research project internships for high-performing 3rd and 4th year B.Tech. students, hackathons, and collaborative R&D.



R&D Impact Generated

Staying true to its sole vision of fostering strategic R&D partnerships between IIT Kanpur and industry, Technopark@IIT Kanpur strictly measures the R&D impact generated on the IIT Kanpur ecosystem by its member companies through various modes of engagement that can vary from consultancy and sponsored research projects to faculty to internships and full-time placements to IIT Kanpur students.

Projects Sanctioned	4
Research Articles published	2
Patents Applied	1
Internships offered	29 (MTX Labs, 3; Merai Newage, 8; Maraal Aerospace, 1; SkyAI Technologies, 2; Dream Aerospace, 8; Treacle, 4; Lenek, 3)
Full-time Hirings	33 (Merai Newage, 29; TSTS, 1; Maraal Aerospace, 3)

In addition to its member companies, Technopark@IIT Kanpur actively engages with every organization that approaches it with serious R&D objectives. Over the past year, Technopark@IIT Kanpur has engaged with **nearly 30 companies**, facilitating around **50 interactions** between industry partners and IIT Kanpur faculty members.

International Partnerships

Technopark@IIT Kanpur has partnered with NMexus™, an SPV (Special Purpose Vehicle) between New Mexico Partnership and Stup LLC. A platform for every independent commercial entity working within the IIT Kanpur ecosystem to enter the U.S. market via the NMexus Centre in Albuquerque.

Growth Stories

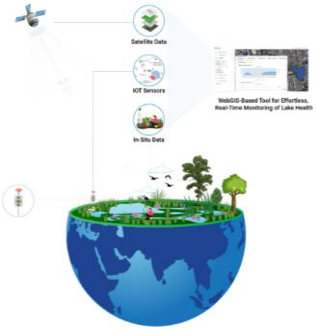
MTX Labs (member company since 2019)

- Launched MedPstat 1.0, a state-of-the-art handheld potentiostat and electrochemical analyzer developed in collaboration with IIT Kanpur in May 2024.

SkyAI Technologies (member since September 2023)

- Filed a joint patent with Prof. Indranil Saha from the Department of Computer Sciences titled “System for detection and localization of drones in real-time and method thereof” (Patent application Ref. No/202411038247; Dated: 19-06-2024)

Geo Climate Risk Solutions (member since August 2020)



- Implemented its flagship product, LAMAS (Lake Management System), which has been developed in collaboration with IIT Kanpur in Ayodhya in collaboration with the Uttar Pradesh government authorities.
- Selected for Cohort 6 of ImagineH2OAsia and 2024 Cohort of the prestigious Standford Seed Transformation Programme.
- Winner of the India Water Pitch-Pilot Scale Challenge, organized by the Ministry of Housing and Urban Affairs (GoI), Amrut 2.0.

AVPL International (member since April 2024)

- Announced a $12 million investment over the next two years to scale up drone training, innovation, and manufacturing.
- Announced establishment of 50 Drone Aero-Vision Labs (in partnership with All India Council for Technical Education AICTE), onboarding 30 Remote Pilot Training Organisations (RPTOs).
- Laid the foundation stone for two new drone manufacturing facilities, including a ₹15-crore unit in Bihta, Bihar, besides building India's largest drone training center in Hisar, Haryana.

KOTAK SCHOOL OF SUSTAINABILITY (KSS)

The Kotak School of Sustainability (KSS) at IIT Kanpur, a collaboration with Kotak Mahindra Bank, is a beacon of excellence in sustainability education and research. The vision of the school is to provide thought leadership and solutions towards sustainability actions and prepare future generations to lead the cause of sustainable development. Launching its M.Tech. in Artificial Intelligence for Sustainability in August 2025 with 20 seats, KSS focuses on data science, machine learning, and applications in climate modeling, water management, and environmental challenges. A PhD program is slated for January 2026. KSS has already hired about half a dozen highly talented & trained faculty (at both entry and senior levels) from top institutions and is continuing with this effort. The school also has amongst its faculty eminent practitioners who bring rich experience from government and industry. Housed in a LEED Platinum-rated building by late 2026, it hosts the National Centre of Excellence in AI for Sustainable Cities under the Airawat Research Foundation, addressing urban pollution, mobility, and governance.

DRDO-INDUSTRY-ACADEMIA CENTRE OF EXCELLENCE AT IIT KANPUR (DIA COE IIT KANPUR)

Indian Institute of Technology (IIT) Kanpur and the Defence Research & Development Organisation (DRDO) have collaborated to establish a DRDO-Industry-Academia Centre of Excellence at IIT Kanpur (DIA CoE IIT Kanpur) for interdisciplinary research in next generation defence technologies. The DIA CoE IIT Kanpur aims to build an ecosystem that facilitates technology development in the academic environment through experienced faculty and bright scholars through harnessing and synergizing the strengths of academia, student community, research scholars, niche technology industries, and DRDO scientists.

DIA CoE IIT Kanpur is mandated to spearhead focused research in identified research and development verticals, including Flexible Electronics and Substrates (FES) to build devices and systems based on thin films for strategic applications; Sensing, Stealth and Surface Protection Using Nano Materials and Meta Materials (SSSP) to provide fundamental contribution to material selection and design; Accelerated Material Design and Development (AMDD) to reduce the number of actual trial experiments while reaching optimal solution via high throughput experiments; High Energy Systems (HES) to focus on the modelling of high-performance explosives and performance prediction of metalized explosives; Bio- Engineering and CBRNE Applications (CBRNE) to develop technologies for applications

ranging from sensing hazardous agents to wound healing and Software Defined Radio and Military Communication Technologies (SDRMC) to develop flexible, reprogrammable radios and secure, resilient, interoperable communication system.

Since the establishment of the CoE, a total of ninety-two project proposals worth Rs. 461.56 cr have been submitted on a diverse range of topics for the consideration of DRDO. Six projects worth Rs. 240.3 cr were sanctioned, eight projects worth Rs. 272.23 cr have been approved, and 32 projects worth Rs. 1764.91cr are under review. The relevant details, as of May 1st, 2025, are as under:

RV	Proposals Submitted	Cost (lakh)	Projects Sanctioned	Cost (lakh)	Projects Approved	Cost (lakh)
1	12	5214.15	1	886.00	2	811.61
2	23	9448.52	3	958.00	1	667.43
3	13	12686.23	1	323.00	0	
4	10	4279.44	0		3	935.71

5	21	8845.00	1	236.00	2	307.61
6	5	4364.65	0		0	
Other	8	1317.57	0		0	
Total	**92**	**46155.56**	**6**	**2403.00**	**8**	**2722.36**

Table: *Research Vertical wise compilation of project proposals received*

DIA CoE IIT Kanpur drives cutting-edge research across six key verticals, and a concise overview of each vertical, their thrust areas, and key projects are detailed below:

Flexible Electronics and Substrates (FES)

- Thrust Areas: Multi-element sensors, ultra-thin flexible electronics, conductive transparent coatings, packaging, and applications like stealth, flexible antennas, and energy harvesting.
- Projects Sanctioned: Flexible Solid-Electrolyte Batteries (Flex SEA Bat).
- Projects Approved: Antennas for SDR and SATCOM, flexible encapsulation for photovoltaics.

Sensing, Stealth, and Surface Protection (SSSP)

- Thrust Areas: Nano-material-based sensors, multi-spectral stealth, marine coatings, high-entropy materials, and scalable production of nano/meta-materials.
- Projects Sanctioned: Multispectral stealth coatings for visible, NIR, thermal, and microwave ranges.
- Projects Approved: Super-omniphobic marine coatings, metamaterial antennas for X- and Ku-band.

Accelerated Material Design and Development (AMDD)

- Thrust Areas: Integrated Computational Materials Engineering (ICME) for advanced metals, super-alloys, naval steel, and AI/ML-driven material design.
- Project Sanctioned: ICME for near-alpha Ti-alloy blisks.

High Energy Systems (HES)

- Thrust Areas: Scalable additives, life prediction of energetic materials, modeling warhead chemical structures, green synthesis, and internal ballistics.
- Projects Approved: Shock attenuation in heterogeneous targets, green catalytic synthesis of TATB.

Bioengineering and CBRNE Applications (CBRNE)

- Thrust Areas: Tissue regeneration, assistive devices, wearable sensors, CBRNE threat detection, decontamination, and AI-based prosthetics.
- Project Sanctioned: AI-driven broad-spectrum antivirals.

- Project Approved: Indigenous porcine collagen for corneal/bone regeneration, AI-based powered prostheses.

Software Defined Radio and Military Communication Technologies (SDRMC)

- Thrust Areas: Waveform design, wireless systems, spread spectrum analysis, cognitive radio waveforms, and efficient SDR hardware.
- Projects Under Review: Formally verified micro-kernel, UWB antenna arrays, compact UWB antennas, and cableless active array antenna units for AEW&C radar.

In addition, the Centre also received proposals outside its designated research verticals, including a dynamic suspension-based space robotics platform and high-entropy ultra-high-temperature materials. These proposals have been forwarded to relevant DIA Centers of Excellence for further consideration.

GANGWAL SCHOOL OF MEDICAL SCIENCES AND TECHNOLOGY AT IIT KANPUR

Gangwal School of Medical Sciences and Technology (GSMST) at IIT Kanpur is dedicated to advancing medical education, research, and innovation. Established with a vision to bridge the gap between engineering and medicine, GSMST integrates cutting-edge technology with medical sciences to address contemporary healthcare challenges.

GSMST, over the past academic year, has initiated partnership research initiatives with the aim of providing a robust platform for interdisciplinary research and collaborative projects. It reflects the School's continued commitment to transformative medical education, cutting-edge healthcare technology, and its mission to bridge the gap between science and clinical practice for improved public health outcomes.

COLLABORATIONS

MoU with the Department of Medical Health and Family Welfare, Government of Uttar Pradesh, for Digital Health Stack

GSMST at IIT Kanpur and the Department of Medical Health and Family Welfare, Government of Uttar Pradesh, signed an MoU to revolutionize healthcare delivery and advance telemedicine facilities in the state through the power of artificial intelligence on February 27th, 2024.

MoU with Centro Nazionale di Adroterapia Oncologica (CNAO) Pavia, Italy

An MoU signed with Fondazione CNAO - Centro Nazionale di Adroterapia Oncologica in Pavia, Italy, on March 7, 2024, to establish a joint research program. GSMST will collaborate with CNAO on a "Capacity Building Program" for Hadron Therapy in India.

MoU with ICICI Foundation for Inclusive Growth

GSMST, IIT Kanpur, and ICICI Foundation for Inclusive Growth (ICICI Foundation), the CSR arm of ICICI Bank, signed an MoU to work together on a Digital Health Stack project on September 17th, 2024.

The ICICI Foundation, through its CSR initiative, has supported the establishment of a state-of-the-art Pathology Laboratory on the IIT Kanpur campus.

UP Government & IIT Kanpur collaboration on State-of-the-art health app designed to bridge the gap in Medical Services

The Uttar Pradesh Government, in collaboration with IIT Kanpur, is introducing a state-of-the-art health app designed to bridge the gap in medical services, especially in rural areas. This innovative app will provide real-time updates on doctor availability, including private practitioners, and allow users to receive prescriptions and medicines directly through the app or even via WhatsApp.

MoU with Armed Forces Medical Services, Ministry of Defense

GSMST, IIT Kanpur signed an MoU with the Armed Forces Medical Services on April 18th, 2024. This collaboration focuses

on joint R&D for technologies suited to soldiers in difficult terrains, including AI-based tools and co-development of biomedical solutions. A *capsule course (ARONAV)* was also conducted for AFMC cadets.

MoU with IIM Lucknow

GSMST, IIT Kanpur signed an MoU with IIM Lucknow to offer an academic Postgraduate Joint Degree Program on “Healthcare Management". This MoU was signed on September 26, 2024.

MoU with NSite Medical, Stanford (Dr. Michael J Gardner, Stanford, CA, USA)

Nsite Medical signed an MoU with GSMST, IIT Kanpur, to collaborate on cutting-edge software development initiatives in April 2025.

COLLABORATIVE BIOMEDICAL RESEARCH

Faculty exchange program This collaboration aims to explore opportunities for interaction among members of faculty between IIT Kanpur and AFMS institutions.

Joint Academic Activities and Events AFMS and IIT Kanpur will formulate joint academic activities such as short courses, seminars, workshops, and conferences based on mutual interests and available expertise in the institutions.

OUTREACH

Various workshops, international research symposiums, and lecture series were organized, which are listed below:

- Symposium on Emerging Technologies and Materials in Medicine (ETMM-2024)
- Bansal Workshop Series on Bansal Workshop Series on Clinical & Community Medicine - GSMST, IIT Kanpur and Faculty of Medicine, Dentistry, and Health Sciences (FDMHS), University of Melbourne
- Workshop on Innovations in NeuroTech, Showcasing Synergies Between Clinical Neuroscience, Computation, and Engineering
- International Research Symposium on “Advancements in Precision Healthcare Robotics and Assistive Technology”
- SPARC Symposium “Point-of-Care Healthcare Devices” & Pant Workshop Series on Medical Technology & Future Medicine
- Jalan Distinguished Lecture Series in MedTech Innovation
- Joneja Colloquium Series in Clinical Medicine

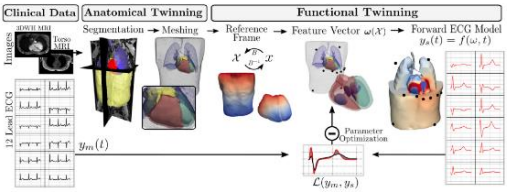
GLOBAL AND NATIONAL ENGAGEMENTS

- Economic Times Healthcare Conclave 2025 GSMST participated in the Healthcare Conclave 2025, centered around the theme: “Catalyzing Healthcare Transformation: Innovation, Accessibility.

- In November 2024, GSMST, IIT Kanpur, joined the Global Consortium of Innovation and Engineering in Medicine (GCIEM). The GCIEM is an international public-private-government collaborative serving the world as the premier global network to advance medicine through engineering and innovation.

GSMST RESEARCH HIGHLIGHTS:

Cardiac Digital Twin



As a complementary approach, a demonstration project on Cardiac Digital Twin is underway. The project is working to detect ablation targets within a few hours, saving time for patients suffering from ventricular arrhythmias and other cardiac anomalies and need to undergo ablation.

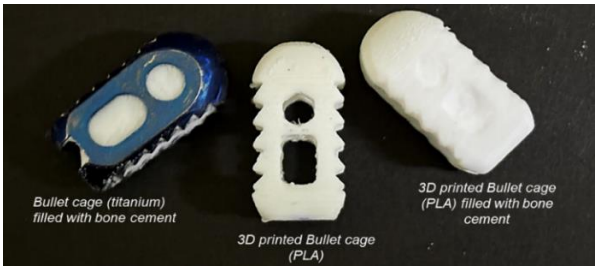
Self-navigating smart wheelchair

A group of faculty and student innovators with expertise in robotics and automation, linear and nonlinear controls, wide area control, and dynamical control systems in biology, computer vision, neural networks, and guidance of autonomous vehicles

have developed an escalator climbing IOT-enabled wheelchair, which is ready for field trials.

3D-printed porous interbody spacer for spinal deformity

A group of faculty members and scientists with expertise in biomaterials, tissue engineering, and advanced material processing, along with a group of orthopedic surgeons, are developing a 3D-printed porous interbody spacer for spinal deformity. Designed for spinal deformities, this novel biomaterial incorporates antimicrobial hydrogels, fusion screws, and anti-slip features to enhance stability and healing.



VISIT TO GSMST

Major General Dharmesh, Armed Forces Medical Services (AFMS)

A team from the Armed Forces Medical Services (AFMS), led by Major General Dharmesh, Additional Director General AFMS (Medical Research, Health & Training), visited IIT Kanpur for an interaction with the Director and faculty members on May 27, 2024. This visit aimed to explore possible areas of collaboration

between the two institutions, building upon the MoU signed earlier this year.

GSMST IN NEWS

Cover Page feature in The Week Magazine, June 2024 edition

Featuring path breaking technological advancement and impactful initiatives by the upcoming Gangwal School of Medical Science and Technology.

State-of-the-art health app designed to bridge the gap in Medical Services

The Uttar Pradesh Government, in collaboration with IIT Kanpur, is revolutionizing healthcare by introducing a state-of-the-art health app designed to bridge the gap in medical services, especially in rural areas.

MEHTA FAMILY CENTRE FOR ENGINEERING IN MEDICINE

In the 2024-2025 academic year, IIT Kanpur's Mehta Family Centre for Engineering in Medicine (MFCEM) achieved significant recognition, with its faculty being elected to prestigious academies for groundbreaking research and numerous patents being filed/awarded. MFCEM hosted the Pan-IIT Meeting and

Research Conference on Engineering in Medicine from December 6th -8th, 2024, focusing on Regenerative, Molecular, and Digital Medicine, with participation from 31 institutes. The event was inaugurated by Shri Ranjan Kumar (IAS), with Shri Rahul Mehta as a guest of honor. Responding to the demand for skilled biomedical engineers, the Department of Biological Sciences and Bioengineering (BSBE), MFCEM, and Gangwal School of Medical Sciences and Technologies (GSMST) launched a unique M.Tech program in Biomedical Engineering starting July 2024. This program, a first of its kind, includes "clinical immersion" at esteemed medical schools to enhance practical training.

Pan-IIT Meeting and Research Conference on Engineering in Medicine, December 6-8, 2024

HIGHLIGHTS

Faculty: Honours, Awards, Recognitions	5
Academy Member	6
Grants	9
Patents	16
Student/Post-doc Achievement	26
Peer-reviewed Publications	81
MFCEM Events	12

AWARDS/RECOGNITION/ HONORS

- Prof. Bushra Ateeq was awarded the TATA Innovation Fellowship 2023 - 24, DBT India.
- Prof. Ashok Kumar was conferred an honorary doctorate in the field of technology, DSc (Tech), from Aalto University, Finland.
- Prof. Bushra Ateeq was felicitated for the Rajib Goyal Prize conferred by the Kurukshetra University, Kurukshetra, on September 6th, 2024.
- Prof. Bushra Ateeq was invited for an “At Home” ceremony hosted by the Honorable President Smt. Droupadi Murmu at the Rashtrapati Bhavan, New Delhi, on 15th August 2024.
- Prof. Bushra Ateeq was awarded the inaugural edition of the Grihshobha Inspire Award in the STEM category, conferred by Delhi Press, a Member of the Academy.

FELLOW OF ACADEMY

- Prof. Ashoke De has been elected as a Fellow of The American Society of Mechanical Engineers (ASME) for exceptional engineering achievements and contributions to the engineering profession and ASME.
- Prof. Ashok Kumar has been elected as a Fellow of the International Academy of Medical and Biological Engineers (IAMBE), class of 2024.
- Prof. Ashok Kumar has been elected Fellow of the Indian National Academy of Engineers (INAE) for the year 2024.
- Prof. Ashok Kumar has been elected Fellow (2024) of the National Academy of Medical Sciences (NAMS), Ministry of Health and Family Welfare, Government of India.
- Prof. Bushra Ateeq has been selected for the World Academy of Sciences (TWAS)- UNESCO Award (2026) in Medical & Health Sciences.
- Prof. Bushra Ateeq has been elected Fellow (2024) of the National Academy of Medical Sciences (NAMS), Ministry of Health and Family Welfare, Government of India.
- Prof. Ashok Kumar was conferred with an honorary membership in the Romanian Society of Biomaterials during the 10th BiomMedD 2024 held in Romania.

POSITIONS/CHAIRS

- Prof. Ashok Kumar was selected for Poonam and Prabhu Goel chair
- Prof. Dhirendra S. Katti has been appointed as Director of IIT Goa.

GRANTS

- Prof. Bushra Ateeq received a grant from CSIR-ASPIRE, Council of Scientific and Industrial Research. Government of India, for “Liquid biopsy-based diagnostics for circulating biomarkers in prostate cancer”.
- Prof. Saravanan Matheshwaran received a grant from the Department of Science & Technology (DST), Gov. of India-Technology Development, for the “Centre of Excellence in Antimicrobial Resistance”.
- Prof. Saravanan Matheshwaran received a grant from the Department of Biotechnology (DBT) for Title: DBT- Frontiers in Biotechnology for: Deciphering the role of Ustilago maydis SWR1 chromatin remodeler in melanin biosynthesis, morphogenesis, and virulence mechanism”.
- Prof. Saravanan Matheshwaran received a grant from SERB, Gov. of India, for “Deciphering the role of LexA-family transcription regulator induced mutagenesis and AMR of MDR strain of Acinetobacter baumannii”.
- Prof. Appu Kumar Singh (PI) and Rakesh Kumar Majhi (Co-PI) received a grant from the Indian Council of Medical Research, ICMR Intermediate Grant for “Augmenting NK

cell immunotherapy for Oral Squamous Cell Carcinoma by genetic and pharmacological modulation of a calcium-permeable TRP channel Period".

