



भारतीय प्रौद्योगिकी संस्थान कानपुर
Indian Institute of Technology Kanpur

SAMANVAY

CORPORATE NEWSLETTER

VOLUME 3



IIT KANPUR
AT BHARAT INNOVATES 2026,
NICE, FRANCE



DEAN'S MESSAGE

It gives me immense pleasure to welcome you to this edition of our Corporate Newsletter, a platform that reflects IIT Kanpur's deepening engagement with industry to build a more innovative, inclusive, and impactful future.

At IIT Kanpur, we believe innovation creates its greatest value when it moves beyond the laboratory to address real-world challenges. Building on this commitment, the Institute is translating scientific excellence into technologies, enterprises, and partnerships that strengthen industry, advance national priorities, and create lasting societal value.

From representing India at “Bharat Innovates 2026” in France to the continued growth of our interdisciplinary work in sustainability, artificial intelligence, and medical sciences, IIT Kanpur continues to expand its global and national footprint. Our growing strengths in defence technologies, cybersecurity, healthcare, semiconductors, clean energy, deep-tech, advanced technologies and manufacturing are creating new opportunities for collaborative innovation and technology deployment.

These achievements are made possible through strong partnerships with industry, government, startups, and philanthropic organisations. Together, we are accelerating towards translational research, technology licensing, startup growth, infrastructure development, and CSR-led initiatives that deliver meaningful outcomes.

As India advances towards becoming a global innovation leader, IIT Kanpur remains committed to serving as a trusted partner for organisations seeking to co-develop technologies, nurture talent, and create scalable solutions for the future. I invite you to explore this edition and discover the many opportunities to build, innovate, and grow with IIT Kanpur.

With warm regards,

Prof. Amey Karkare

Dean, Resources and Alumni,
IIT Kanpur



BHARAT INNOVATES 2026

IIT KANPUR ON THE WORLD STAGE

Taking deep-tech research from campus to global markets, at India's first innovation showcase abroad

When India took its innovation story to the world for the first time, IIT Kanpur was among the premier institutions carrying it forward. At Bharat Innovates 2026, held in Nice, France, from June 14–16 under the India–France Year of Innovation, IIT Kanpur joined a select group of the country's leading research institutions in showcasing how frontier research becomes deployable, world-ready technology.

A seat at the high table. A Ministry of Education initiative, Bharat Innovates 2026 was inaugurated in the presence of the Prime Minister of India and the President of France, a signal of how high innovation now sits on the national agenda. IIT Kanpur's Director featured on the summit's speaker roster alongside India's Principal Scientific Adviser, the directors of other leading IITs, and global innovation councils and investors, contributing to the summit's central theme: turning India's research into technology the world can use.



What IIT Kanpur brought to Nice?

The institute's innovations were part of the curated compendium of high-impact technologies drawn from India's top institutions. IIT Kanpur's strength lies in the breadth of its deep-tech ecosystem, anchored by its Startup Incubation and Innovation Centre (SIIC) spanning exactly the frontier domains that defined the summit: semiconductors, artificial intelligence, healthcare and MedTech, space and defence, clean energy, and cybersecurity. Across these areas, IIT Kanpur pairs deep research with a translational focus and a maturing startup pipeline, positioning it to co-develop rather than merely supply.

A platform that delivered

The summit brought together more than 2,000 participants from 29 countries, including over 500 French investors, corporate leaders, and researchers. Across three days it enabled over 1,350 business-to-business meetings and resulted in more than 50 collaboration agreements spanning industry, academia, research, and incubation building durable bridges between India's innovation ecosystem and global partners.

Why does it matter?

For industry, the message from Nice was direct: India is ready to co-create, not just contribute. And IIT Kanpur through its research depth, translational focus, and startup ecosystem is ready to build alongside the global partners prepared to shape what comes next.

IIT KANPUR'S NEW INTERDISCIPLINARY SCHOOLS - ON TRACK TO OPEN THIS YEAR

IIT Kanpur's three new interdisciplinary schools have moved decisively from blueprint to reality. With construction, faculty, and academic programmes now in advanced stages, all three are set to be inaugurated and become functional through 2026, a defining year for the Institute.

Kotak School of Sustainability (KSS)

Kotak School of Sustainability (KSS) India's first fully integrated school dedicated to sustainability is up and running, and scaling fast. Under inaugural Dean Prof. Sachchida Nand Tripathi, KSS has launched a new M.Tech in Artificial Intelligence for Sustainability, with admissions underway for 2026–27. On the ground, low-cost air-pollution sensors and water-filtration units are already being piloted, and the school has built strong national and international research partnerships. A campus-wide Net Zero drive energy audit, solar power, and waste segregation is now in motion.