- Prof. Sandeep Verma received a grant from the U.P. government for the "Promotion of Equitable Access to Affordable Healthcare in Uttar Pradesh".
- Prof. Bushra Ateeq received a grant from the Department of Biotechnology Tata Innovation Fellowship for "Fabrication of low-cost microfluidic device for improved molecular diagnostics and assessing treatment response of Prostate Cancer Patients".
- Prof. Jayandharan G Rao received a grant from Scientific and Useful Profound Research Advancement (SUPRA), Anusandhan National Research Foundation (ANRF), DST, for "Next-generation genome engineering and chemo-genetic platform technologies for gene therapy of ocular disorders".
- Prof. Debanjan Dasgupta received two two-year grant under the Ignite Life Science Foundation Award 2025 for "Revealing Circuit Biomarkers in Alzheimer's Disease using Olfactory Stimulation".

MFCEM EVENTS

Conference

- The Pan-IIT Meeting and Conference 2024 on Engineering in Medicine was held from 6th to 8th December at IIT Kanpur.

- A one-day conference on metabolic disorders was organized on 27th September 2024
- The Rice-IITK Workshop was held on NeuroTech Innovations to develop innovative solutions for neurological and psychiatric care.
- Indian National Science Academy (INSA)- and ACS-sponsored workshop for the PhD students under INSA Kanpur local chapter (30th-31st December 2024).

MFCEM Lecture series

- Dr. Umrao Monani, De Vivo Prof. of Neurology, Columbia University Medical Centre, delivered a lecture on “Mechanisms underlying infantile-onset spinal muscular atrophy: Clues from a novel disease modifier”.
- Prof. Arabindo Nath Bose Endowed Lecture titled “Discovery of Bedaquiline and Its Impact on the Global TB Landscape” was delivered by Dr. Anil Koul, VP & Head, Global Public Health Discovery, J&J & a member of the Board of Directors of Janssen Pharmaceuticals.

MFCEM Workshop

- Dr. Sanjay Kumar Mishra, Senior Advisor, Dept of Biotechnology, Government of India, conducted a workshop on Funding and Career Opportunities in STEM in India.
- An interactive session with Ms. Mihikaa Jain on Biomedical Entrepreneurship was held on 28th September 2024.

- Mr. Jacob Koshy, Deputy Science Editor of The Hindu, conducted the workshop on Science Journalism.
- Workshop by Dr. Prince Kumar Lat on Python for Biologists.
- Workshop by Dr. Vanshika Singh, product content specialist at Cactus Communications, on Scientific Writing in the AI Era: A Systematic Approach for Academic Excellence.
- MFCEM Connect with Alumni Dr. Ram Prakash Gupta [PhD, BSBE, IIT Kanpur 2014], Deputy General Manager (Manufacturing), Laurus Labs, India, on the BioTech industry in India.

CHANDRAKANTA KESAVAN CENTRE FOR ENERGY POLICY AND CLIMATE SOLUTIONS

CHANDRAKANTA KESAVAN LECTURE SERIES 2024–25

Eight distinguished lectures delivered by leading figures from academia and industry, each contributing deep insights into contemporary sustainability challenges. The series addressed a diverse yet interconnected set of themes, including advanced climate modeling, emerging sustainable technologies, strategic pathways to Net-Zero emissions, innovative approaches to wastewater treatment, frameworks for environmental governance, and India's evolving energy transition. Collectively, these lectures not only broadened scholarly understanding but also fostered critical discourse on the interdisciplinary imperatives of sustainability in the Indian and global context.

List of Speakers

- Mr. Chandrashekhar Chincholkar, Director - Corporate Advisory at CES India Pvt Ltd, Pune
- Mr. Manish Chourasia, Managing Director of Tata Cleantech Capital
- Mr. Ajay Phatak, Trustee, The Ecological Society, Pune
- Prof. Husain Kanchwala, Assistant Prof. in the Centre of Automotive Engineering and Tribology at IIT Delhi

- Dr. Sudhanshu Shukla, Senior Researcher at Interuniversity Microelectronics Centre (IMEC), Belgium
- Dr. Asit Kumar Mishra, Research Engineer, Marie Sklodowska-Curie fellow
- Dr. Virender K. Sharma, Prof. at the Department of Chemical, Environmental, and Material Engineering at the University of Miami, Florida
- Mr. Manojit Sengupta, Delivery Centre Head - Eastern Region, TCS

Conferences/Workshops/Symposiums

Schmidt Sciences Conference

Title: *"Energy Technologies for India's Decarbonization"*

A high-impact two-day conference bringing together national and international experts to deliberate on cutting-edge innovations and policy frameworks essential for accelerating India's energy transition.

NetZero Dialogue – 4th Edition

Title: *"Socio-ecological Considerations for Renewable Energy Projects"*

This one-day workshop explored the intersection of renewable energy development with social and ecological sustainability, fostering dialogue between researchers, policymakers, and practitioners.

Sustainable Geo Communities Workshop

A two-day workshop focused on community-led sustainability

solutions and decentralized energy systems, emphasizing the role of geospatial approaches and stakeholder engagement in rural and peri-urban contexts.

Faculty Research Support

- Customized EV Drive train test setup
- Multi-carbon Product (C2+) Synthesis through Photo-Electrocatalytic CO_2 Reduction (C2-PECR)
- Improving Emergency Services Preparedness for Urban Floods in India
- Lamination of Blade-Coated Semi-transparent Perovskite Solar Cells

STUDENT ACTIVITIES

Student participation in various conferences & workshops was encouraged, such as the 5th International Conference on Materials: Advances in Material Innovation, Switzerland, and the Sustainable GeoCommunities Workshop, Noida.

One of our PhD Students attended an advanced course on Vehicle Dynamics in the Professional Development Program at IIT Madras.

Chandrakanta Kesavan Best Research Thesis Award for Master's Degree – 2024

- Siddharth – Dept. of Sustainable Energy Engineering
- Gudelli Shivakumar – Dept. of Sustainable Energy Engineering

- C. Navya Nirmala – Dept. of Chemical Engineering
- These awards recognize outstanding postgraduate research contributions in the domain of sustainability and energy.

INFRASTRUCTURE CREATION

- Field Emission Scanning Electron Microscope (FESEM), for microstructural characterization of materials, Manufacturer: Thermo Fisher Scientific Apreo 2C
- X-Ray Diffractometer (XRD) for structural analysis of materials, Manufacturer: Rigaku SmartLab SE
- BET Surface Area Analyzer, for surface area analysis of nanomaterials, Manufacturer – Autosorb
- Stylus Profilometer, for thickness measurement in devices, Manufacturer: Bruker Dektak

SAMTEL CENTRE FOR DISPLAY TECHNOLOGIES AND NATIONAL CENTRE FOR FLEXIBLE ELECTRONICS

VISION AND OBJECTIVES

Samtel Centre for Display Technologies: The Samtel Centre for Display Technologies, known more popularly as Samtel Centre or SCDT, is a multi-disciplinary research and development center that caters to prototype building and eventual productization of technology related to Flexible Electronics. The areas of focus broadly include large area

electronics, which are typically printable and are likely to be built on an organic electronics base. The ideas explored at the center are necessarily linked to a real-world application with some practical value. The prototype building and productization are carried out primarily at its industry outreach arm - which is the National Centre for Flexible Electronics (FlexE Centre) - typically with active involvement and participation of industry partners right from the early stages of development and product conception.

National Centre for Flexible Electronics: The National Centre for Flexible Electronics (NCFlexE, also known as the FlexE Centre) was set up as a Centre of Excellence at the Indian Institute of Technology (IIT) Kanpur in 2014 with financial support from the Ministry of Electronics and Information Technology (MeitY), Government of India, and IIT Kanpur. The vision of this Centre is to catalyze the development of domestic industry in the field of large area flexible electronics, and this vision is being executed with the Centre serving as a bridge between the academic ecosystem and the industrial ecosystem.

The second phase of NCFlexE has been sanctioned for a five-year tenure starting from November 2023.

HIGHLIGHTS

Sl No.	Particular	No.
1.	Patents filed	09
2.	Publications	10
3.	NDA and MoU with Industries	11
4.	Ongoing Projects	03

Technology Transfer

IIT Kanpur transferred a technology developed at NCFlexE for the detection of mastitis in bovines on 27th Jun 2024, titled 'Lateral Flow Immunoassay Strip and Method for Detection of Mastitis in Bovines', to Prompt Equipments Pvt. Ltd. To facilitate its widespread adoption, IIT Kanpur signed a technology transfer MoU with Prompt Equipments Pvt. Ltd.

Outreach Activities

Participation and exhibition on the following events

- 51 Dairy Industry Conference & Exhibition 2025, hosted by Indian Dairy Association (IDA) at Samrat Ashoka Convention Centre (Gyan Bhawan), Patna, India, 6th-8th March 2025.
- International Electrotechnical Commission (IEC) in Munich, Germany, 25th -27th February, 2025.

- Innovations Display organized by Society for Information Display (SID) at India Habitat Centre, New Delhi on 10th January 2025.
- Conference on Advances in Chemistry for Energy and Environment at TIFR, Bombay, from 16th – 20th December 2024.
- Inter Dairy 2024, organized by VA Exhibitions Pvt. Ltd. in collaboration with the Indian Dairy Association (West Zone) at Bombay Exhibition Centre, Mumbai, India, 5th-7th December 2024.
- DAE-BRNS 10th Interdisciplinary Symposium of Materials Chemistry (ISMC-2024), BARC, Mumbai 4th-7thDecember, 2024.
- Panel discussion on "Tech4Good – Advancing Disability Solutions through Innovation" at the 11th National Conference on Disability at Sarthak Global Resource Centre, Gurugram on 7th December 2024.
- Panel Discussion on "IT, Electronics & Semiconductors Sector" at the Global Manufacturing Summit, India International Science Festival 2024 at IIT Guwahati on 2nd December 2024.
- Participation in Samanvay 2024, November 2024, International Electrotechnical Commission's General Meeting (IEC GM) in Edinburgh, UK, October 2024, and SEMICON India 2024, Greater Noida, Delhi, India, September 2024.

Annual Short-Course, Industry Meet organized by NCFlexE

- Virtual short Course on Flexible and Printed Electronics: from 25th-27th July 2024, covering various aspects of Flexible Electronics technologies such as OLEDs, TFTs, PV, sensors, etc.
- Virtual "Industry Meet-2024" on 13**th** Dec 2024.

SCDT-FlexE Centre Webinar Series (launched in 2021 and is on-going since)

SCDT and FlexE Centre hosts a monthly Webinar Series bringing together scientists, engineers, researchers, students, entrepreneurs, and industry players involved in different aspects of flexible electronics from around the country (and sometimes outside India as well) on a common platform. This forum helps improve interactions between the different stakeholders in technology as it evolves. More details can be found at https://www.IIT Kanpur.ac.in/scdt/webinars.html.

NATIONAL AEROSOL FACILITY

The National Aerosol Facility (NAF) at IIT Kanpur, in collaboration with Bhabha Atomic Research Centre (BARC) under Dept. of Atomic Energy (DAE), is a state-of-the-art, multi-purpose research Centre dedicated to study aerosol behavior under conditions simulating severe nuclear reactor accidents. The major objectives of NAF include generating an extensive database on aerosol retention factors in representative PHT (Primary Heat Transport) piping systems for various thermal-hydraulic conditions during typical post-severe accident scenarios, both dry and wet conditions. This database is used for the validation and development of nuclear accident codes. In April 2022, NAF completed its setup and commissioning activities for nuclear reactor safety research on Indian PHWRs. Recent developments have seen the initiation of a project in collaboration with the Reactor Safety Division (RSD) of BARC, titled “Aerosol Transport Behaviour Experiments at National Aerosol Facility in Context of Nuclear Reactor Accidents,” and two new projects are submitted to BRNS, DAE by RSD, BARC.

Following are the wide array of projects and initiatives registered under NAF. The funding agencies and title of the projects are mentioned below.

- **Ministry of Education, GoI** (2024-2025): Centre of Excellence in Artificial Intelligence for Sustainable Cities in PoC stage. Forecasting and modeling for Urban sustainability under 4 tracks viz. Air Quality, Energy, Mobility and Governance.
- **Ministry of Earth Sciences (MoES), GoI** (2023-2027): Ice Nucleating Particle and Cloud Condensation Nuclei Properties in the North-Western Himalayas (Ice-Crunch).
- **Open Philanthropy** (2022-2026): To Support the Rural Air Quality Monitoring Project.
- **Clean Air Fund** (2023-2025): Dynamic Hyper-Local Source Apportionment for Real-Time Policy Action.
- **Clean Air Fund** (2023-2025): Atman-Centre of Excellence: Core Support Grant.
- **Clean Air Fund** (2024-2025): Supporting Indigenous Development of Low-Cost Sensors.
- **Klenviron Technologies Pvt Ltd, Mumbai** (2024-2027): Testing the Efficacy Of Air Purifier Modules Under Outdoor And Room Conditions: To test the performance of their air purifier.
- **Bhabha Atomic Research Centre** (2023-2025): Aerosol Transport Behaviour Experiments at National Aerosol Facility In Context of Nuclear Reactor Accidents.

- **Autotronics Innovation Pvt Ltd** (2024-2025): Testing the Efficacy of Air Purifier Modules Under Room Conditions.
- **GE India Industrial Private Limited** (2024-2026): Collecting Airborne Dust Samples from Various Airports Across India.
- **Swati Energy & Projects (P) Ltd** (2024-2027): Joint Collaboration with Swati Energy for Knowledge Sharing.

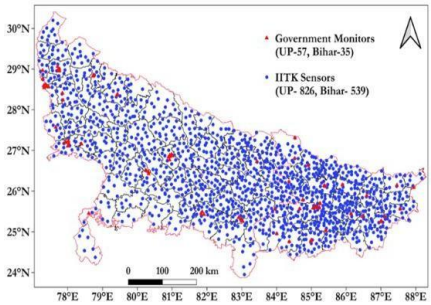
Dynamic Hyper-Local Source Apportionment for RealTime Policy Action

The project seeks to establish a novel technique called Dynamic Hyper-local Source Apportionment (DHSA) for real-time and low-cost Source Apportionment (SA). Mobile AQM laboratory housing sophisticated instruments (like Aerosol Mass Spectrometer (AMS), Xact, Scanning Mobility Particle Analyzer (SMPS), Aethalometers, E-Bam, Optical Particle Sizer (OPS), along with the portable sensor units) was developed for testing the technique across Lucknow and Kanpur. The mobile laboratory has completed the last cycle of sampling across different category sites in Lucknow and Kanpur in this period.

NAF incubated a section-8 company as a part of the Airawat Research Foundation. In this project, the PI of the National

Aerosol Facility will be acting as Project Director. A mobile van for DHSA has been deployed in Delhi to monitor air quality in various locations in collaboration with the Delhi Pollution Control Committee (DPCC).

Ambient air quality Monitoring of Rural Areas using Indigenous Technology (AMRIT) project



IIT Kanpur established a network of 1400 Sensor Ambient Air Quality Monitors (SAAQM) across 539 and 826 block development offices in Bihar and Uttar Pradesh, respectively. Partnerships with Bihar (BSPCB, Rural Development Dept.) and Uttar Pradesh governments (Environment, Forest and Climate Change Dept., UPPCB, Rural Development Dept.) facilitate monitoring and mitigation. Hyper-local air quality data collection began in April 2023. IIT Kanpur also set up three unique co-location calibration facilities to evaluate 280-300 SAAQMs simultaneously.

Air Quality Disparities: The SAAQM network mapped fine-scale pollution across urban, suburban, small-town, and rural areas in Uttar Pradesh and Bihar.

Air-Shed Detection: Data-driven analysis identified five consistent airsheds in Bihar, with three in the north and two in the south of the Ganges.

Exposure and Health Risks: Northern Bihar districts showed PM2.5 exposure levels 1.4 times higher than southern districts.

Network Optimization: Sensor placement is optimized using a heuristic approach and greedy algorithm, factoring in population density and PM2.5 emission data per sq. km.

Hotspot Detection: XGBoost and RT-RF advanced machine-learning models identified key factors influencing PM2.5 distribution in spatial data.

NATIONAL CENTRE FOR GEODESY

The National Centre for Geodesy (NCG) at IIT Kanpur was established on July 1, 2019, with support from the Department of Science and Technology (DST), Government of India. It is the first center in India dedicated to supporting education and research in Geodesy. NCG addresses the national-level education opportunities in Geodesy and allied areas, which very few institutes in India offer. NCG's primary goal is to promote geodesy education, capacity building, and R&D. As a hub of excellence at national and international levels, NCG supports PG

programs, organizes training courses, conferences, and workshops, develops educational resources, conducts R&D projects with high-precision geodetic infrastructure, processes and analyzes geodetic data, and collaborates with national and international organizations.

Significant achievements of the Centre (2024-2025):

- Five training programs and workshops were organized to impart knowledge in geodesy and related areas (> 100 persons trained).
- NCG supported 7 PhDs, 7 MS(R)s , 3 DIITs and 9 interns
- Five corner reflectors have been installed to calibrate upcoming NISAR mission data in collaboration with SAC (ISRO).
- 15 MoUs have been signed with various organizations/institutes.
- NCG members have been invited to participate in the governing and advisory boards of the International Association of Geodesy's Global Geodetic Observing System and International Gravity Field Service, respectively.

Outreach Activities:

- Prof. Onkar Dikshit delivered a lecture at the National Workshop on 'Precision Mapping: Geodesy, DGPS, and Drones for Surveying and Mapping', organized by the Regional Centre for Geodesy (RCG) at IIST from October 22nd-24th, 2024.

- Prof. B. Nagarajan was invited to deliver the lectures at the Winter School on Advanced Geospatial Data Gathering and Management Techniques for Sustainable Smart City Development, held at Chennai Institute of Technology, Kundrathur, Chennai, from November 04-24, 2024.
- Dr. Sushant Shekhar and Dr. Somalin Nath were invited for the guest lectures ATAL FDP on “Advancing Sustainable Development: Integrating Remote Sensing and GIS Technologies” held on 15th and 20th December 2024 at Tula’s Institute, Dehradun.
- Prof. B. Nagarajan was invited to deliver a lecture at the CSIR-CSIO International Workshop, “Observing Ground Deformation from Space and in the Field, from December 16-19, 2024.
- Prof. B. Nagarajan was invited to deliver the lectures in STTP on “Advances in GNSS/GPS and open-source solutions for GIS and other applications” at the Regional Centre for Geodesy (RCG) MANIT Bhopal.

Student Achievements

- Arnab Laha (PhD student) has been awarded the Ernst Mach Scholarship - Worldwide for 6 months at TU Wien, Austria (Jan - Jun 25).
- Shivani Singh (PhD student) has been awarded the Ernst Mach Scholarship - Worldwide for 6 months at TU Wien, Austria (Jan - Jun 25).

- Arnab Laha (PhD student) has been awarded the ETH4D Doctoral Mentorship Scholarship for a period of one year with a 3 month (July - Sep 25) stay at the Institute of Geodesy and Photogrammetry, ETH Zürich (Oct 24 - Sep 25).
- Vikas Kumar (PhD student) has been awarded the Raman-Charpak Fellowship 2024.

Key R&D initiatives

- With support from DST, NCG established Regional Centres for Geodesy (RCG) at six academic institutions to promote geodesy at the regional level.
- A CORS network with eight academic institutions has been established, and real-time GNSS data processing at NCG ensures the seamless sharing of raw and processed data. This data is also shared with the national CORS network established by the Survey of India.

Ongoing R&D Projects

Map generalization; Geoid using airborne gravimetry; DORIS for Ocean Monitoring and Climate Studies; Calibration/Validation for upcoming NASA-ISRO (NISAR) mission data; Calibration of NISAR Data with GNSS-IR Derived Soil Moisture for Precision Soil Moisture Retrieval; Impact of geoid on hydrodynamic and landslide studies; Ionospheric Coupling Processes due to Earthquakes & Space weather effects; Climate and Tectonics driven assessment of Landslide Susceptibility in the Northwestern Himalaya.

OFFICE OF INTERNATIONAL RELATIONS (OIR)

NEW PARTNERSHIPS

During the academic year 2024–25, IIT Kanpur signed 12 new partnership agreements with leading universities across Asia, Europe, and North America. These new partnerships include:

In Asia – (i) Nara Women's University, Japan, for cooperation in the areas of faculty and student exchange, joint research activities, and exchange of academic materials and publications; (ii) National Institute for Materials Science (NIMS), Japan for cooperation in the areas of faculty and student exchange; (iii) International Cooperative Graduate Program Agreement with NIMS, Japan; (iv) Osaka University, Japan for collaborative research, lectures, symposiums; (v) Osaka University, Japan for student exchange; and (vi) Kyoto University, Japan for exchange of students based upon existing General Memorandum for Academic Cooperation and Exchange between two universities.

In Europe – (i) Johannes Gutenberg University Mainz, Germany; (ii) University of Nottingham, UK, for cooperation in the areas of faculty and student exchange, joint research activities, and exchange of academic materials and publications; (iii) Financial University, Moscow for collaboration in academics and research; and (iv) Financial University, Moscow for student exchange agreement.

In North America – (i) Johns Hopkins University, USA, for shared research and industry engagement in the areas of engineering, science, medicine, humanities, and business; and (ii) Dept. of Mechanical Engineering FAMU-FSU College of Engineering, USA for research and educational activities such as exchange of faculty and researchers, exchange of students, short-term academic programs and joint research activities.

Establishment of joint research seed grant awards with the University of Alberta, Canada

In January 2024, IIT Kanpur and the University of Alberta (UAlberta) signed an agreement that established a framework for collaborations, specifically in the areas of sustainable energy, climate change, and health sciences, and for a joint degree program for doctoral students.

The “University of Alberta-IIT Kanpur Seed Grant Fund,” established in 2024, awarded seed grant up to ₹ 15,00,000 to IIT Kanpur while the the UAlberta awardees received funding of up to CAD 25,000. List of faculties who received the seed grant from IIT Kanpur are Prof. Raju Kumar Gupta and Prof. Sudarshan Narayanan (Sustainable Energy Engineering), Prof. Tarun Gupta (Civil Engineering), Prof. Debabrata Goswami (Chemistry), Prof. Lalit Pant (Sustainable Energy Engineering), Prof. Ashish Garg and Prof. Srinivas Yadavalli (Sustainable Energy Engineering), Prof. Raghavendra Ragipani (Chemical Engineering), Prof. Chunendra Sahu (Civil Engineering) and Prof. Rahul Mangal (Chemical Engineering).

IIT Kanpur- University of California Santa Cruz joint research symposium

In March 2024, IIT Kanpur and the University of California Santa Cruz (UCSC) signed an agreement setting out the framework for stronger ties between the two institutions. In July 2024, ten faculty members from the departments of Electrical Engineering and Computer Science & Engineering at IIT Kanpur visited UCSC for a joint symposium on 'Artificial Intelligence, Machine Learning, and Cybersecurity'. The three-day symposium was held from 15th-17thJuly at UCSC's Main Campus and the Silicon Valley campus. The symposium involved introductory presentations outlining the ongoing research at both institutions, round table discussions about generative AI and cyber security, and panel discussions on Responsible AI and the Intersection of AI and Cybersecurity.

ASEAN-India Network of Universities (AINU) FACULTY EXCHANGE

Under the AINU, IIT Kanpur signed an agreement for a Faculty Exchange Program between IIT Kanpur and any AINU institution from the ASEAN Member States. Prof. Mousami Prasad from the Dept. of Management Sciences was selected by AINU

for a faculty exchange visit to the University of Malaya, Malaysia. Prof. Prasad will be involved in teaching and collaborative research at the University of Malaya.

VISITS OF FOREIGN DELEGATIONS TO IIT KANPUR

Several foreign university delegations visited IIT Kanpur in 2024-25 to discuss possibilities for academic and research collaborations. Many of these have led to fruitful relationships between IIT Kanpur and the university partner abroad, and some of them are part of an ongoing collaboration.

From Asia: A delegation from National Yang Ming Chiao Tung University (NYCU), Taiwan; National University of Singapore, Singapore; and Chiang Mai International Engineering School, Thailand, visited for discussions on how to enrich the partnership and implement new activities.

From Australia: A delegation from the Royal Melbourne Institute of Technology, Australia, visited IIT Kanpur for potential collaborations.

From Europe: A delegation from Cardiff University, UK, visited to explore academic ties in Cybersecurity.

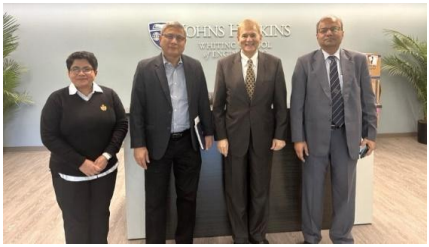
From France: A delegation from the French Institute in India and the French Embassy in India visited IIT Kanpur. Their visit was aimed at strengthening the academic and scientific collaboration between India and France. A session with the students was also organized on “Study and Research Opportunities in France”.

From the USA: Delegations from the US Embassy in New Delhi, the University of Minnesota, Rice University, New York University, Office of Naval Research Global, University of Miami, and Yale University visited IIT Kanpur to explore potential research collaborations and to strengthen the existing relationship with IIT Kanpur.

OVERSEAS VISITS OF IIT KANPUR DELEGATION

Thailand: As a part of IIT Kanpur outreach in Southeast Asia, Prof. Ashish Garg, Head of Sustainable Energy Engineering, visited several universities in Thailand: Chulalongkorn University, Asian Institute of Technology, and Mahidol University and Chiang Mai University, Maejo University, Rajabhat University between November 27th and December 4th, 2024.

USA: A delegation comprising Prof. Manindra Agrawal, Director; Prof. Vinod K. Singh, Institute Chair Prof.; Prof. Braj Bhushan, Deputy Director; Prof. Bushra Ateeq, Dean of International Relations; Mr. Kapil Kaul, CEO of the IIT Kanpur Development Foundation; and Mr. Rajat Sharma, Vice President of the IIT Kanpur Development Foundation, visited Washington D.C., Chicago, Johns Hopkins University, and Purdue University, exploring opportunities for joint research projects, exchange programs, and innovative initiatives in science and technology USA from October 7th to October 17th, 2024 to explore various avenues of collaboration.



JAPAN-INDIA Universities Forum: On 19th October 2024, Prof. Bushra Ateeq, Dean of International Relations, and Prof. Deepu Philip, Prof.-in-Charge of Incubation and Innovation at the Startup Incubation and Innovation Centre (SIIC), participated in the 3rd Japan-India Universities Forum. The event aimed at strengthening collaboration between Indian and Japanese universities in science, technology, and innovation. As an outcome of this forum, IIT Kanpur signed six new partnerships with different universities in Japan this year.

JAM Waiver for Foreign Students

With growing interest among foreign students in pursuing an MSc at IIT Kanpur, OIR has put forward a proposal for the waiver of the JAM exam requirement for foreign students for admission into this program. The Senate, IIT Kanpur, has recently approved the proposal, allowing foreign national admissions in MSc programs at IIT Kanpur from the 2025-26 academic year onward.

All IIT International Relations Conclave 2024

IIT (ISM) Dhanbad hosted the All IIT International Relations Conclave 2024 on 12th -13th December 2024 on the theme 'Study in India'. The program included plenary sessions on internationalization strategies, discussions on funding schemes, and exchange of ideas and best practices.

Happy Hour for International Students

OIR started monthly Happy Hour get-togethers for foreign students at IIT Kanpur in 2024. Two interactive events in September 2024 and February 2025 were conducted.

Festival Celebrations

OIR organizes festival celebrations to acquaint international students with the culture and practices of India. In 2024-25, celebrations for Holi, Christmas, Diwali, and Eid festivals with simple activities (such as diya-lighting and rangoli-making) were organized by OIR. Students were served traditional food on these occasions.

Hindi Classes for Foreign Students

In January 2025, the OIR started Hindi language classes for the second batch of foreign students. The classes are taught by experts at

the Shivani Centre for Nurture & Reintegration of Hindi & Other Languages, IIT Kanpur. These classes aim to enhance the everyday experience of foreign students and smoothen their interaction with the local community.

Foreign Students at IIT Kanpur

IIT Kanpur hosted 69 foreign students in 2024-2025, with 56 of them pursuing a post-graduate degree at IIT Kanpur and 13 pursuing internship programs.

The 56 students pursuing a post-graduate degree are from countries such as Bangladesh, Jordan, Indonesia, Syria, Ethiopia, Iran, Nepal and Myanmar. The degrees being pursued by these 56 students are as follows:

- 27 are pursuing a Ph.D. degree and
- 29 are enrolled in a Master's program
- In addition to this, IIT Kanpur has hosted 13 internship students from the UK, Japan, and Nepal.

IIT Kanpur Student Mobility Overseas

- 35+ students from IIT Kanpur were nominated for semester exchange at partner universities in 2024-25
- Over 34 IIT Kanpur students were accepted for internships at foreign universities.

Short-Term Courses for Foreign Working Professionals

In 2024-25, IIT Kanpur organized three courses under the Indian Technical and Economic Cooperation Program (ITEC), the leading capacity-building platform by the Ministry of External Affairs, Government of India.

ITEC courses at IIT Kanpur in 2024-25 are listed below:

- Spacecraft Dynamics & Control (June 2024) – Course taught by Prof. Dipak Giri
- Robotics (March 2025) – Course taught by Prof. Ashish Dutta
- Industrial and Electronics Waste Recycling and Management (March 2025) – Course taught by Prof. Arunabh Meshram

These short-term courses were aimed specifically at working professionals from ITEC partner countries such as Kazakhstan, Uzbekistan, Ethiopia, Thailand, Paraguay, Bhutan, and Peru. Over 70 students participated in these courses held in face-to-face mode at IIT Kanpur.

DEAN OF RESOURCES & ALUMNI

Out of the total amount of ₹ 265.24 crore pledged by donors in FY 2024-25, a sum of ₹ 159.70 crore has already been received, as compared to ₹ 156.90 crore received in the FY 2023-24, and the balance is expected to be received based on the milestones achieved as set by the donors in the next 2-3 years.

Major Initiatives in FY 2024-25

Major Initiatives	Amount in Crore
Gangwal School of Medical Sciences and Technology	₹ 47.49
Construction of New Hall of Residence for Students	₹ 20.25
Kotak School of Sustainability	₹ 17.59
Translational and Transformative Training and Investigations Lab at CSE	₹ 10.38
Social Innovation Lab 3.0	₹ 5.75
The Mehta Family Centre for Engineering in Medicine	₹ 4.38
Scientific Research	₹ 4.38
Opportunity School Building	₹ 4.26
Social Innovation Lab	₹ 3.50
The Humanities-Technology Bridge: A Tribute to Prof. Mahajan & Prof. Dhanagare	₹ 2.13

ICICI Foundation Digital Health Stack	₹ 2.10
Moisture Resistant Paper Packaging Solutions	₹ 1.99
Soma and Manas Mandal Chair	₹ 1.68
Manas Mandal Student Scholarship	
Manas Mandal Best PhD Thesis Award	
Om Prakash Gautam Faculty Chair in CHE	₹ 1.55
Rajeev and Joyce Gautam Student Travel Grant in CHE	
Pawan Tewari Goldman Sachs Endowment Towards AI for Social Good	₹ 1.15
The Pawan Tewari Goldman Sachs Scholarships	
Jainendra Navlakha (1974) Chair	₹ 1.32
Dr. T. B. Singh Scholarship	₹ 1.30
Smt. Kusum Singh Scholarship	
Satya and Rao Remala Foundation chair	₹ 1.31
Post Graduate Research Lab in CHE	₹ 1.19
Jeet Singh Bindra Centre of Excellence in Specialty Chemicals	
IIT Kanpur Development Foundation	₹ 1.00

IITK Samanvay 2024

IITK Samanvay 2024 is a groundbreaking initiative by IIT Kanpur designed to bridge the existing gap between industry and academia. Held on November 28-29, 2024, at IIT Kanpur's

iconic campus, it unites industry leaders, academicians, and innovators for open dialogue. The event drives innovation by addressing future challenges through thought-provoking discussions, networking, and research partnerships. With participation from top industry figures like the Chairman of ONDC and Mahindra Agri, Samanvay 2024 inspires new ideas and solutions, positioning IIT Kanpur as a hub for progress. Key highlights of the event included showcasing unique platforms such as the SIDBI Innovation and Incubation Center (SIIC), emerging departments like Cognitive Science and Sustainable Energy Engineering, and national research facilities, including the Wind Tunnel and Animal Testing Facility.

IIT Kanpur's Distinguished Alumni Meet (DAM)

This meeting fosters collaboration, knowledge sharing, and mentorship between alumni, students, and faculty. The first DAM in India, held from August 30th September to 1st October 2024 in Goa, featured notable alumni like Dr. Mahesh Gupta and Prof. U.B. Desai, emphasizing translational research and teaching excellence. In the USA, the event was organized in New York on 9th Oct 2024 to chart the next steps in IIT Kanpur's journey toward global excellence in education, research, and innovation. These meets strengthen IIT Kanpur's global alumni network and are inspiring.

Other Major Initiatives

Initiative	Pledged Amount in crore	Realized Amount in crore
Kaira Karmakar Memorial Student Scholarship	₹ 1.59	₹ 0.39
IIT Kanpur Swastibhavatu Lecture Series supported by Rawat Family Trust	₹ 1.50	₹ 0.75

Donations received by the Gangwal School of Medical Sciences & Technology till March 31, 2025

Donor/Organization Name	Pledged Amount		Realized Amount in crore
	in million	in crore	
Mr. Muktesh Pant (BT/CHE/1976)	$ 2.50	₹ 19.00	₹ 19.00
Dr. Dev Joneja (BT/ME/1984)	$ 2.50	₹ 19.00	₹ 20.04
Mr. Anil Bansal (BT/MME/1977)	$ 2.50	₹ 19.00	₹ 10.59
Mr. Rakesh Gangwal (BT/ME/1975)	$ 13.50	₹ 100.00	₹ 108.70
Dr. Deepak Mohan Narula (BT/EE/1985)	$ 0.60	₹ 5.00	₹ 5.00

Mr. Hemant Jalan (BT/CHE/1977)		₹ 18.00	₹ 18.00
IBM		₹ 59.66	₹ 59.11
JK Cements		₹ 60.00	₹ 35.00
REC Foundation		₹ 14.40	₹ 11.88
HDFC Bank		₹ 20.00	₹ 19.97
Sutwala Family		₹ 0.41	₹ 0.41
Mr. Vikram Tannan		₹ 10.00	₹ 4.50
Dr. Vijay Parikh (BT/CHE/1982)		₹ 0.20	₹ 0.20
Mr. Manoj Gupta		₹ 0.44	₹ 0.44
Total	**$ 21.60**	**₹ 345.11**	**₹ 312.84**

Major Donations received towards fundraising campaigns

Name of the Campaign	Goal Amount in crore	Received Amount in crore
P. T. Narasimhan Fund for Performing Arts	₹ 1.00	₹ 0.81
Prof. N. Sathyamurthy Endowment Lecture Series	₹ 0.25	₹ 0.25 (Target achieved)
Late Prof. Kanwar Singh Nalwa Memorial Scholarship	₹ 0.25	₹ 0.25 (Target achieved)
Annual Giving	₹ 2.00	₹ 2.15 (Target achieved)
Prof. Vinod K. Singh Distinguished Lecture Series	₹ 0.25	₹ 0.18
V. Srinivasan Memorial Fund	₹ 0.25	₹ 0.26 (Target achieved)

Major donations received towards Endowment Activities in FY 2024-25

Faculty Chairs	Amount in crore
Om Prakash Gautam Chair	₹ 1.25
Jainendra Navlakha (1974) Chair	₹ 1.24
Soma and Manas Mandal Chair	₹ 1.25
Satya and Rao Ramala Chair	₹ 1.28
Fellowships	
Cherian and Vigny Mathew Faculty Fellowship for AI	₹ 0.45
Pradeep Jotwani Young Faculty Fellowship	₹ 0.45
Scholarships	
Manas Mandal Student Scholarship	₹ 0.27
Sqn Ldr Sudhanshu Mohan Scholarship	₹ 0.25
Awards	
Prof. J. L. Bansal Best PhD Thesis Award	₹ 0.25
Distinguished Lecture Series	
IIT Kanpur Swastibhavatu Lecture Series Supported by Rawat Family Trust	₹ 0.75
Departmental Fund	
Bridging Horizons: The confluence of Technology and Humanities	₹ 2.00

Class Fund in in FY 2024-25

Class	Pledge Amount in crore	Realized Amount in crore	Initiatives Supported
1967 (Get together)	NA	₹ 0.30	Scholarship
1999	₹ 13.60	₹ 3.01	Batch Fund
1985	₹ 1.05	₹ 0.27	Batch Fund
1975	₹ 5.00	₹ 0.71	Batch Fund
1980	₹ 4.20	₹ 4.10	Support Hall 3, Girls Hostel and Batch Fund
1965	₹ 1.00	₹ 0.54	Pioneering Research Excellence and Innovation Award

Top Donors in FY 2024-25

Name/Degree	Category	Amount in crore	Purpose
Mr. Bhadresh Kantilal Shah (BT/MME/1974)	Alumni	₹ 9.00	Construction of New Hall of Residence for Students
The Mehta Family Foundation	Non - Alumni	₹ 4.38	The Mehta Family Centre for Engineering in Medicine
Prof. Chandralekha Singh & Jeremy Levy	Non-Alumni	₹ 4.26	Opportunity School Building

Mr. Vikram Tannan	Non-Alumni	₹ 4.00	Gangwal School of Medical Sciences and Technology
Mr. Hemant Jalan (BT/CHE/1977)	Alumni	₹ 3.00	Gangwal School of Medical Sciences and Technology
Mr. Srinath Anantha-raman (BT/EE/1980)	Alumni	₹ 2.34	1980 Class Fund
			The Humanities-Technology Bridge: A Tribute to Prof. Mahajan & Prof. Dhanagare
Mr. Manas Mandal (BT/CSE/1985)	Alumni	₹ 1.68	Soma and Manas Mandal Chair
			Manas Mandal Student Scholarship
			Manas Mandal Best PhD Thesis Awards
Dr. Rajeev Gautam (BT/CHE/1974)	Alumni	₹ 1.55	Om Prakash Gautam Faculty Chair in CHE
			Rajeev and Joyce Gautam Student Travel Grant in CHE
Dr. Deepak Mohan Narula (BT/EE/1985)	Alumni	₹ 1.49	Gangwal School of Medical Sciences and Technology
Prof. Jainendra Navlakha (MT/EE/1974)	Alumni	₹ 1.32	Jainendra Navlakha (1974) Chair

Mr. Rao Remala (MT/CSE/1975)	Alumni	₹ 1.31	Satya and Rao Remala Foundation Chair
Mr. Manoj Singh (BT/EE/1974)	Alumni	₹ 1.30	Dr. T. B. Singh Scholarship
			Smt. Kusum Singh Scholarship
Mr. Jagjeet S. Bindra (BT/CHE/1969)	Alumni	₹ 1.19	Jeet Singh Bindra Centre of Excellence in Speciality Chemicals
			Post Graduate Research Lab in CHE
Mr. Pawan Tewari (BT/EE/1988)	Alumni	₹ 1.11	Pawan Tewari Goldman Sachs Endowment Towards AI for Social Good
			The Pawan Tewari Goldman Sachs Scholarships
Mr. Ranodeb Roy (BT/CSE/1990)	Alumni	₹ 1.00	IIT Kanpur Development Foundation
Mr. Anil Bansal (BT/MME/1977)	Alumni	₹ 0.85	Gangwal School of Medical Sciences and Technology
Mr. Shishpal Singh Rawat (BT/EE/1979)	Alumni	₹ 0.74	IIT Kanpur Swastibhavatu Lecture Series supported by Rawat Family Trust
Yuva Unstoppable	Non - Alumni	₹ 0.62	Yuva Unstoppable Scholarship

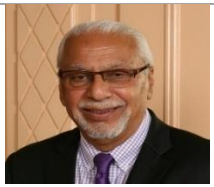
Mr. Gopal Das Lakhani (PhD/MTH&S/1971)	Alumni	₹ 0.41	Gopal Lakhani Leadership Award for Community Services
			Gopal Lakhani Leadership Award for Professional Development Activities
			Gopal Lakhani Leadership Award for Sporting Event Organization
Dr. Pawan Kumar Goenka (BT/ME/1975)	Alumni	₹ 0.40	Pawan Kumar Goenka Chair
Karmakar Foundation	Non-Alumni	₹ 0.40	Kaira Karmakar Memorial Scholarship Program
Mr. Mukul Gupta (BT/CSE/1999)	Alumni	₹ 0.35	1999 Batch Fund
Mr. Satya P. Chauhan (BT/CHE/1968)	Alumni	₹ 0.34	Satya and Sudha Chauhan, Faculty Chair in SEE
Mr. Cherian V. Mathew (BT/CSE/2008)	Alumni	₹ 0.34	Cherian and Vigny Mathew Faculty Fellowship for AI
Mr. Rakesh Rawal (BT/ME/1978)	Alumni	₹ 0.31	Pritam Lal Shakuntala Rawal Memorial Scholarship
			Prof. N. Sathyamurthy Endowment Lecture Series

Mr. Prakhar Bansal (BT/CHE/1994)	Alumni	₹ 0.28	1994 Class Fund
			Prof. J. L. Bansal Best PhD Thesis Award in MTH&S
Prof. Chandra Mauli Agrawal (BT/ME/1982)	Alumni	₹ 0.27	Sqn Ldr Sudhanshu Mohan Scholarship
Late Dr. Rathin Datta (BT/CHE/1970)	Alumni	₹ 0.26	Biochar Project
Mr. Rohit Kumar Toshniwal (BT/CSE/1999)	Alumni	₹ 0.25	1999 Batch Fund

ALL TIME DONORS

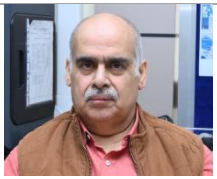
		
Mr. Rakesh Gangwal (BT/ME/1975)	Mr. Narayana Murthy (MT/EE/1969)	Dr. Dev Joneja (BT/ME/1984)
		
Mr. Muktesh Pant (BT/CHE/1976)	Mr. Anil Bansal (BT/ME/1977)	Mr. Sudhakar Kesavan (BT/CHE/1976)
		
Mr. Hemant Jalan (BT/CHE/1977)	Late Dr. Ranjit Singh (BT/MME/1965)	Mehta Family Foundation (non-alumni)
		
Mr. Bhadresh Shah (BT/MME/1974)	Mr. Vikram Tannan (non-alumni)	

PRINCIPAL DONORS

		
Prof. Chandralekha Singh & Jeremy Levy (non-alumni)	Mr. Jagjeet S Bindra (BT/CHE/1969)	Mr. Lokvir Kapoor (BT/ME/1987)
		
Ms. Asha Jadeja Mot-wani (non-alumni)	Dr. Prabhu Goel (BT/EE/1970)	Ms. Nirmala Govindan (non-alumni)

MAJOR DONORS

		
Mr. Pawan Tewari (BT/EE/1988)	Mr. Ranodeb Roy (BT/CSE/1990)	Mr. Deepak M Narula (BT/EE/1985)

		
Mr. Rajiv Batra (BT/EE/1982)	Mr. Ajay Dubey (BT/CHE/1980)	Dr. Devendra Shukla (BT/CE/1967)
		
Mr. Ashish Karandikar (BT/EE/1995)	Mr. Kal Shastri (MSC2/PHY/1976)	Mr. Kushal C Sacheti (MT/CHE/1971)
		
Mr. Sudhir M Mittal (BT/CHE/1970)	Mr. Alok Agarwal (BT/EE/1979)	Dr. B V R Mohan Reddy (MT/ME/1974)
		
Prof. Jainendra Navla-kha (MT/EE/1974)	Mr. Manas Mandal (BT/CSE/1985)	Dr. Rajeev Gautam (BT/CHE/1974)

Corporate Partners in FY 2024-25

Name	Amount in crore	Purpose
IBM India Pvt. Ltd.	₹ 28.11	Gangwal School of Medical Sciences and Technology
Kotak Mahindra Bank Ltd.	₹ 17.59	Kotak School of Sustainability
AIA Engineering Ltd. Mr. Bhadresh Shah (BT/MME/1974)	₹ 11.25	Construction of New Hall of Residence for Students
Citadel Securities India Markets Pvt. Ltd.	₹ 10.38	Translational and Transformative Training and Investigations Lab at CSE
Citibank	₹ 9.25	Social Innovation Lab
		Social Innovation Lab 3.0
J K Cement Ltd. Mr. Yadupati Singhania (BT/CE/1977)	₹ 5.00	Gangwal School of Medical Sciences and Technology
The Mehta Family Foundation	₹ 4.38	The Mehta Family Centre for Engineering in Medicine
HDFC Bank	₹ 3.00	Gangwal School of Medical Sciences and Technology
ICICI Foundation for Inclusive Growth	₹ 2.10	ICICI Foundation Digital Health Stack
ITC Ltd.	₹ 1.99	Moisture Resistant Paper Packaging Solutions

REC Foundation	₹ 1.24	Gangwal School of Medical Sciences and Technology
Portescap India Pvt. Ltd.	₹ 1.14	Scientific Research
Tower Research Capital Markets India Pvt. Ltd.	₹ 0.61	Scientific Research
Suraj Logistix Pvt. Ltd.	₹ 0.53	Scientific Research
Nmtronics (India) Pvt. Ltd.	₹ 0.49	Scientific Research
IPM India Wholesale Trading Pvt. Ltd.	₹ 0.46	Design & Development Centre at Rozi Shiksha Kendra
In Covid Support Fze Llc	₹ 0.42	BFI - Biome Network grants for biomedical innovators
TCS Fellowship	₹ 0.39	Scientific Research
RIICO Ltd.	₹ 0.23	Centre of Excellence for Innovation in Basic Education (STEM labs)
Adani Enterprises Ltd.	₹ 0.21	Scientific Research
4E Software Pvt. Ltd. Mr. Mahendra Yadav (BT/ME/1999)	₹ 0.20	1999 Batch Fund
Khanna and Khanna Ltd.	₹ 0.20	Scientific Research
Airbus India Pvt. Ltd.	₹ 0.18	Airbus-IIT Flying Start Programme

Raramuri Technology Pvt. Ltd.	₹ 0.15	Bhu Parikshak 2.0
		Scientific Research
Saraswati Heart Care & Research Centre Pvt. Ltd. Mr. Surendra Kumar Garg (BT/EE/1972)	₹ 0.15	1972 Golden Jubilee Legacy Project
MacDermid Alpha Electronics Solutions India Pvt. Ltd.	₹ 0.15	Scientific Research
Government of Uttarakhand	₹ 0.15	Support from Dept. of Higher Education, Government of Uttarakhand
ANSYS Software Pvt. Ltd.	₹ 0.13	Promote education among PG students
		Scientific Research
Sahasra Electronics Pvt. Ltd. Mr. Ajit Chakravarti (BT/EE/1972)	₹ 0.12	1972 Golden Jubilee Legacy Project
Hindon Filters Pvt. Ltd. Mr. Madan Gopal Agarwal (BT/ME/1974)	₹ 0.12	Class of 1974 Legacy Fund
Faiveley Transport Rail Technologies India Pvt. Ltd.	₹ 0.12	Scientific Research
ZN Tech Solutions Pvt Ltd	₹ 0.11	Bhu Parikshak 2.0
Qualtech Consultants Pvt. Ltd.	₹ 0.11	Project Solar concentrator in SPASE

Zopsmart Technology Pvt. Ltd.	₹ 0.10	Bhu Parikshak 2.0
Pradeep Metals Limited	₹ 0.10	Class 1978 legacy project
Sethi-Sethi Comf Mr. Satish Sethi (BT/EE/1975)	₹ 0.10	1975 Class Fund
Humboldt Wedag India Pvt. Ltd.	₹ 0.10	Pioneering Research Excellence and Innovation Award
Frontier Alloy Steel Ltd.	₹ 0.10	Scientific Research
CSI Engineering Software Pvt. Ltd.	₹ 0.09	NICEE
Logic Fruit Technologies Pvt. Ltd.	₹ 0.09	Gangwal School of Medical Sciences and Technology
Credex Technology Pvt. Ltd. Mr. Pradeep Arya (MSC2/MTH&S/1999)	₹ 0.09	1999 Batch Fund
Rahman Industries Ltd.	₹ 0.08	Antaragni 24
Audify Tech. Pvt. Ltd.	₹ 0.08	Scientific Research
Omidyar Network India Advisors Pvt. Ltd. Mr. Siddharth Nautiyal (BT/CSE/1999)	₹ 0.07	1999 Batch Fund
Hytech Professionals India Pvt. Ltd. Mr. Damnish Kumar (MSC5/MTH&S/2000)	₹ 0.07	1999 Batch Fund

Fashion Suitings Pvt. Ltd.	₹ 0.06	Scientific Research
TVM Signaling and Transportation Systems Pvt. Ltd.	₹ 0.05	Campus School Development Fund
Prachi Leathers Pvt. Ltd Mr. Anil Gupta (BT/ME/1978)	₹ 0.05	Class 1978 legacy project
Aeron Systems Pvt. Ltd.	₹ 0.05	Gangwal School of Medical Sciences and Technology
Hexa Tours and Travels Pvt. Ltd.	₹ 0.05	Udghosh
Bharat Forge Ltd.	₹ 0.05	Team Motorsports Fund
Integra Micro Systems Pvt. Ltd.	₹ 0.05	Scientific Research
Wonder Illuminate Service of Education Pvt. Ltd.	₹ 0.05	Opportunity School
Apollo Heat Exchangers Pvt. Ltd. Mr. Naresh Shah (BT/ME/1974)	₹ 0.05	Class of 1974 Legacy Fund
		Hall 1 Renovation
AlphaGrep Securities Pvt Ltd.	₹ 0.05	AlphaGrep Scholarship
PNC Infratech Ltd.	₹ 0.05	Scientific Research
PN International Pvt. Ltd.	₹ 0.05	Scientific Research

My Home Industries Pvt. Ltd.	₹ 0.04	Pioneering Research Excellence and Innovation Award
Bright 4 Wheel Sales Pvt. Ltd.	₹ 0.03	Scientific Research
Tellapur Technocity Pvt. Ltd.	₹ 0.03	Pioneering Research Excellence and Innovation Award
Continental Belting Pvt. Ltd.	₹ 0.02	Pioneering Research Excellence and Innovation Award
J. K. Fenner (India) Ltd.	₹ 0.02	Scientific Research
Rimjhim Ispat Ltd.	₹ 0.01	Team Motorsports Fund
Prem Jain Memorial Trust	₹ 0.01	Prem Jain Award for Excellence in Sustainability
Jjg Aero Pvt. Ltd.	₹ 0.01	For SPASE
Alkyl Amines Chemicals Ltd.	₹ 0.01	Annual Gift Programme
Evonik India Pvt. Ltd.	₹ 0.004	Annual Gift Programme
My Home Power Consultancy Services Pvt. Ltd.	₹ 0.002	Pioneering Research Excellence and Innovation Award
Surya Powerpacks Mr. Tarun Desai (BT/CHE/1978)	₹ 0.002	Class 1978 legacy project

ALUMNI IMPACT

Some of the major awards and honors received by our alumni in 2024-25 are listed below.

Award/ Honour	Name/Association with IIT Kanpur	Award Endowed by
Presburger Award	Dr. Pravesh K. Kothari (BT/EE/2010)	The European Association for Theoretical Computer Science (EATCS)
Listed in Forbes 30 under 30 Asia 2025	Mr. Krishna Gupta (BT/CHE/2020)	Forbes
Listed in Forbes 30 under 30 Asia 2025	Mr. Karttikeya Mangalam (BT/EE/2018)	Forbes
Fellow of the American Association for the Advancement of Science	Prof. Raj Singh (BT/MME/1967)	American Association for the Advancement of Science Council
Rashtriya Vigyan Puraskar	Dr. Digendranath Swain (PhD/ME/2018)	Ministry of Science & Technology, GoI
Charles A. Whitten Medal	Prof. Srinivas Bettadpur (MT/AE/1985)	American Geophysical Union

Arthur T. Winfree Prize	Prof. Mohit Kumar Jolly (BT/MT/BSBE/2010/2012)	The Society for Mathematical Biology
2024 Donald E. Knuth Prize	Prof. Rajeev Alur (BT/CSE/1987)	ACM Special Interest Group
IEEE-EDS 2024 Early Career Award	Dr. Nilesh Pandey (PhD/EE/2022)	IEEE Electron Devices Society
IEEE Fellow	Prof. Saikat Guha (BT/EE/2002)	IEEE Board of Directors
Eminent Faculty Award	Prof. Raj Singh (BT/MME/1967)	OKLAHOMA STATE UNIVERSITY
ACM India Doctoral Dissertation Award	Dr. Priyanka Golia (PhD/CSE/2023)	ACM India Council
Endowed Prof.ship of Joyce A. Yelencsics Rosevear '65 and Frederick M. Rosevear '64	Prof. Debanjan Chowdhury (MSC5/PHY/2010)	Joyce A. Yelencsics Rosevear and Frederick M. Rosevear
FAI Award	Dr. Abhilasha Tripathi (PhD/CE/2023)	Fertilizer Association of India (FAI)
Padma Shri	Prof. Ashutosh Sharma (BT/CHE/1982)	Ministry of Home Affairs, GoI

Padma Shri	Dr. Pawan Goenka (BT/ME/1975)	Ministry of Home Affairs, GoI
IEEE Fellow	Prof. Rajiv K. Varma (BT/PhD/EE/1980/1988)	IEEE Board of Directors
ACM Fellow	Dr. Satish Chandra (BT/CSE/1991)	The Association of Computing Machinery
ACM Fellow	Prof. Ashish Goel (BT/CSE/1994)	The Association of Computing Machinery
PECASE (Presidential Early Career Award for Scientists and Engineers)	Prof. Mohit Bansal (BT/CSE/2008)	The USA Government
AAAI Fellow	Prof. Mohit Bansal (BT/CSE/2008)	The Association for the Advancement of Artificial Intelligence
Wolf Prize in Physics	Prof. Jainendra Jain (MSC/PHY/1981)	The Wolf Foundation, Israel
Young Researcher Award R&D in HPC Applications (Dr. APJ Abdul Kalam HPC Awards 2025)	Prof. Navrose (BT-MT/PhD/AE/2010/2016)	Hewlett Packard Enterprise

2025 AACR Award for Lifetime Achievement in Cancer Research	Prof. Rakesh K. Jain (BT/CHE/1972)	American Association for Cancer Research (AACR)
Best Thesis Award in the Carbon Materials category at the INYAS National Competition for Research Excellence	Dr. Prerna Sinha (PhD/MSP/2023)	The Indian National Young Academy of Sciences (INYAS)
Visionary Leadership Best Practices Recognition 2025	Dr. Anil K. Rajvanshi (BT/MT/ME/1972/1974)	Frost & Sullivan Institute
Distinguished Academic Achievement Alumni Award	Prof. Pankaj Jalote (BT/EE/1980)	Siebel School of Computing & Data Science, University of Illinois Urbana-Champaign

Notable Professional Achievements by Our Alumni in FY 2024-25

Name/Association with IIT Kanpur	Position
Dr. Ajay Kumar (BT/EE/1984)	Director on Board of Sify Technologies, Ltd.
Mr. Sandeep Kishore Jain (BT/ME/1988)	President of the Federation of Indian Micro and Small & Medium Enterprises (FISME)
Dr. Sharat Sinha (MT/IME/1994)	CEO & Director, Airtel Business
Mr. Sanjay Malhotra (BT/CSE/1989)	Governor of the Reserve Bank of India (RBI)
Mr. Rakesh Gangwal (BT/ME/1975)	Chairman of Southwest Airlines
Mr. Atul Saxena (BT/CE/1997)	Managing Director & CEO of Stock Holding Corporation of India Ltd.
Prof. Sandhya S. Visweswariah (MSC2/CHM/1980)	President-elect of the International Union of Biochemistry and Molecular Biology (IUBMB)
Mr. Rahul Navin (BT/MT/CE/1990/1993)	Director of Enforcement Directorate, GoI
Mr. Amit Agrawal (BT/EE/1991)	Secretary of the Dept. of Pharmaceuticals, Ministry of Chemicals and Fertilizers, GoI

Mr. Vineet Joshi (BT/ME/1989)	Secretary Dept. of Higher Education, Ministry of Education, GoI
Mr. Rupesh Singh (BT/CE/1991)	Director (HR) at Engineers India Limited (EIL)
Mr. Gyanesh Kumar (BT/CE/1985)	Chief Election Commissioner
Prof. Pushpak Bhattacharyya (MT/CSE/1986)	Chairman of RBI's high-level committee
Mr. Ambarish Kenghe (MT/CSE/1998)	Group CEO of Angel One
Prof. Achyut Wagle (PhD/ECO/2018)	Vice Chancellor of Kathmandu University
Dr. Ajay Kumar (BT/EE/1984)	Chairman of the Union Public Service Commission (UPSC)
Mr. Abhishek Anand (BS-MS/CHM/2022)	selected to represent Japan in the Men's National Cricket Team 2025
Mr. Sandeep Fuller (BT/EE/1986)	Chief Executive Officer – Systems and PMC at SYSTRA
Mr. K. Ramakrishna Rao (BT/CHE/1987)	Chief Secretary of Telangana
Mr. Devendra Kumar (BT/CSE/1997)	Chief Information Officer (CIO) of Michael Baker International

Some notable entrepreneurial endeavors by alumni of IIT Kanpur in FY 2024-25.

Name of Startup	Name of Alumni	Startup Description
Jeevatva Biosciences	Dr. Pawan Kumar (BT/CHE/1999)	The startup is working on microbiome-based therapeutics for metabolic reprogramming, insulin resensitization, and inflammation reduction.
Indespace Robotics Pvt. Ltd.	Dr. Abhishek Verma (PhD/DES/2024)	The startup is developing a cervical softening and dilation device for incomplete cervical dilation in dairy cattle to treat dystocia.
Vetted-code Technologies India Pvt. Ltd.	Mr. Himanshu Gautam (BT/MT/ME/2016)	The startup's mission is to make Web3 safer and more accessible, combining expert security services with innovative products to foster a secure, inclusive, and community-driven blockchain ecosystem.
Maraal Aerospace Pvt. Ltd.	Dr. Vijay Shankar Dwivedi (MT/PhD/AE/2014/2021)	Maraal Aerospace is a deep-tech startup involved in the design, development, and manufacturing of Fixed Wing Solar UAVs & subsequently, High-Altitude Long Endurance Solar. They aim to provide applications in Intelligence, Surveillance,

		and Reconnaissance (ISR) missions.
Ananant Systems Pvt. Ltd	Dr. Chitranjan Singh (BT/EE/1998)	The startup is building a leading wireless semiconductor and systems company focused on advanced 5G and 6G in India, underpinned by an Atmanirbhar philosophy.
SuEng Tech Pvt. Ltd.	Mr. Chaitanya (BT/CE/1998)	SuEng-Tech (Sustainable Engineering through web-based Technology) is a technology-based platform to carry out the system engineering, financial modeling, and project management of renewable & sustainable projects.
Innovative Grid Services Pvt. Ltd.	Prof. Ankush Sharma (MT/PhD/EE/2001/2015)	The company deals in the business of commercializing power equipment, Smart Electric Meter Devices, and methods for enabling meter data communication, as well as an apparatus for micro-resolution phasor measurement and a method for parameter estimator of untransposed distribution cable.
Narottam Innovations Pvt. Ltd.	Prof. Vipul Arora (BT/PhD/EE/2009/2015) Mr. Shivam Pal (BT-MT/EE/2020)	The startup provides AI-powered transcription & translation of audio and video files, offering solu-

		tions that provide unmatched efficiency and accuracy in generating text transcriptions and translations from audio and video files.
Sarvshixiit Pvt. Ltd.	Prof. Amey Karkare (BT/CSE/1998)	The Company is dedicated to bridging skill gaps in remote villages by actively implementing NEP 2020. With a focus on holistic development, Sarvshixitt emphasizes skill development, hands-on activities, and tinkering. By providing a curriculum in Indian languages, Sarvshixitt aims to empower students with practical knowledge and equip them for the challenges of the 21st century.
Just-dataanalytics Pvt. Ltd.	Prof. Pradip Swarnakar (PhD/HSS/2008)	The dedicated team employs cutting-edge methodologies to monitor field dynamics, policy developments, and technological innovations, providing timely and insightful analyses related to energy transition and other environment-related issues.

OUTREACH ACTIVITIES

Our alumni network is one of our greatest strengths. Their rich experiences and strong bonds with our institution make them essential allies in our pursuit of excellence. We actively encourage open dialogue and idea-sharing with our alumni, recognizing that their perspectives play a vital role in shaping the Institute's ongoing progress.

IITKarvaan - Singapore

The IITKarvaan held its very first event of the year 2024-25 in Singapore on May 11, 2024, bringing together over 80 esteemed alumni along with their spouses. The event was a grand success because of the dedicated efforts of alumni coordinators Mr. Ranodeb Roy (BT/CSE/1990) and Mr. Abhinaya Agrawal (MBA/IME/ 2010). Prof. Manindra Agrawal, Director of IIT Kanpur, Prof. Kantesh Balani, Dean of Resources and Alumni, and Mr. Kapil Kaul, CEO of the IIT Kanpur Development Foundation, represented IIT Kanpur.

IITKarvaan – USA

USA IITKarvaan was led by Prof. Manindra Agrawal. The delegation visited five major cities: New York, Washington DC, Chicago, Seattle, and the Bay Area. The purpose of the visit was to strengthen ties with IIT Kanpur alumni, expand the institute's network, build new connections, and explore potential collaborations to support the Institute's growth and development.

The journey began in New York on October 6th, 2024, where 150+ alumni attended a high-energy meet that recognized distinguished alumni, and robust discussions were held around the IIT Kanpur Foundation's role in global collaboration. IITKarvaan moved to Washington D.C on October 11th, 2024.

Chicago marked the third stop on our IITKarvaan tour in the USA. The Karvaan event was held on October 13th, 2024, where the Honourable Consulate General, Chicago, Mr. Somnath Ghosh, delivered the keynote address.

Seattle marked the fourth stop on the IITKarvaan tour in the USA, and the energy was unmatched.

Last but not least, the Bay Area edition of USA IITKarvaan was held on October 19th, 2024, with a focus on deepening ties with alumni in the Startup ecosystem and building innovation bridges

between Silicon Valley and IIT Kanpur. A Fireside Chat with Mr. Dheeraj Pandey - Co-Founder & CEO of DevRev, was also the Centre of attraction.

IITKarvaan - India Tour

The IITKarvaan India Tour was successfully conducted in December 2024, covering three major cities—Mumbai, Bengaluru and Delhi. These alumni gatherings witnessed an enthusiastic participation of over 500 alumni, including prominent leaders from industry, government, and academia.

Mr. Shashidhar Sinha (BT/CE/1979), CEO of IPG Mediabrands India, and Mr. Amit Kumar Agarwal (BT/CE/2000), Co-Founder & CEO of NoBroker, delivered inspiring Keynote addresses in Mumbai and Bengaluru, respectively.

The events honored our shared roots, while conversations focused on collaborations for the future growth of IIT Kanpur.

IITKarvaan - Australia

The second edition of IITKarvaan Australia took place in Melbourne on March 15th, 2025. With an enthusiastic turnout of over 30 alumni, the event offered a perfect blend of nostalgia, networking, and vision sharing. Prof. Amey Karkare and Mr. Kapil Kaul represented the institute and the Development Foundation, respectively.

REUNIONS NOVEMBER 2024 - MARCH 2025

Reunions remain the most anticipated alumni engagement events at IIT Kanpur. During the 2024–25 academic year, the institute hosted 10 such gatherings, bringing together graduates across generations. The youngest batch to join the celebrations was the Class of 2014, marking their 10th reunion, while the Classes of 1975 celebrated the remarkable milestone of their 50th reunion, and the pioneering Class of 1965 celebrated their remarkable 60th reunion.

These events served as heartfelt platforms for alumni to reconnect, relive cherished memories, and renew their enduring relationship with the institute. Milestone reunions—be it the 10th, 50th, 35th, or beyond—offered natural occasions for classmates to reunite, reflect on shared journeys, and celebrate personal and professional achievements.

Yet, the impact of reunions extended well beyond personal nostalgia. They created a meaningful two-way dialogue: IIT Kanpur shared its latest milestones, innovations, and vision for the future, reinforcing a sense of pride and ownership among its alumni. In return, alumni engaged deeply with the institute's initiatives—contributing through fundraising, mentorship, and various collaborative efforts.

INSTITUTE FACULTY

In the past year, the Institute has offered 38 faculty positions against 1,721 applicants through a rigorous selection. Out of these, 20 new faculty members have joined the Institute. The department-wise joining schedule for this duration is tabulated below.

Department	No. of new faculty
Aerospace Engineering	00
Biological Sciences and Bioengineering	02
Chemical Engineering	01

Chemistry	01
Civil Engineering	01
Cognitive Science	01
Computer Science and Engineering	03
Earth Sciences	00
Economic Sciences	01
Electrical Engineering	01
Humanities and Social Sciences	00
Dept. of Management Sciences	01
Materials Science and Engineering	02
Mathematics & Statistics	01
Mechanical Engineering	01
Physics	01
Space, Planetary & Astronomical Sciences & Engineering	01
Sustainable Energy Engineering	02

During the same period, the institute also offered a Postdoctoral fellowship to 92, a Visiting Prof. position to 19, an Adjunct Faculty position to 15, and a Visiting Prof. of Practice position to 07 candidates.

AWARDS & HONOURS

Our faculty members have played a significant role in pushing the frontiers of knowledge. This has been duly recognized in the form of various awards and honors, including fellowship of professional societies and editorship of international journals.

I am extremely happy to share with you the wonderful news that Prof. Ashutosh Sharma (CHE) was conferred with the Padma Shri 2025 by the GoI for his exceptional contributions to Science & Engineering. Prof. S. N. Tripathi (CE, SEE) has been awarded the Alexander von Humboldt Medal 2025 of the European Geophysical Union. Prof. Bushra Ateeq (BSBE) has been selected for the prestigious World Academy of Sciences (TWAS) Award in Medical & Health Sciences. Prof. Adimurthi Adi (MTH&S) was awarded the Rashtriya Vigyan Puraskar, Vigyan Shri for 2024.

Prof. D. H. Dethe (CHM) has been awarded the C. N. R. Rao National Prize for Chemical Sciences-2025 of the Chemical Research Society of India (CRSI). Prof. Avinash Agarwal (ME, Director IIT Jodhpur) has been selected to receive the 2025 ASME (American Society of Mechanical Engineers) Internal Combustion Engine Award. He has also received the 3rd IETI (International Engineering and Technology Institute) Ramesh Agarwal Lifetime Achievement Award. Prof. Animesh Biswas (EE) has received the Prof. G. K. Dube Memorial Lifetime Achievement Award - 2024 from IEEE, UP Section. Prof. Krishanu Biswas (MSE) has been selected to receive the MRSI (Materials Research Society of India) Medal for 2024. Prof. Wasim Ahmad

(ECO) was awarded the prestigious Mahalanobis Memorial Medal – 2024.

Prof. Ashoke De (AE, SEE) has been elected as a Fellow of the American Society of Mechanical Engineers (ASME). Prof. Animangshu Ghatak (CHE) and Prof. S. P. Rath (CHM) have been elected to the Fellowship of the Indian National Science Academy (INSA). Prof. Jayant K. Singh (CHE) was elected to the Fellowship of the Indian Academy of Sciences - 2025. Prof. Siddhartha Panda (CHE) and Prof. Ashok Kumar (BSBE) have been elected as Fellow of the prestigious Indian National Academy of Engineering (INAE).

STUDENT AWARDS

The prestigious scholarships and awards received by our students have been a matter of pride and pleasure for us. To name a few, Vasa Abhirup, Archit Agarwal, and Inapakurti Rajesh received the prestigious Aditya Birla Scholarship; Arindom Bora, Goural Dureja, and Kuldeepak Dhar Dwivedi received the O P Jems scholarship; and 189 students received the Inspire Scholarship.

INSTITUTE COUNSELLING SERVICE

The Institute Counselling Service (ICS) at IIT Kanpur is dedicated to supporting students' mental, academic, and financial well-being. Its mission is to create a compassionate and supportive environment on campus. The ICS team consists of 9

professional counselors (3 of them joined this year) and 3 consultant psychiatrists, along with a strong network of student volunteers. This includes separate undergraduate and postgraduate wings. The undergraduate wing has 5 coordinators, 22 core team members, 225 student guides, and 185 academic mentors. The postgraduate wing consists of 18 core members, 187 student guides, and 28 orientation team members. Along with this, we have 80 Faculty Guides who are volunteering their service to support the in-distress first-year UG and PG students.

Students can seek counseling on their own or be referred by friends, faculty members, or the campus health Centre. Those facing academic stress are also encouraged to seek help. In case of emergencies, ICS coordinates with external clinics, and a Psychiatry & De-addiction Clinic is held every two weeks at the campus health Centre.

In the academic year 2024–25, ICS conducted 4,116 individual therapy sessions together with wing visits of halls, departmental presentations, and emergency interventions. The number of therapy sessions has increased by about 30% from the previous year.

The academic year began with a 10-day orientation program for Y24 UG and PG students. Over 1,500 PG and 1,215 UG students arrived on campus in July. They were warmly welcomed by the Director, Deans, Head of ICS, and student members. UG students also attended an inspiring session by IIT Kanpur alumnus and entrepreneur Prof. Ashok Jhunjhunwala. A separate

session was held for over 2,700 parents of UG students. They got to learn about academics, student life, and mental health support from institute officials and psychiatrist Dr. Alok Bajpai. During the program, students were introduced to various clubs, activities, and support services such as counseling, internships, and exchange programs. There were also fun events like Zumba, DJ nights, science shows, and campus tours. To help new students settle in, ICS follows a mentor-mentee system where senior students guide and support small groups of freshers.

The ICS also promoted strong anti-ragging measures to keep the campus safe and welcoming by organizing an anti-ragging workshop. In August, an open mic event in collaboration with the Gender Cell provided a platform for students to express themselves through music, poetry, and personal stories, raising awareness about mental health. A special session on mental health and wellness was also held for students in the Design, BSBE, and CSE departments. ICS started peer-led support groups for students facing mental health challenges, helping them connect and share coping strategies.

On World Suicide Prevention Day, ICS hosted a talk by Prof. P. R. Bijwe, a noted author and a former professor at IIT Delhi, followed by a poetry performance by Mr. Shubham Shyam and a screening of the movie Inside Out. For World Mental Health Day, several creative events, such as a T-shirt painting, a campus-wide family photo, and a decluttering contest, helped bring

the community together. During Diwali, ICS organized a festive event called Hakuna Matata, which featured game nights, diya lighting, and sky lanterns. In a thoughtful gesture, sweets were distributed to security staff as a token of appreciation for their continued service.

To help staff members recognize and respond to students in distress, ICS conducted a Gatekeeper Training Program. A special session titled “Sneak-Peek into the Therapy Room” was also held to demystify counseling and encourage students to seek help without hesitation. Additionally, an awareness session on the government’s Tele-MANAS program was organized in collaboration with the District Mental Health Program (DMHP), featuring talks by a psychiatrist, a clinical psychologist, and a psychiatric nurse.

A new initiative called ‘Wellness Mandali’ was introduced this semester as an activity-based support group where students engage in group activities and learn techniques to manage stress together. ICS teams also visited residence halls regularly to check on students and offer support when needed. Academic mentors provided remedial classes and one-on-one mentoring for first-year undergraduates. Just before exams, motivational cards were distributed to students to help ease anxiety and promote a positive mindset.

To enhance outreach and awareness, this year, ICS launched a monthly Instagram campaign featuring motivational wallpapers, playlists, event calendars, and mental health resources.

In addition, the team published blogs and ran social media campaigns throughout the year. Students especially well received their internship-themed comic series and motivational posts during the placement season.

STUDENT ACTIVITIES

PRESIDENT, STUDENTS' GYMKHANA OFFICE

The President's Office of the Students' Gymkhana undertook a diverse range of initiatives in the academic year 2024–25, focusing on student welfare, infrastructure, mentorship, industry exposure, community engagement, and the cultural vibrancy of the campus. Below are a few highlights:

Campus Infrastructure & Facility Development

- A proposal for a new Students' Activity Centre near Hall 14 was presented, and it has been passed by the Institute Academic Council (IAC). The required space has been marked for development, with the funding expected through the IIT Kanpur Development Fund.
- A Users' Committee was officially formed on October 19th, 2024, by the Director (vide DIR/IITK/2024/OO-119) for planning Halls 15 and 16. The committee ensures that student feedback and requirements are incorporated during the design and construction process from the initial stages.

Student Welfare & Well-being

- Emergency Medical Fund was launched in collaboration with DoSA and the CMO, the fund provides support in situations where TPA services or insurance coverage are unavailable.
- VendiHalt vending machines were installed in all Halls of Residence and the New SAC to ensure 24x7 access to snacks and beverages.
- A Suit Drive was conducted in collaboration with Raymond and a local distributor. Formal wear was offered at subsidized rates, and over 200 students benefited from this initiative.
- Cycle Auction Drive was conducted in two phases in October and November 2024; the auction verified and sold over 850 abandoned or unclaimed cycles.

Mentorship & Professional Exposure

- An MoU with Trumio Inc. enabled students to work on real-world projects in ESG, cybersecurity, and consulting—bridging academics with industry.
- A landmark proposal, ratified by the Students' Senate and approved by the IAC, allows PhD students to act as "Co-Principal Investigators with viewing rights" on research projects—provided the funding agency's norms permit it.

Cultural, Festive & Legacy Events

- Events were conducted in a healthy and competitive environment at the General Championship,
- Farewell Fantasia (Y20) was a farewell event for the graduating batch.
- Over 1200 printed copies of the Y21 Yearbook were distributed to the graduating Y21 batch.

Governance & Representation

- A group of six students visited the new Parliament House at the invitation of the Hon'ble Vice President of India, with support from the DoSA Office.

Community Welfare Cell (CWC)

The CWC organized many community engagement activities throughout the year. To name a few, the celebration of Menstrual Hygiene Day, which included awareness and pad distribution in nearby Nankari village; Old Age Home Visit; Raksha Bandhan celebration with the SIS guards and Prayas children; installation of water bowls across the campus for birds and celebration of Basant Panchami.

Prakriti

To spread awareness about the environment and well-being, the Club celebrated events like World No Tobacco Day, the Plastic-free challenge, climate awareness sessions in local

schools, organized competitions, field trips, and campus plantation drives.

Unmukt

Unmukt is a gender & sexual diversity forum. It launched blogs, podcasts (Voices Unbound), and Pride Fest IRIS. The members also participated in the Kanpur Queer Parade and IIT Delhi's Vibhinn.

Vivekananda Samiti

The Samiti arranges meditation programs, quizzes, spiritual talks, etc., for the campus junta on a regular basis. These events are very well received.

Raktarpan

The student body organized eight blood donation camps. The drives were held on major national days like Independence Day, Gandhi Jayanti, etc.

Prayas

For the benefit of the underprivileged, the student body organized cycle distribution drives, health and gender awareness sessions, and workshops in music, science, dance, etc.

Entrepreneurship Cell

Throughout the year, the Cell organized many events contributing to the entrepreneurial & innovation ecosystem of the institute. These include E-Summit'24, UpStart'24, and Alma-Konnect.

Vox Populi

Projects undertaken by the Vox Populi during AY 2024-25 explored and covered diverse topics of campus life such as campus culture, heritage projects like the time capsule, R.G. Kar silent march, Fursat Mandli play cancellation, and updates from Hall 13 and SPASE.

- Released satire and analysis through Resume Comics, cycle shop eviction reports, and NIRF infographics.
- Analyzed rankings and infrastructure, including QS performance and drainage issues.
- Launched the "As We Leave" series, maintaining the tradition of farewell letters from graduating students.

Outreach Cell

The Cell organized Monsoon Milan '24, where 100+ alumni and 100+ students networked for internships. 90+ alumni conducted mock interviews for 200+ interns at Mock-en-Joy.

Public Policy & Opinion Cell (PPOC)

The Cell organized various aspiring talks for the students, like talks by IAS officers Mr. Ashutosh Dwivedi, Mr. Himanshu

Kishore and Mr. Pawan Kadyan (BT/EE) and IPS officer Mr. Aditya Srivastava (BT-MT/CSE/2019). Various competitions like Riwayat, a Policy-making competition, and Brahmastra, a national policy case competition that saw a participation of 1,727 teams, were conducted.

Election Commission

In the 2024–25, three Gymkhana elections were held at IIT Kanpur. The Mid-Term Elections in October 2024, The General Elections in January 2025, and By-Elections in March 2025. These elections ensured continued student representation and the smooth functioning of the Gymkhana.

ACADEMICS & CAREER COUNCIL

The PG Wing

- Orientation Sessions: Two sessions for incoming PG batches (Aug & Jan) with talks by Director Prof. Manindra Agrawal and senior faculty, distributing booklets to 750+ students on academic structure and resources.
- Institute Research Symposium (IRS): Flagship event with 150+ abstract submissions featuring keynote speeches by Prof. Ashutosh Sharma and Dr. Yogeshwar Nath Mishra, poster/oral presentations, and networking dinners.
- High-Impact Talks: Prof. Ajit Chaturvedi on scientific writing and Dr. Sanjeev Varshney on global research grants.

- Informative Sessions & Workshops: Sessions with Fulbright, ETH Zurich, and Ernst Mach fellowship recipients; four online workshops for GRE/TOEFL/IELTS preparation.

The UG Wing

- Career Prep: Internship preparation series, profile-specific placement sessions, placement blog series, and CAT mock test for UG students.
- Career Connect 2025 (Mar 21-23): Three-day career fest with workshops on study abroad, product roles, and case studies.
- Alumni Talks & Portal: Talks by IIT Kanpur alumni at Harvard, Columbia, and Cornell; launched Foreign Exposure Portal.
- Lab Introduction: Introduced Y24 students to leading labs with Counseling Service.
- Engineers' Conclave '25: Inter-pool research competition with poster presentations and research analysis.
- Product Club: Summer projects for 150+ students on product fundamentals, marketing, and analytics; bootcamps and workshops for 200+ students with real-world startup projects.

Media & Cultural Council Highlights:

- Cultural Nexus (Aug, 2024): Freshers' Weekend event.

- Alfaaz (Oct, 2024): Literary festival with author talks, writing workshops, JAM sessions, book discussions, quizzes, and poetry.
- Antaragni (Oct, 2024): 59th edition with performances by Badshah, Ritviz, and Javed Ali.
- Inter IIT Cult Meet 7.0 (IIT Patna): IIT Kanpur's 230+ member contingent won 1st in the Dance Arts Cup and 2nd in Digital Arts and Filmmaking Arts Cups.
- Galaxy (Feb, 2025): 40th annual inter-pool competition with events in dramatics, music, dance, design, and literature.
- Cultural Extravaganza (Apr, 2025): Organized by various clubs, featuring diverse cultural events.

SCIENCE & TECHNOLOGY COUNCIL

- **SnT Summer Camp 2024 (May-Jul)**: Over 600 students engaged in 50+ hybrid-mode technical projects across 12 entities, with awards in Best Project, Research, Documentation, and Implementation.
- **Hack IITK (Jun-Jul)**: Focused on industry-level challenges from partners like Zelta Labs, Trumio, C3iHub, and Overlayy, preparing students for Inter IIT Tech Meet and national competitions.
- **SnT Pavilion (Aug)**: Introduced Y24 batch to Council entities through live demos and interactive projects.

- **TAKNEEK 2024 (Aug 27-Oct 02)**: Offline event with Multi-Day challenges (Innovate, Quest, Insight), On-Spot Problem Statements, and SnT Code, covering RC Plane Design, Astrophotography, LLM Manipulation, Deepfake Detection, and Game Theory.
- **Opportunity Open-Source Conference 2024**: Hosted at IIT Kanpur with 50+ institutes, 51 global speakers, and sponsors like Google, Canonical, and The Linux Foundation. Included a networking dinner for collaboration.
- **13th Inter IIT Tech Meet (Dec 2024, IIT Bombay)**: IIT Kanpur secured 6th place among 23 IITs, tackling problem statements from ISRO, Adobe, Dream11, and others.
- **Techkriti 2025 (Mar 27-30)**: Asia's premier tech festival with competitions, talks, exhibitions, and an Indian Armed Forces pavilion featuring CDS, Army, and Air Force Chiefs. Four high-energy pronites capped the event.
- **Astroventure 2025**: Astronomy Club's golden jubilee event with 1500+ participants and keynote talks.
- **Other Events**: SARAS AI Hackathon (computer vision and AI) and Electrovista 2025 (3-day workshop on IoT, Computer Vision, PCB Design). Outreach included NGO collaborations (Shiksha Sopan, SINSME), Kalam Labs, ARIES Observatory, and school workshops by Astronomy and Aeromodelling Clubs.

Team Achievements:

- **Team Aerial Robotics**: Developed a 5-drone swarm with ROS coordination, secured ₹50,000 funding, placed 5th at Inter IIT Tech Meet 13.0, designed a vision-based Mars landing system for ISRO's IRoC-U, and built a decentralized drone swarm for ICUAS 2025.
- **Team AUV-IITK**: Competed in Singapore AUV Challenge 2025.
- **Team ERA**: Qualified for RoboCup 2025 in El Salvador, ranked 7th globally, and top 3 in design sharing and video submission, becoming India's first team to reach the main challenge.
- **Team Humanoid**: Achieved 4th globally at FIRA HuroCup 2024, with podium finishes in Archery and Sprint, the only Indian team to qualify.
- **Team IIT Kanpur Motorsports (IITKMS)**: Won Overall Champion in Electrical Category at Formula Imperial 2024, secured 6 awards, and placed 9th at Formula Bharat 2025.
- **IITKRASET**: Launched a rocket reaching 600 ft in July 2024.

GAMES & SPORTS COUNCIL

Workshops

- Powerlifting & Weightlifting Workshop (Aug 17th -21st, 2024): Focused on talent scouting and strength training.

- Teacher's Day Event: Featured Gurbaksh Singh Sandhu, former Indian National Boxing Team coach, honoring IIT Kanpur coaches.
- Talk by Olympian Sudha Singh (Mar 5th, 2025): Shared insights to motivate athletes

Intra-Campus Sports Events

- Institute Phatta League (IPL, Aug 16th, 2024): 10-member team event with strong participation, backed by Champhunt.
- Fresher's Inferno 2024 (Aug 31st -Sep 8th): Included 16 events, introduced swimming.
- Intra-IIT Wall Climbing Competition: Featured speed and difficulty categories.
- Athletics Arena (Oct 26th, 2024): Included relays, shot put, and long jump.
- Institute Volleyball League (IVL, Feb 15th -16th, 2025): Inclusive event for men and women.

Sports Camps

- A 45-day Sports Conditioning Camp was conducted for Inter-IIT preparation, followed by a felicitation of top performers.
- Inter-IIT Team Trials were held from July 30th to August 1st, 2024, to select athletes for the main meet.
- Inter-IIT Aquatics Camp was held exclusively for aquatics team members from September 23rd –29th, 2024.

- A 40-day Winter Camp was conducted for team bonding and nutrition planning, with daily juices and high-protein diets.

Tournaments Achievements

- Sangram 2024 at IIT Roorkee witnessed exceptional performances from the IIT Kanpur contingent.
- Sportech 2024 at IIT Delhi saw enthusiastic participation from IIT Kanpur teams.
- Inter-IIT Aquatics Meet 2024 was held in IIT Indore.
  - Men's Swimming: 1 Silver, 3 Bronze
  - Women's Swimming: 1 Silver, 1 Bronze
  - Water Polo: 4th overall

Udghosh 2024

This year, IIT Kanpur celebrated the 20th edition of Udghosh, attracting immense participation nationwide. IIT Kanpur's contingent of 300+ athletes competed fiercely over three days, turning all sports grounds and courts into battlefronts.

Inter IIT Sports Meet 2024

The meet was hosted jointly by IIT Kanpur and IIT Indore; IIT Kanpur was ranked 5th overall among 23 IITs with 69.39 points.

Highlights:

- Gold: Badminton (Men), Lawn Tennis (Men)
- Silver: Athletics (Men), Table Tennis (Men), Swimming (Women), Weightlifting (Men)

- Bronze: Swimming (Men), Table Tennis (Women), multiple relay events
- Strong performances are also noted in Volleyball, Squash, Basketball, and Cricket.

Inferno 2024

Inferno is an Intra institute sports competition, which was held from April 3–14, 2025, featuring 20 men's and 15 women's events.

STUDENTS' PLACEMENT OFFICE

Campus Recruitment Drive 2024-25

The campus recruitment drive for the academic year 2024-25 was conducted in hybrid mode across two phases. Phase-1 officially began on December 1st, 2024, and continued until December 15th, 2024, with initial preparations and related activities starting in July 2024. Phase-2 of the campus recruitment commenced in mid-January 2025 and is currently ongoing. "One student one job" (single offer acceptance) policy, ensuring equal opportunity for all students registered with the Students' Placement Office (SPO), was continued this year as well.

As of May 10th, 2025, over 400 companies have participated in the campus placement process across both phases of 2024–25. Out of 1,530 registered students, 1,223 have been success-

fully placed through the SPO, including 200 Pre-Placement Offers (PPOs) covering both undergraduate and postgraduate programs.

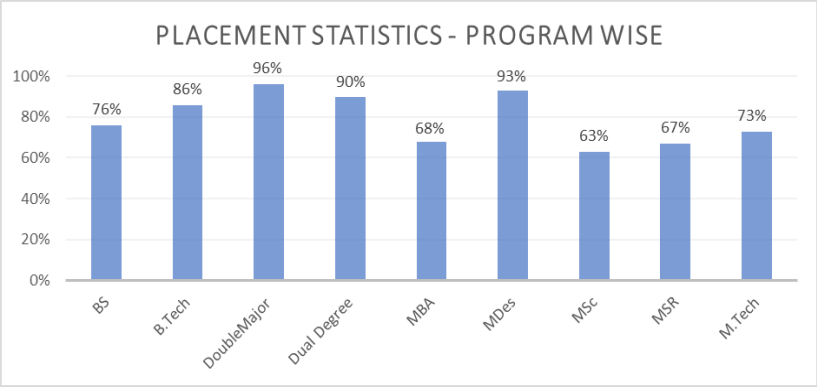
Notably, students from IIT Kanpur received 29 international offers, representing a significant 31% increase over the previous year. The overall placement rate stands at approximately 80%, underscoring the collective efforts and commitment of the SPO team—comprising student volunteers, faculty coordinators, and staff members.

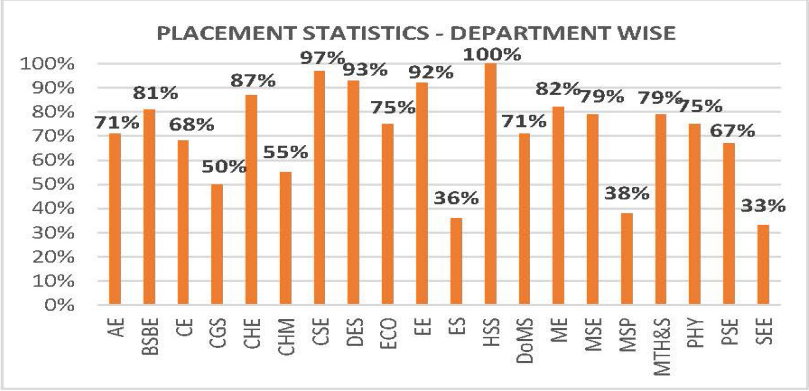
In BTech, BS, Double Major & Dual Degree programs, 798 out of 937 registered students (~ 85%) secured placements. In MTech, MSR, MSc, MBA, MDes & PhD programs, 425 out of 593 registered students (~ 72%) were placed during the recruitment drive 2024-25 as of now. It should be noted that a significant number of graduating students may choose to pursue higher studies, entrepreneurship, or placements outside the campus recruitment drive. The numbers reported here pertain exclusively to students registered with the Students' Placement Office (SPO).

Apart from the regular placement drive, the Students' Placement Office successfully organized Shodhspandan, which is an exclusive recruitment for PhD scholars. The event highlighted the interdisciplinary strengths of IIT Kanpur's PhD candidates, covering diverse domains from engineering to humanities, and

attracted participation from over 25 leading industries and academic institutions. As of now, 12 PhD students have secured positions through this dedicated drive.

In addition to the placement drive, the Students' Placement Office also conducted an internship drive, which began on August 3rd, 2024, and is currently ongoing. This year's internship drive has seen a notable surge in offers, with 551 students having secured positions so far.





EPILOGUE

Dear Graduating Students,

I congratulate you all on this momentous occasion in your life!

This day brings back the nostalgia of my own graduation from this very Institute.

I also take this opportunity to acknowledge the role of all the parents who have played a central role in their children's achievements throughout.

You have spent most of your life so far in training to meet the challenges of the world. Now is the time to put your training into practice. The technology space is undergoing an exciting transition, giving rise to great opportunities for new discoveries and applications of relevance to the world in general and India in particular. I am sure that with your abilities and training, you will have a significant role to play in this transition.

I wish you all the best for your future endeavors. May you find success, joy, and prosperity in life. Stay in touch!

Jai Hind !

- Manindra Agrawal

BOOKS PUBLISHED

- Emerging Materials and Technologies for Bone Repair and Regeneration by Ashok Kumar (BSBE), Sneha Singh, Prerna Singh, CRC Press (2024), ISBN: 9781040088616
- ChE Triad: Lecture Notes Series in Chemical Engineering by Nishith Verma (CHE), Ane Books Pvt. Ltd. (2024), ISBN: 9788119662920
- ChE CRE: Homogeneous Chemical Reaction Engineering by Nishith Verma (CHE), Ane Books Pvt. Ltd. (2024), ISBN: 9788197888694
- FinFET/GAA Modeling for IC Simulation and Design: Using the BSIM-CMG Standard (Second Edition) by Yogesh Singh Chauhan (EE), Darsen Lu, Sriramkumar Vanugopalan, Sourabh Khandelwal, Juan Pablo Duarte, Navid Payvadosi, Ali Niknejad, Chenming Hu, Academic Press, Elsevier (2024), ISBN: 9780124200852
- GaN Transistor Modeling for RF and Power Electronics: Using The ASM-HEMT Model by Yogesh Singh Chauhan (EE), Ahtisham Ul Haq Pampori, Sheikh Aamir Ahsan, Woodhead Publishing, Elsevier (2024), ISBN: 9780323999403
- Artificial Intelligent Algorithms for Image Dehazing and Non-Uniform Illumination Enhancement by Teena Sharma, Nishchal K. Verma (EE), Springer Nature (2024), ISBN: 9789819720118
- Constrained Reinforcement Learning with Average Reward Objective: Model-Based and Model-Free Algorithms by Vaneet Aggarwal, Washim Uddin Mondal (EE), Qinbo Bai, Now Publisher Inc. (2024), ISBN: 9781638283966

- Substrate Integrated Waveguides by Soumava Mukherjee, Prasun Chongder, Animesh Biswas (EE), Artech House (2024), ISBN: 9781685690465
- Environmental and Ecological Sustainability Through Indigenous Traditions: Perspectives from the Global South by Binay Kumar Pattnaik (HSS), Springer (2024), ISBN: 9789811970795
- Optimization Essentials Theory, Tools and Applications by Faiz Hamid (DoMS), Springer Singapore (2024), ISBN: 9789819954919
- Gender and Power Sector Regulation by A. Salgotra, Anoop Singh (DoMS), Centre for Energy Regulation (CER) (2025), ISBN: 9789334142310
- Ammonia and Hydrogen for Green Energy Transition by Sudarshan Kumar, Avinash Kumar Agarwal (ME), Bhupendra Khandelwal, Paramvir Singh, Springer Nature Singapore (2024), ISBN: 9789819705078
- Decarbonization of Maritime Transport by Burak Zincir, Pravesh Chandra Shukla, Avinash Kumar Agarwal (ME), Springer Nature Singapore (2024), ISBN: 9789819916771
- Application of Clean Fuels in Combustion Engines by Gabriele Di Blasio, Avinash Kumar Agarwal (ME), Giacomo Belgiorno, Pravesh Chandra Shukla, Springer Nature Singapore (2024), ISBN: 9789811687518
- Challenges and Opportunities of Distributed Renewable Power by Sudipta De, Avinash Kumar Agarwal (ME), P Kalita, Springer Nature Singapore (2024), ISBN: 9789819714063

- Role of flavonoids in chronic metabolic diseases: From bench to clinic by Arshad Farid, Ashish Garg (SEE), B. H. Jaswanth Gowda, Neeraj Mishra, Sumel Ashique, Wiley (2024), ISBN: 9781394238057
- Beneficiation and Management of Technological Waste Opportunities and Challenges by Anurag Bajpai, Arunabh Meshram, Krishanu Biswas (MSE), CRC Press (2024), ISBN: 9781032555386

FELLOWSHIPS

- Prof. Mahendra K. Verma (PHY) has been awarded the prestigious Senior Research Fellowship by Stanford University.
- Prof. Debabrata Goswami (CHM) has been selected for the JILA visiting fellowship program to work in the University of Colorado at Boulder.
- Prof. Abheejeet Mohapatra (EE) has been selected for the Class of 1979 Young Faculty Fellowship.
- Prof. Supratik Banerjee (PHY) has been awarded the P. K. Kelkar Fellowship with effect from September 09, 2024 for a period of 3 years.

AWARDS AND HONORS

- Prof. Ashutosh Sharma (CHE) has been conferred with the Padma Shri 2025 by the GoI for his exceptional contributions to science & engineering.

- Prof. S. N. Tripathi (CE, SEE) has been awarded the Alexander von Humboldt Medal 2025 of the European Geophysical Union.
- Prof. Bushra Ateeq (BSBE) has been selected for The World Academy of Sciences (TWAS) Award in Medical & Health Sciences.
- Prof. Adimurthi Adi (MTH&S) was awarded the Rashtriya Vigyan Puraskar, Vigyan Shri for 2024.
- Prof. D. H. Dethe (CHM) has been awarded the C. N. R. Rao National Prize for Chemical Sciences-2025 of the Chemical Research Society of India (CRSI).
- Prof. Avinash Kumar Agarwal (ME, Director IIT Jodhpur) has been selected to receive the 2025 ASME (American Society of Mechanical Engineers) Internal Combustion Engine Award.
- Prof. Animesh Biswas (EE) has received the Prof. G. K. Dube Memorial Lifetime Achievement Award - 2024 from IEEE, UP Section.
- Prof. Avinash Kumar Agarwal (ME, Director IIT Jodhpur) has received the 3rd IETI (International Engineering and Technology Institute) Ramesh Agarwal Lifetime Achievement Award.
- Prof. Mrinmay Biswas (MTH&S) has been awarded the Sushila and Kantilal Mehta Award for the year 2024.
- Prof. Krishanu Biswas (MSE) has been selected to receive the MRSI (Materials Research Society of India) Medal for 2024.
- Prof. Wasim Ahmad (ECO) has been awarded the prestigious Mahalanobis Memorial Medal – 2024.

- Prof. Angshuman Karmakar (CSE) won the Google India Research Award 2024 for his pioneering project on NIST standardization.
- Prof. Kaustubh Kulkarni's (MSE) research article has been selected for the Editor's Choice Award for 2024 in the Journal of Phase Equilibria and Diffusion.
- Prof. Abhijith G. R. (CE) has received the Best Associate Editor Award for the Journal of Water Resources Planning and Management from ASCE Environmental and Water Resources Institute (EWRI).
- Prof. Srinivas Dharavath (CHM) has been chosen as one of the Thieme Journals awardees for 2025.
- Prof. Prakash Chandra Mondal (CHM) has been chosen as one of the Thieme Chemistry Journal awardees for 2025.
- Prof. Swagata Mukherjee (PHY) has received the Breakthrough Prize in Fundamental Physics, which is awarded to the co-authors of publications based on CERN LHC Run-2 data.
- Prof. Sanmay Ganguly (PHY) has received the Breakthrough Prize in Fundamental Physics, which is awarded to the co-authors of publications based on CERN LHC Run-2 data.
- Prof. Sandeep Verma (CHM) has been conferred an Honorary Doctorate from Goethe University, Frankfurt, Germany.
- Prof. Sandeep Verma (CHM) has been conferred an honorary doctorate by Amity University, Rajasthan.

- Prof. Purushottam Kar (CSE) has been awarded the Gopal Das Bhandari Memorial Distinguished Teacher Award for the year 2024.
- Prof. Amit Agarwal (PHY) has been awarded the P. K. Kelkar Chair of IIT Kanpur with effect from June 15, 2024, for a period of 3 years.
- Prof. Aditya K. Jagannatham (EE) was awarded the IIT Kanpur Distinguished Teacher Award 2024.
- Prof. Mainak Chaudhuri (CSE) was awarded the IIT Kanpur Distinguished Teacher Award 2024.

APPOINTMENTS

- Prof. Rohit Budhiraja (EE) has been appointed as Vice Chairman of the 6G Use Case and Revenue Stream in the Bharat 6G Alliance.

FELLOW/ASSOCIATE OF ACADEMY

- Prof. Ashoke De has been elected as a Fellow of The American Society of Mechanical Engineers (ASME).
- Prof. Animangshu Ghatak (CHE) has been elected to the Fellowship of the Indian National Science Academy (INSA).
- Prof. S. P. Rath (CHM) has been elected to the Fellowship of the Indian National Science Academy (INSA).
- Prof. Basker Sundararaju (CHM) has been selected as INSA Associate Fellow 2025.

- Prof. Animangshu Ghatak (CHE) has been elected to the Fellowship of the National Academy of Sciences, India (NASI).
- Prof. Rahul Mangal (CHE) is selected as a member of the National Academy of Sciences, India (NASI).
- Prof. Jayant K. Singh (CHE) has been elected to the Fellowship of the Indian Academy of Sciences - 2025.
- Prof. Dootika Vats (MTH&S) has been awarded the Associateship of the Indian Academy of Sciences, Bengaluru.
- Prof. Ritika Gautam Singh (CHM) has been awarded the Associateship of the Indian Academy of Sciences, Bengaluru.
- Prof. Siddhartha Panda (CHE) has been elected as a Fellow of the prestigious Indian National Academy of Engineering (INAE).
- Prof. Ashok Kumar (BSBE) has been elected as a Fellow of the prestigious Indian National Academy of Engineering (INAE).
- Prof. Tushar Sandhan (EE) has been selected as INAE Young Associate 2024.
- Prof. Salil Goel (CE) has been selected as INAE Young Associate 2024.
- Prof. Dipin S. Pillai (CHE) has been selected as INAE Young Associate 2024.
- Prof. Bushra Ateeq (BSBE) was elected as a Fellow of the National Academy of Medical Sciences (NAMS), India.

EDITORSHIPS / MEMBERSHIP

- Prof. Raju Kumar Gupta (CHE) has been invited to serve as a member of the International Advisory Board of Energy Technology, an applied energy journal.
- Prof. Srinivas Dharavath (CHM) has been invited to join the board of FirePhysChem Journal as a consulting editor.
- Prof. Nikunj Bhagat (BSBE, EE) has been elected as a member of the Technical Committee for Neural & Rehabilitation Engineering (TC-NRE) formed by the IEEE Engineering, Medicine & Biology (EMB) Society.
- Prof. Indra Sekhar Sen (ES) has been appointed as an Associate Editor for a period of three years in the journal Geophysical Research Letters, published by the American Geophysical Union.
- Prof. S. N. Tripathi (CE, SEE) has been appointed as Editor of Aerosol Science and Technology, a journal published by the American Association for Aerosol Research.
- Prof. Kumar Ravi Priya (HSS) has been selected to serve as the Special Issue Editor of the journal Qualitative Research in Psychology.
- Prof. Prerna Gautam (DoMS) was selected as an Associate Editor of the International Journal of Systems Assurance and Engineering, Springer.
- Prof. Suman Saurabh (DoMS) was appointed as Associate Editor of Decision, an official journal of IIM Calcutta.

- Prof. Rohit Budhiraja (EE) was elected (unopposed) to the governing council of TSDSI (Telecommunications Standards Development Society, India).
- Prof. Umesh Madanan (ME) has been invited to serve on the Early Career Editorial Board of Applied Thermal Engineering (Elsevier).
- Prof. Sandeep Verma (CHM) has been elected as Vice President of the Society of Materials Chemistry (Bhabha Atomic Research Centre, Trombay) for three years (2025-2028).
- Prof. D. H. Dethe (CHM) has joined the Editorial Board of Tetrahedron & Tetrahedron Letters.
- Prof. Sabuj Kundu (CHM) has been invited to join the editorial advisory board of the journal Tetrahedron Green Chem.
- Prof. Prakash Chandra Mondal (CHM) has been offered a visiting professorship at the National Research Nuclear University, MEPhI, Moscow, Russia.
- Prof. Sandeep Verma (CHM) has been invited to join as a Distinguished Prof. (Visiting) in the Dept. of Chemistry, School of Natural Sciences, at the Shiv Nadar Institution of Eminence (SNIoE), Deemed to be University.

STUDENTS AWARDS

- Mr. Alankrit Srivastava (21101263, PhD/AE) received the Best Paper Award at the 2nd International Conference on Fluid, Thermal and Energy Systems (ICFTES'24), organized during June 6-8, 2024.

- Mr. Ranjay Kumar Singh (20101282, PhD/AE) has received the Best Paper Award in ICFTES'24, organized from June 6-8, 2024.
- Ms. Talat Zahra (18118269, PhD/BSBE) has been awarded the Outstanding Poster Presentation Award at the Indian-EMBO (European Microbiology Organization) Lecture course on post-transcriptional regulation in ageing and age-related diseases held at Shiv Nadar Institute of Eminence and IIIT Delhi from June 10-15, 2024.
- Mr. Mohd. Mujahid Khan (18214265, PhD/DOMS) has been awarded the Best Paper Award (first runner-up) at MERC 2024 held during May 31-June 2, 2024, at IIM Kashipur.
- Mr. Pradeep Sachan (19107291, PhD/CHM) received the Best Poster Prize at the Chemical Research Society of India (CRSI) meeting held in Hyderabad from July 4-6, 2024.
- Ms. Dolly Chandel (18207263, PhD/CHM) received the Best Poster Prize at the CRSI meeting held in Hyderabad from July 4-6, 2024.
- Ms. Abhisha Garg (20104261, PhD/EE) received the Best Poster Prize at the International Conference on Signal Processing and Communication (SPCOM-2024) held at IISc Bangalore from July 1-4, 2024.
- Mr. Akash Kumar (22104005, MTech/EE) received the Best Poster Prize at the SPCOM-2024 held at IISc Bangalore from July 1-4, 2024.
- Mr. Suraj Srivastava (15204275, PhD/EE) received the Best Poster Prize at the SPCOM-2024 held at IISc Bangalore from July 1-4, 2024.

- Ms. Rikhia Bhukta (20227262, PhD/ECO) received the Best Poster Prize at the 2nd Global Conference on Caste, Business, and Society meeting held at the University of Bath from June 19-21, 2024.
- Mr. Arnav Pandey (200188, BTech/ME) has received the ISSS UG Student Award for the year 2023 at the IC-MNSS 2024 in IISc Bangalore held during July 9-12, 2024.
- Mr. Suryansh Pathak (Summer Intern/ME) has received the Best Paper Award at the IC-MNSS 2024 in IISc Bangalore held during July 9-12, 2024.
- Ms. Priyanka Maity (18104285, PhD/EE) has been awarded the prestigious Qualcomm Innovation Fellowship (QIF) India for the year 2024.
- Mr. Prabhakar Kumar Pandey (18507265, PhD/CHM) received the ACS Catalysis Best Poster Award at the 30th International Conference on Organometallic Chemistry (ICOMC 2024), organized at Jaypee Palace, Agra, between July 14-18, 2024.
- Mr. Saikat Pal (17507261, PhD/CHM) received the ACS Catalysis Best Poster Presentation Award at the XXIII International Symposium on Homogeneous Catalysis (ISHC) held at Trieste, Italy, during July 21-26, 2024.
- Ms. Shivangi Gupta (19107301, PhD/CHM) was awarded the Dalton Transactions Best Poster Prize at ICOMC-2024 held at the Jaypee Palace, Agra, from July 14-18, 2024.
- Ms. Nidhi Garg (18107276, PhD/CHM) was awarded the Chemistry- A European Journal Best Poster Award at ICOMC-2024 held at the Jaypee Palace in Agra from July 14-18, 2024.

- Ms. Prachi Awasthi (19205268, PhD/ME) received the Best Oral Presentation Award at the International Conference on Materials and Membranes for Water and Energy (ICMMWE-2024) held from July 10-12, 2024 at Bhavnagar, Gujarat.
- Mr. Sandarbh Kumar (19218263, PhD/BSBE) has been awarded the Best Oral Presentation Award at the International Conference on Engineered Materials for Sustainable Development (EMSD 2024) held from July 24-26, 2024.
- Mr. Prajwal K Subudhi (210527, BTech/ME) won the First Prize in Paper Presentation at the mini-symposium on undergraduate research presentation at the Indian Conference on Applied Mechanics held from July 12-14, 2024, at NIT Warangal.
- Ms. Rhitwika Chowdhury (20107292, PhD/CHM) has received the Best Poster Award in International Symposium Frontiers in Sustainable Catalysis and Organometallics (FISCO) held at MNIT Jaipur from July 11-12, 2024.
- Ms. Ritama Kar (19207274, PhD/CHM) received the Best Poster Award at the International Conference on 60 Years of DFT: Advancement in Theory & Computation held at IIT Mandi from July 21-26, 2024.
- Mr. Abhishek Kumar Yadav (20107261, PhD/CHM) received the Best Oral Presentation Award in the 14th International Workshop on Combustion and Propulsion held at Pescara, Italy, from July 29-31, 2024.

- Ms. Sarika Yadav (17112262, PhD/MSP) has been highly commended for presenting a 3-minute video entitled Artificial Intelligence for Artificial Taste Sensing in WiSe Video Competition at IEEE BioSensors 2024, Cambridge during July 28-30, 2024.
- Mr. Abhiram Shukla (18103261, PhD/CE) received Third Position in Poster Presentation at the prestigious Decarbonization of Built Environment Workshop organized by IIT Bombay on August 28, 2024.
- Mr. Shanmukha Sree Jaya Prakash Neelam (231030052, MTech/CE) is awarded the ESRI India Masters' Scholarship in GIS 2024.
- Mr. Naman Mehrotra (210647, BTech/EE) is the Regional Winner (First Runner Up) of the IET India Scholarship Award from the South-2 Zone National Finals held in Bengaluru on September 2, 2024.
- Ms. Paulami Chakraborty (19107289, PhD/CHM) received the Best Poster Award at the 17th European Biological Inorganic Chemistry Conference (EuroBIC-17) held at the University of Münster, Germany from August 25-29, 2024.
- Ms. Priyanka Chakraborty (17207267, PhD/CHM) has received the Best Flash Presentation Award in ACS Meetings Global Virtual Symposia Fall 2024 - Emerging Landscape of Organometallic Chemistry and Catalysis held during August 17-21, 2024.
- Mr. Debarghya Sarkar (18107270, PhD/CHM) received the Best Poster Award at the 34th International Symposium on Chirality held in Kyoto, Japan from August 26-29, 2024.

- Mr. Shreepad Gunge (231020041, MTech/CHE) has been awarded the Best Oral Presentation at CEES (Catalysis for Energy, Environment, and Sustainability) 2024 conference jointly organized by Catalysis Society of India and CO_2 India Network held at CSIR-IICT Hyderabad during September 18-20, 2024.
- Ms. Ananya P. Mukherjee (19123262, PhD/ES) has been awarded second prize for the Best Poster Presentation in the National Conference on Emerging Trends in Earth Sciences: Geohazards and Resource Management (ETES2024) organized by IIT(ISM) Dhanbad during September 27-29, 2024.
- Mr. Suraj Jaiswal (231040414, MSR/EE) has received the 2024 IEEE SPS Scholarship from the IEEE Signal Processing Society (SPS).
- Ms. Shraddha Tripathi (18104292, PhD/EE) has received the 2024 IEEE SPS Scholarship from the IEEE Signal Processing Society (SPS).
- Mr. Shantanu Sen (18107281, PhD/CHM) has been selected as one of the 11 nationwide recipients of the Gandhian Young Technological Innovation (GYTI) Award for the year 2023.
- Mr. Shantanu Sen (18107281, PhD/CHM) has secured 2nd position at the prestigious Falling Walls Lab Event India, hosted by the Falling Walls Foundation Germany and IISc Bangalore.
- Ms. Mahure Kanchan Gunvantrao (18201266, PhD/AE) has won the 2nd Best Paper Award at the International Conference on Experimental Mechanics, 2024.

- Ms. Chandrani Pal (20107273, PhD/CHM) has received the Best Oral Presentation Award in the CRSI-ACS Early Career Researchers Symposium held at KIIT DU, Bhubaneswar, from October 22-23, 2024.
- Mr. Zahid Ahmad Khan (20207277, PhD/CHM) has received the Best Poster Award in the Organic Chemistry Symposium (OCS-2024) held at IIT Kanpur from September 08-09, 2024.
- Ms. Shilpa (20207272, PhD/CHM) has received the Best Poster Award in OCS-2024 held at IIT Kanpur from September 08-09, 2024.
- Mr. Vatsalya Gupta (22107288, PhD/CHM) has received the Best Poster Award in OCS-2024 held at IIT Kanpur from September 08-09, 2024.
- Mr. Niranjan Chatterjee (19118272, PhD/BSBE) has been awarded the Gandhian Young Technological Innovation (GYTI) Award (GYTI-2023).
- Mr. Ritwik Shankar (210866, BTech/AE) has been selected for the India AI Fellowship awarded by MEITY, GoI.
- Mr. Atul Kumar Soni (18104270, PhD/EE) has received the GRID-INDIA Power System (GIPSA) 2024 award.
- Mr. Sunil Kumar Maurya (20104315, PhD/EE) has received the GRID-INDIA Power System (GIPSA) 2024 award.
- Ms. Sylvie Rana (21104272, PhD/EE) received the Best Paper Award at the IEEE SPACE 2024 held during July 22-23, 2024, in Bangalore.

- Ms. Sylvie Rana (21104272, PhD/EE) received the Prof. Sudarshan Tiwari Memorial Best Paper Award at the 2nd International Conference on Microwave, Antenna and Communication (MAC), 2024 held during October 4-6, 2024, at Dehradun.
- Mr. Praveen (20204271, PhD/EE) has received the Shri Dorilal Agarwal National Scholarship 2024.
- Mr. Manish Kumar Gupta (21204405, MSR/EE) has received the GRID-INDIA Power System (GIPSA) 2024 award.
- Ms. Keerthika Kadagala (210505, BTech/EE) received the Best Paper Award at the 11th IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2024), Lucknow held during November 29 - December 01, 2024.
- Mr. Saurav Bhattacharjee (15103274, PhD/CE) received the Best Paper Award at the GEOMATE conference, held during November 12-16, 2024, in Thailand.
- Mr. Vineet Arora (20114274, PhD/DoMS) has received the Best Research Paper Award at the India Management Research Conference (IMRC) 2024 held at the IIM Ahmedabad from December 7-9, 2024.
- Mr. Mrityunjay Rai (22207263, PhD/CHM) has been selected for the FICCI-PMRF Fellowship (Industry) for the year 2024.
- Mr. Parasar Kumar (20207268, PhD/CHM) received the Best Poster Award at the 16th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM-2024) held at IISER Berhampur from November 09-13, 2024.

- Ms. Namrata Pachauri (18212264, PhD/MSP) received the Best Poster Presentation Award at the symposium on Chemical Reaction Engineering (CRE-2024) held at the CSIR-National Chemical Laboratory, Pune in December 2024.
- Mr. Avanish Pandey (22104267, PhD/EE) has received the IES Student and Young Professionals Activity (SYPA) Paper Award at the IECON 2024- 50th Annual Conference of the IEEE Ind. Electron. Society, Chicago, USA, held during November 3-6, 2024.
- Mr. Yojan Sharma (22104129, MTech/EE) has received the IES Student and Young Professionals Activity (SYPA) Paper Award at the IECON 2024- 50th Annual Conference of the IEEE Ind. Electron. Society, Chicago, USA, held during November 3-6, 2024.
- Mr. Yojan Sharma (22104129, MTech/EE) has received the Best Paper Presentation Award at the IECON 2024- 50th Annual Conference of the IEEE Ind. Electron. Society, Chicago, USA, held during November 3-6, 2024.
- Mr. Harish Ranot (19106273, PhD/MSE) has received the Best Oral Presentation Award in the Physical Metallurgy theme of the 6th International Conference on Processing and Characterization of Materials (ICPCM 2024) organized by NIT Rourkela from December 5-7, 2024.
- Ms. Abhisha Garg (20104261, PhD/EE) has been awarded the Outstanding WiE Professional Volunteer Award 2024 by the IEEE India Council.
- Mr. Gaurav Kumar (18112261, PhD/MSP) has been awarded the First Prize for the Oral Presentation at the International Conference on Emerging Trends in Chemical Engineering and Advanced

Materials (ETCEAM-2024) held at BITS, Mesra from December 13-15, 2024.

- Mr. Javed Akhter Mondal (20109274, PhD/PHY) has been awarded the Best Poster Award at the PHOTONICS-2024 held at IIT Kharagpur from December 12–15, 2024.
- Mr. Niranjan Chatterjee (19118272, PhD/BSBE) has been awarded the Best Master's Thesis Award by the Society for Biomaterials and Artificial Organs (India).
- Ms. Moumita Chanda (18118265, PhD/BSBE) received the Bajpai Saha Award at the International Conference on Advances and Challenges in Medical Technology Translation (TransMedTech 24) held during December 12-14, 2024, at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.
- Ms. Saptomee Chakraborty (19118277, PhD/BSBE) has received the RSC 3rd Prize in Poster Presentation at TransMedTech 24 held during December 12-14, 2024.
- Dr. Aman Mahajan (15118261, PhD/BSBE) has received the 3rd prize in the Outstanding PhD Thesis Award at TransMedTech 24 held during December 12-14, 2024.
- Ms. Adrija Bose (22118004, PhD/BSBE) has received the First Prize in SBAOI Poster Presentation at TransMedTech 24 held during December 12-14, 2024.
- Ms. Ekta Srivastava (18118263, PhD/BSBE) has received the Best MTech Thesis Award at TransMedTech 24 held during December 12-14, 2024.

- Ms. Triya Saha (19118282, PhD/BSBE) received the Mehta Family Centre Best Flash Talk Award in Regenerative Medicine at the PAN-IIT Meeting and Conference on Engineering in Medicine held during December 6-8, 2024, at IIT Kanpur.
- Ms. Triya Saha (19118282, PhD/BSBE) has been judged 1st in the Clinical Trials category of Oral Paper Presentation Session at the 64th Annual Conference of National Academy of Medical Sciences (NAMSCON-2024) at AIIMS Jodhpur during 22-24 November 2024.
- Ms. Ayushi Mairal (19118264, PhD/BSBE) received the Mehta Family Centre Best Flash Talk Award in Molecular Medicine at the PAN-IIT Meeting and Conference on Engineering in Medicine held during December 6-8, 2024.
- Ms. Ayushi Mairal (19118264, PhD/BSBE) has been judged in 2nd place in the Clinical Trials category of Oral Paper Presentation Session at NAMSCON-2024.
- Mr. Ubaid Tariq (20118282, PhD/BSBE) received the Thermo Fisher Scientific Best Flash Talk Award in Regenerative Medicine at the PAN-IIT Meeting and Conference on Engineering in Medicine held during December 6-8, 2024.
- Ms. Purva Gupta (17118273, PhD/BSBE) has received the Mehta Family Centre Best Flash Talk Award in Regenerative Medicine at the PAN-IIT Meeting and Conference on Engineering in Medicine held during December 6-8, 2024.
- Mr. Piyush Kumar (19118274, PhD/BSBE) received the Merck Life Sciences Best Poster Presentation Award in Regenerative

Medicine at the PAN-IIT Meeting 2024 and Conference on Engineering in Medicine held during December 6-8, 2024.

- Mr. Niranjan Chatterjee (19118272, PhD/BSBE) received the Thermo Fisher Scientific Best Oral Presentation Award in Regenerative Medicine at PAN-IIT Meeting 2024 and Conference on Engineering in Medicine held during December 6-8, 2024.
- Ms. Ankita Kumari (18204263, PhD/EE) has secured the 3rd position in the 3-Minute Thesis (3MT) Competition organized during the IEEE Microwaves, Antennas, and Propagation Conference (MAPCON-2024) held during December 9-14, 2024 at Hyderabad.
- Ms. Keerthika Kadagala (210505, BTech/EE) has been awarded the Best Project Award for Engineering under the SURGE-2024 research internship program.
- Mr. Vivek Chaudhary (22204268, PhD/EE) received the Best Paper Award at the 2024 IEEE 11th Power India International Conference (PIICON 2024) held on December 10-12, 2024 at MNIT Jaipur.
- Ms. Garima Joshi (231160603, PhD/PSE) has received the Best Poster Award at the PHOTONICS 2024 held at IIT Kharagpur from December 12-15, 2024.
- Mr. Mohd. Vaseem (21114266, PhD/DOMS) has received the Best Research Paper Award at the XXVII Annual International Conference of the Society of Operations Management (SOM 2024), held at IMT Ghaziabad from December 19-21, 2024.

- Ms. Hemlata Meena (21109867, PhD/PHY) has received the Best Poster Award in COMPFLU (Conference of Indian Society of Rheology and the Soft Matter Community of India) held from December 16-18, 2024 at IIT Hyderabad.
- Mr. Pankaj Kumar Mahawar (20109868, PhD/PHY) has received the Best Poster Award in COMPFLU held December 16-18, 2024, at IIT Hyderabad.
- Mr. Nikhil Shrivas (231090904, PhD/PHY) has received the Best Poster Award at the PHOTONICS 2024 held at IIT Kharagpur from December 12-15, 2024.
- Mr. Nikhil Shrivas (231090904, PhD/PHY) has received the Best Poster Award at the OptoIn24 (Annual Symposium of the Optical Society of India) held at CSIO, Chandigarh during October 23-25, 2024.
- Mr. Jalaj Kumar (20104283, PhD/PHY) received the Best Poster Award at the International Conference IEEE Power Electronics, Drives, and Energy Systems (PEDES)-2024, held at NITK Surathkal from December 18-21, 2024.
- Ms. Ashma Parween (21103265, PhD/CE) has received the Second Prize for Oral Presentation at the international conference on Advances in Sustainable Solutions for energy Transitions (ASSET) held at IIT Guwahati during January 2-4, 2025.
- Mr. Prashant Kumar (22201264, PhD/AE) received the First Prize in the CASML 2024 - Scientific Machine Learning Challenge organized by IISc during December 9-18, 2024.
- Mr. Abhishek Kumar Yadav (20107261, PhD/CHM) received the Best Poster Award at the Conference on Advances in Chemistry

for Energy and Environment (CACEE -2024) held at TIFR Mumbai from December 16-20, 2024.

- Mr. Abir Das (20107317, PhD/CHM) has received the RSC Best Poster Award in the 7th International Symposium on C-H Activation (ISCHA 2024) held at IIT Bombay from December 6-9, 2024.
- Ms. Shruti Tripathi (20207273, PhD/CHM) has been selected for the Young Scientist Award at the International Conference on Emerging Trends in Biopharmaceutical and Translational Research for Human Health and the 18th Annual Convention of the Association of Biotechnology and Pharmacy (ABAP) held at Mangalayatan University, Aligarh during December 19-21, 2024.
- Mr. Bharat Singh (17207263, PhD/CHM) has received the Best Poster and Oral Presentation Award in the 61st Annual Convention of Chemists and the International Conference on Emerging Trends in Chemistry to Revolutionize Indian Chemical Industries for Viksit Bharat@2047 held at JECRC University, Jaipur from December 19-21, 2024.
- Mr. Manish Kumar (18107275, PhD/CHM) has received Best Poster and Oral Presentation Awards in the 61st Annual Convention of Chemists and the International Conference on Emerging Trends in Chemistry to Revolutionize Indian Chemical Industries for Viksit Bharat@2047.
- Mr. Subhadip Pramanik (19107307, PhD/CHM) has received the Dalton Transactions Best Poster Award in Modern Trends in Inorganic Chemistry MTIC-XXI held at IIT Kharagpur from December 14-17, 2024.

- Mr. Aman Pathak (20214261, PhD/DOMS) has won the Best Paper Award (for doctoral students) by the Journal of Global Marketing at the International Communication Management Conference held at MICA, Ahmedabad, from January 6-9, 2025.
- Mr. Suryakapa Jaipal Reddy (18103280, PhD/CE) won Best Oral Presentation at the 9th International Conference on Civil and Building Materials held during January 17-19, 2025, in Bali, Indonesia.
- Ms. Baisakhi Bandyopadhyay (20204264, PhD/EE) has been selected to receive the prestigious IEEE MTT-S Graduate Fellowship for 2025.
- Mr. Abhay Pratap Raghuvanshi (19227261, PhD/ECO) has received the Best Paper Award at the 4th Annual International Research Conference (AIRC) organized by IIM Lucknow from January 30 – February 1, 2025.
- Mr. Vikas Tiwari (20106296, PhD/MSE) was awarded the Best Poster Presentation Award at the International Conference on Additive Manufacturing and Characterization (ICAMC) organized by IIT Bombay on January 10-11, 2025.
- Mr. Manu S. Varghese (22105040, MTech/ME) was awarded the Best Paper Award in Fluid Mechanics at the 11th International and 51st National Conference on Fluid Mechanics & Fluid Power (FMFP-2024) held during December 21-23, 2024 at Aligarh Muslim University.
- Mr. Abhishek Kumar (231050007, MTech/ME) was awarded the Best Paper Award in Fluid Mechanics at the 11th International and 51st National Conference on Fluid Mechanics & Fluid Power (FMFP-2024).

- Mr. Harshit Kumar Sharma (21127262, PhD/ECO) was awarded the Best Paper Award at the 6th Annual Conference in Economics and Finance (ACEF) 2025, organized by BITS Pilani from February 4-6, 2025.
- Ms. Prerna Sinha (16112264, PhD/MSP) was awarded the Best Thesis award in Category Carbon Materials from the INYAS-National Competition for Research Excellence.
- Mr. Abhishek Bhardwaj (210034, BTech/EE) has been awarded for the Hyundai Hope Scholarship.
- Ms. Saumya Kumari (210946, BTech/CHE) has been awarded for the Hyundai Hope Scholarship.
- Mr. Raj Kumar (20105291, PhD/ME) received the Best Paper Award in the Manufacturing for Biomedical and Aerospace Applications category at the COPEN 13-2024 conference held at NIT Calicut during December 13-15, 2024.
- Ms. Shruti Dubey (17506261, PhD/MSE) has secured the Third Position in the Student Poster Presentation competition at the Advances in Energy Efficient Materials Processing (AEEMP-2025) conference held during February 20-21, 2025, at IIT Patna.
- Mr. A Shivnag Sharma (22201261, PhD/AE) received the First Prize for Best Poster Presentation during the 5th International Structural Integrity Conference and Exhibition (SICE'24) held during October 22-24, 2024, at VNIT Nagpur.
- Mr. Aditya Sharma (19103290, PhD/CE) has secured First Position in Oral Presentation at the International Conference, Chemical Resilience & Sustainable Practices: Advanced Materials in Water Purification Strategies for Desalination, Energy Production

& Environmental Conservation jointly organized by HBTU Kanpur and the Indian Desalination Association during February 20-22, 2025.

- Mr. Ajay Kumar Sahoo (18107263, PhD/CHM) received the Best Poster Award at the International Conference on Advances in Organic Chemistry held in Goa from January 27-29, 2025.
- Ms. Gulshan Anjum (17207265, PhD/CHM) has received the Best Poster Award at the International Conference on Advances in Organic Chemistry held in Goa from January 27-29, 2025.
- Mr. Vatsalya Gupta (22107288, PhD/CHM) received the Best Poster Award at the International Conference on Advances in Functional Materials and Applications held at BITS Pilani, Goa from February 19-22, 2025.
- Mr. Radhakrishnan Sriram (231060016, MTech/MSE) has received the Best Poster Award at the Indian Semiconductors and Packaging Ecosystem Conference (ISPEC-2025).
- Dr. Arghya Sen (18507261, PhD/CHM) has been awarded the prestigious Humboldt Research Fellowship.
- Mr. Abir Das (20107317, PhD/CHM) has been selected to attend the 74th Lindau Nobel Laureate Meeting dedicated to Chemistry to be held in Lindau, Germany, during June 29 to July 04, 2025.
- Mr. Ritwik Shankar (218070866, BT-MT/AE) has been awarded the Vertical Flight Foundation Scholarship by the Vertical Flighty Society of USA in the Undergraduate Category.
- Mr. Mantavya Upadhyay (220627, BTech/EE) has been awarded the Best Poster Award at the 2nd Global Conference on Decarbonizing India held at NIT Calicut from March 7-8, 2025.

- Mr. Atul Kumar Soni (18104270, PhD/EE) has been awarded the prestigious Clayton Griffin Student Paper Award 2025.
- Mr. Prabhu Safi (220776, BTech/AE) has been awarded the Hyundai Hope Scholarship award under the Innovators Category.
- Mr. Shreeyash Nitin Malode (20214271, PhD/DOMS) has been selected for the IIASA's Young Scientist Summer Program (YSSP) 2025. He has been awarded the Prof. Jyoti and Kirit Parikh Fellowship to fund his participation in the program.
- Ms. Abhirami A (21100263 PhD/HSS) has been honored with the Emerging Scholar Award 2025 at the University of Hawaii, USA, in June 2025 in collaboration with the European Society of Comparative Literature.
- Ms. Bandana Mili (21100265 PhD/HSS) won the highly competitive ASLE Travel Award of $500 for her paper presentation.
- Ms. Shambhavi Mishra (19214268, PhD/DoMS) has been selected for a 1-year ETH4D Doctoral Mentorship Scholarship with 3 months stay at ETH Zurich, Switzerland, along with funding support for one international conference.
- Mr. Shailendra Pratap Singh (231040615 PhD/EE) has been adjudged for the Best Paper Award under the Conference Track: Electric Transportation.
- Mr. Bharat Singh Chahar (19206264 PhD/MSE) has been awarded Best Oral Presentation at the i3C conference 2025, Jamshedpur.
- Mr. Saikat Mandal (19106274 PhD/MSE) has been awarded Best Oral Presentation at the i3C conference 2025, Jamshedpur.

- Mr. Susanta Kumar Nayak (18106279 PhD/MSE) has been selected for the Editor's Choice Award for 2024 in the Journal of Phase Equilibria and Diffusion.
- Ms. Biswarupa Samantaray (18106264 PhD/MSE) has been selected for the Editor's Choice Award for 2024 in the Journal of Phase Equilibria and Diffusion.
- Ms. Shivangi Singh (20103293 PhD/CE) has been awarded the Best Poster Award at the VLBI Data Analysis at the European VLBI Group for Geodesy and Astrometry (EVGA) 2025 Conference held in Matera, Italy from April 6-10, 2025.
- Ms. Abhirami A (21100263 PhD/HSS) has been awarded the Swiss Government Excellence Scholarship for the academic year 2025–2026.
- Mr. Basil M. Idrees (17104266 PhD/EE) has won the Best Student Presentation Award (3rd Prize) at PIERS 2025, held during May 4-8, 2025, in Abu Dhabi.
- Ms. Shreya Pourush (231040616 PhD/EE) has been selected as one of the recipients of the prestigious and highly competitive IEEE Antennas and Propagation Society (AP-S) C.J. Reddy Travel Grant ($1,500) for Graduate Students for the year 2025.
- Ms. Adheeti Atul Agarwal (231180614 PhD/BSBE) was awarded the Best Paper Award in Carbon Nanocomposite in Thermo-Responsive Melanocare Gel Facilitates Transdermal Therapy of Melanoma held in IIT Ropar.

LIST OF MAJOR PROJECTS SANCTIONED

1. Mission Coordination Cell, National Quantum Mission (Dept. of Science and Technology)
2. DBT-Sahaj Centre for Bio-Sensing Technologies (Dept. of Biotechnology)
3. Crypto Currency Forensics (National Security Council Secretariat)
4. Capacity Building and Skill Development in the Medical Device Sector (Ministry of Chemicals and Fertilizers)
5. Flexible Solid-Electrolyte Alternative Chemistry Batteries (Flex Sea Bat) (Defence R & D Organisation)
6. Centre Of Excellence Antimicrobial Resistance (AMR), (Dept. of Science and Technology)
7. ATL In Uttarakhand Schools, (Samagra Shiksha Dept. of Education-Govt of Uttarakhand)
8. Electronics & ICT Academy Scheme - Phase-II – Reg (Ministry of Electronics and Information Technology)
9. Switchable Tandem Car-T Cells Targeting Tmuc 1 And Rori for Breast Cancer Immunotherapy (Indian Council of Medical Research)
10. Just Transition Research Centre 2024 (Stichting Sed Fund Netherlands)
11. Novel Solution for Improving Water Quality of Kushak Nallah in New Delhi (New Delhi Municipal Council)

12. UAID/India Higher Education Partnership for Disaster Resilient Infrastructure (Hep-Dri) (U.S. Agency For International Development)
13. Centre Of Excellence In "Specialty Chemicals" At IIT Kanpur (Ministry of Chemicals and Fertilizers)
14. Third Generation Super Omniphobic Foul Release Marine Coating for Water-Borne Vehicles (Defence R & D Organisation)
15. Design And Development of An Integrated Inspection Framework Comprising of UGVs (Unmanned Ground Vehicles) With Deployable UAVs (Unmanned Aerial Vehicles) For Critical Power Infrastructure Inspection (Central Power Research Institute)
16. ISRO-IITK-STC (Space Technology Cell)
17. Cyclic Thermal Testing of Tbc Coated Superalloys in a Burner Rig (Aeronautics R&D Board)
18. Research On Channel Modelling, AI/ML Driven Transceiver Architectures, and Realistic Performance Evaluation in Tera Hertz Band For 6g Wireless Systems (Telecom Centre of Excellence India)
19. ICME For Near Alpha Ti-Alloy Blisks with Dual Microstructure (Defence R & D Organisation)
20. Point-Of-Care Devices in Healthcare Technologies (Min. Of Human Resource Develop)
21. Augmenting NK Cell Immunotherapy for Oral Squamous Cell Carcinoma by Genetic and Pharmacological Modulation of a Calcium-Permeable Trp Channel (Indian Council of Medical Research)

22. Multispectral Stealth Solutions Covering Visible, Nir, Thermal, and Microwave Ranges Using Coating and Patterned Surfaces (Defence Research and Development Organisation)
23. Neuropeptide Y1 Receptor as A Potential Drug Target for Metabolic-Associated Steatohepatitis and Liver Fibrosis (Indian Council of Medical Research)
24. Unravelling Snare Complexes Involved in Autophagy as a Therapeutic Strategy or Mycobacterium Tuberculosis (Indian Council of Medical Research)
25. Development Of Height of Burst (Hob) Estimation System for Airburst Ammunition (Armament Research Board)
26. Framing Just Transition Pathways for India (John D. And Catherine T. Macarthur Foundation)
27. Surrogate Fuel Combustion and Flow Dynamics in Dual Mode Scramjet Engine (Defence Research and Development Organisation)
28. Ladakh Engineering College Project (Government of Ladakh)
29. Next-Generation Genome Engineering and Chemo-Genetic Platform Technologies for Gene Therapy of Ocular Disorders (Anusandhan National Research Foundation)
30. Swayam NPTEL "Ini" (Ministry of Education)
31. Information Security Education and Awareness (ISEA) Project Phase-III (Ministry of Electronics and Information Technology)

32. Sprayable Polymer Based Targeted Nanotherapeutics as A Treatment Strategy for Fatty Liver Diseases (Indian Council of Medical Research)
33. Antenna Using Metamaterials For X-And Ku- Band Applications (Defence Research and Development Organisation)
34. Remote Piloting TRG Module (RPTM) And Software in the Loop Simulation (SITL) As A Sys For UAV/Drones Pilot/OPR TRG Out Of IR&D (Head Quarter Central Command)
35. Processing Of TFT Array and Liquid Crystal Layer and Their Integration with Meta surface Antenna (Indian Space Res. Organization)
36. Hob System Design and Integration (Armament Research Board)
37. Understanding And Predicting Soot Formation from Jet Fuels and Their Biofuel Blends for Gas Turbine Engines (Aeronautics R&D Board)
38. Exploring The Structural and Dynamic Landscape: Visualizing the Real-Time Entry of Sars-Cov-2 By Smfret and Cryo-Et for Potential Therapeutic Interventions (Dept. of Biotechnology)
39. Support For Up Gradation Preventive Repair and Maintenance of Equipment (Supreme) (Dept. of Science and Technology)
40. Holistic Assessment of Mahakumbh 2025 By IIT Kanpur (Kumbh Mela 2025) (Prayagraj Mela Authority)
41. Field-Deployable Quantum-Enhanced Sensor on Integrated Hybrid Platform (Dept. of Science and Technology)

42. Bharat-GPT A Suite of Generative AI Tech For India (Dept. of Science and Technology)
43. Quantum Imaging Technical Group at IIT Kanpur (Dept. of Science and Technology)
44. Hfo2-Based Ferroelectrics for Low Power Memory Application (Air Force Office of Scientific Research)
45. Zero Aircraft Heat Transfer Loop Using Supercritical Fluid for Hydrogen Conditioning (Airbus India Private Limited)
46. Adaptive NK Cells And Anti-EGFR Monoclonal Antibody Based Combinatorial Immunotherapy to Circumvent Hyposia Induced Immune-Dysfunction in Oral Cancer (Indian Council of Medical Research)
47. Methods Of Artificial Intelligence and Magneto-Electric Effects in the Dynamics and Motion Control Problems of Telecommunication Spacecraft (Dept. of Science and Technology)
48. Hydrogen Production from Water Catalyzed by Functionalized NHC-Stabilized Nanoparticles and Beyond (Dept. of Science and Technology)
49. Development Of a Novel Underwater Welding Process for Defect Free Joints Using In-Situ Imaging and Machine Learning (Ministry of Earth Sciences)
50. PPP Mode Industry Projects (Prototype Development Cost) (Kalpa Innovative Solution)

LAB/FACILITIES DEVELOPED

- High Fidelity Driving Simulator (CE)
- Rack Server for CER/EAL Lab (Tyrone 2* AMD DDR5 SDRAM with 768 GB) (DoMS)
- GAMS Software (GAMS/BASE Module, GAMS/CPLEX, GAMS/ GUROBI) (DoMS)
- Miniaturization and Efficiency Improvement of Power Electronic Systems (MEIPES) Laboratory - A power electronics research lab (Prof. Utsab Kundu, EE)
- New computational resources for AI for Computational Physics and AI for speech research (Prof. Vipul Arora, EE)
- State-of-the-art 64-channel electroencephalography (EEG) system for conducting research on brain-machine interfaces and robotics to overcome paralysis after neurological injury (Prof. Nikunj Bhagat, EE)
- Material Characterization Facility with three instruments Field-Emission Scanning Electron Microscope (FE-SEM), BET Surface Area Analyser, Stylus Profilometer (SEE)
- Dual-Zone Environmental Chamber Facility for Testing Wall Assemblies (SEE)
- Hybrid Microgrid Test Facility for Prototype Testing (SEE)
- Electric Vehicle Charging Setup for Off-Grid and On-Grid Operations (SEE)

- Solar-Thermal based Ammonia Heating System for Catalytic Hydrogen Generation (SEE)
- 500 W Electrolyzer Test-Station (SEE)
- Sky Watch Array Network (SWAN) station operating at meter-wave radio bands (SPASE)
- Teaching & training labs developed in optical, radio, and X-ray wavebands (SPASE)
- An experimental astrobiology and cubesat development lab (SPASE)
- Characterization lab for geological samples using an optical/near infrared spectrometer (SPASE)
- R&D lab for visualization of granular flows (SPASE)

SOFTWARE DEVELOPED

- PRAVAH- A high-fidelity CFD solver for Aerodynamic Applications (Dr. Rajesh Ranjan, AE)
- Scalable to perform spectral proper orthogonal decomposition (SPOD). It is available on GitHub:https://github.com/Mitulsidh/parallel-Streaming-SPOD-Spectral-proper-orthogonal-decomposition (Prof. Pradeep Moise, AE)
- Developing of an Open-Source Statistical Software Package Called 'Resquin: Response Quality Indicators for Survey Research' (Prof. Niveditha Bhakta, DoMS)
- PROMPT Dashboard (Power Sector Regulatory Oversight and Market Performance Tracking) (Prof. Anoop Singh, DoMS**)**

- Regulatory Data Dashboard - Covers all Discoms (Prof. Anoop Singh, DoMS)
- Regulatory Tracker Dashboard - For MoU-signed ERCs (Prof. Anoop Singh, DoMS)
- Data Visualization Slider - Developed for UPERC (Prof. Anoop Singh, DoMS)
- ERC Hub Dashboard (Chart visualization) - For MoU-signed ERCs (Prof. Anoop Singh, DoMS)
- Market Monitoring Framework for the Indian Power Sector (Prof. Anoop Singh, DoMS)
- Scilab Code for New Results on Single User Massive MIMO - Correlated Channel with Precoding and Dummy Data (Prof. K. Vasudevan, EE)
- T90 Ballistic Computer Firmware (Prof. Yatindra Nath Singh, EE)
- B4 communication api for firewall punching and signaling. (Prof. Yatindra Nath Singh, EE)
- Interactive Speech Transcription (Prof. Vipul Arora, EE)
- Interactive music transcription (Prof. Vipul Arora, EE)
- Spoken term detection (Prof. Vipul Arora, EE)
- Music raga identification (Prof. Vipul Arora, EE)
- Development of protocol converter solution for seamless integration and interoperation of data sets on various power system protocols (Prof. Ankush Sharma, EE)

- Development of an Indigenous Advanced Distribution Management System (AMDS) platform integrated with the Common Information Model (CIM) (Prof. Ankush Sharma, EE)

TECHNOLOGIES DEVELOPED

- A deformation tracking and virtual speckling technique to identify optimal parameters for digital image correlation (Prof. Pritam Chakraborty, AE)
- A system and method for vision based tracking and precise landing of aerial vehicles using ground cameras (Prof. Abhishek, AE)
- A process for preparing a light-weight energy-absorbing natural panel and applications thereof (Prof. C. S. Upadhyay, AE)
- AAV-Mediated combination therapy for sustained vision rescue in Leber Congenital Amaurosis Type 2 (Prof. Jayandharan Giridhara Rao, BSBE)
- A nanoformulation for inhibition ofmycobacterial sos response and a process of preparation (Prof. Saravanan Matheshwaran, BSBE)
- An Automated Apparatus for a continuous upflow microbial Fuel Cell (Prof. Nishith Verma, ChE & Prof. Saravanan Matheshwaran, BSBE)
- Biofilm extracellular polymeric substances- based carbon nanoparticles (Prof. Santosh Kumar Misra, BSBE)
- A Bioengineered AAV9 Vector carrying optimized transgene for Duchenne Muscular Dystrophy Gene Therapy (Prof. Jayandharan Giridhara Rao, BSBE)

- Novel molecule for treating glycogen storage disorders (Prof. S Ganesh, BSBE & Prof. Sandeep Verma, CHM)
- A hydrogen sulfide releasing insulin derivative (Prof. Sandeep Verma, CHM & Prof. Subramaniam Ganesh, BSBE)
- An optimized AAV Vector for gene therapy of Muscular Dystrophy (Prof. Jayandharan Giridhara Rao, BSBE)
- Thermo-responsive probiotic vesicles for IBD treatment (Prof. Ashok Kumar, BSBE)
- Obstacle detection wearable device for Navigation Assistance to blind people (Prof. Siddhartha Panda, ChE)
- Transdermal patch for drug delivery (Prof. Animangsu Ghatak, ChE)
- Multi-micronutrients- and carbon nanofiber-modified biochar for enhanced plant growth (Prof. Nishith Verma, ChE)
- Dolomite-mixed micronano Fertilizer Composition (Prof. Nishith Verma, ChE)
- A Phase Change Material (PCMs) formulation and integrating in an Ice Cream Cart (Prof. Sri Sivakumar, ChE)
- A layered structure for thermal insulation and evaporation of water from water bodies (Prof. Animangsu Ghatak. ChE)
- Apparatus and method for mineralization of carbon dioxide with alkaline solids (Prof. Raghavendra Ragipani, ChE)
- A coiled flow inverter photoreactor for photodegradation of pharmaceutical effluents and the synthesis of photocatalyst (Prof. Nishith Verma, ChE)

- A system and method for determining cortisol level in biofluids (Prof. Siddhartha Panda, ChE)
- Copper(II) Based Antimicrobial Agents for Attenuation of In-Vivo Dental Biofilm Formation (Prof. Ritika Gautam, CHM)
- Picolinic acid derivatives based antimicrobial agents for attenuation of In-Vivo dental biofilm formation (Ritika Gautam, CHM)
- Zinc(II) based antimicrobial agents for attenuation of staphylococcus aureus infection (Prof. Ritika Gautam, CHM)
- Thiourea based derivatives are novel antimicrobials against a baumannii (Prof. Sandeep Verma, CHM)
- Ferroptosis inducers as anticancer therapeutics and process for preparation (Prof. Dharmaraja Allimuthu, CHM)
- 2,6,9- trisubstituted adenine derivatives for promoting osteogenesis and bone regeneration (Prof. Sandeep Verma, CHM)
- A nitric oxide-releasing peptide for neutralizing neuroinflammation and cell death pathway (Prof. Sandeep Verma, CHM)
- A system and process for preparation of a nanoscale molecular junctions for in-memory computing (Prof. Prakash Chandra Mondal, CHM & Prof. Shubham Sahay, EE)
- System and method for cyber security risk management (Prof. Sandeep Kumar Shukla, CSE)
- A process-level intrusion detection system for securing industrial control systems (Prof. Sandeep Kumar Shukla, CSE)
- System for attributing cyber threats and method thereof new title: system and method for adaptive cyber threat attribution based on behavioural pattern analysis (Prof. Sandeep Kumar Shukla, CSE)

- Method and system for detecting intrusions in industrial control systems (Prof. Sandeep Shukla, CSE)
- Ultrasound-based non-invasive neuroimaging device (Prof. Dibakar Ghosal, ES & Prof. Subhajit Roy, CSE)
- A device for guiding cardiopulmonary resuscitation with audio feedback (Prof. J Ramkumar, ME)
- An air intake system for an engine (Prof. Avinash Kumar Agarwal, ME)
- System and method for operating a compression ignition (CI) engine by using methanol-based fuels (Prof. Avinash Kumar Agarwal, ME)
- Gasoline compression ignition (GCI) system for low-octane fuel-powered engine (Prof. Avinash Kumar Agarwal, ME)
- A fuel injection system operating based on a methanol (M85) fuel in spark ignition (SI) engine (Prof. Avinash Kumar Agarwal, ME)
- A shape memory alloy-based device with enhanced rotational motion (Prof. Bishakh Bhattacharya & Prof. Virkeshwar Kumar, ME)
- Highly flexible, ultra-light weight, ultrathin and hydrophobic electromagnetic interference (EMI) shielding composite based on human hair (Prof. Kamal Krishna Kar, ME & Prof. Jaleel Akhtar, EE)
- A bio-hybrid membrane for detecting and filtering impurities from a water sample (Prof. Neeraj Sinha, ME)
- A packed bed photobioreactor for continuous conversion of aqueous CO_2 into starch (Prof. Kamal Krishna Kar, ME)
- A zinc-ion battery system for dendrite suppression using magnetic field (Prof. Abhishek Sarkar & Prof. Shantanu Bhattacharya, ME)

- A sleepwalk detection and prevention device (Prof. Nachiketa Tiwari, ME & DES)
- Direct contact, interfacially heated solar membrane desalination system (Prof. Jishnu Bhattacharya, ME)
- A method for producing zeolite from recycled materials (Prof. Arunabh Meshram, MSE)
- A system for fabrication of controlled composite structure (Prof. Shikhar Krishn Jha, MSE)
- Scaffold for bone tissue engineering applications and method of fabrication (Prof. J Ramkumar, ME & Prof. Kantesh Balani, MSE)
- Metal oxide co-doped bioglass pellets and method for farbrication (Prof. Kantesh Balani, MSE)
- A system and method for measuring radial coherence (Prof. Anand K Jha, PHY)

58वाँ दीक्षान्त समारोह
58th CONVOCATION

भारतीय प्रौद्योगिकी संस्थान कानपुर
Indian Institute of Technology Kanpur