Wadhwani School of Advanced AI & Intelligent Systems (WSAIS)

Set up as a national SuperHub for AI, WSAIS rolls out its first academic programmes this year. Its new Department of Intelligent Systems welcomes its first B.Tech batch in 2026, and the school is launching a new four-year Bachelor of Cybersecurity (B.Cyber.) from July 2026, with a distinctive hackathon-based admission model. Five research centres across Advanced AI, Intelligent Systems, Cybersecurity, Robotics, and AI Policy anchor a growing network of partner hubs across India.

GANGWAL SCHOOL OF MEDICAL SCIENCES AND TECHNOLOGY

Gangwal School of Medical Sciences & Technology (GSMST) is closest to opening its doors. Civil work for the Yadupati Singhania Super Speciality Hospital is nearly complete, with the focus now shifting to interiors, services, and the installation of advanced medical equipment - MRI, CT, Cath Lab, modular operation theatres, and critical-care systems. Once functional this year, the 450-bed super-speciality hospital will offer specialised treatment across cardiac sciences, neurosciences, endocrinology, and joint replacement with the potential to serve more than four million people within a 300-km radius of Kanpur.



Recent highlight: IIT Kanpur appointed Prof. Anil K. Lalwani, M.D., of Columbia University as the inaugural Dean of GSMST, a major leadership milestone as the school prepares to welcome its first patients and students.



Together, these three schools mark IIT Kanpur's expansion beyond its engineering roots into sustainability, intelligent systems, and medicine, each on track to come alive in 2026 and create lasting impact for the region, the nation, and beyond.

REIMAGINING MEDICINE: INDIA'S NEW MODEL FOR INNOVATION IN THE AI AGE

Bringing together global leaders to explore the convergence of medicine, AI, engineering, and innovation

IIT Kanpur, in collaboration with the Consulate General of India, New York, hosted an exclusive reception and panel discussion to present the vision of the Gangwal School of Medical Sciences and Technology (GSMST), a first-of-its-kind initiative that seeks to redefine medical education by bringing together medicine, engineering, artificial intelligence, and translational research.

The event was hosted by Prof. Manindra Agrawal, Director, IIT Kanpur, and H.E. Amb. Binaya Pradhan, Consul General of India, New York, and welcomed donors, IIT Kanpur alumni, leaders from the healthcare and pharmaceutical sectors, members of the Indian diaspora, and other distinguished guests.



The highlight of the evening was the panel discussion, "**Medicine Reimagined: Engineering the Future of Health,**" The discussion featured an eminent panel comprising:

Moderator:

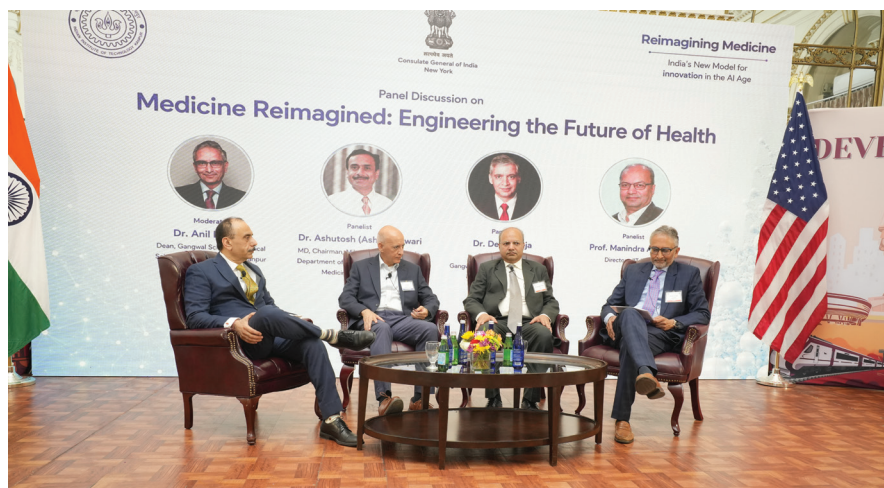
Prof. Anil Lalwani,
Dean, Gangwal School of Medical Sciences & Technology, IIT Kanpur

Panelists:

Dr. Ashutosh (Ash) K. Tewari,
MD, Chairman, Milton and Carroll Petrie Department of Urology, Icahn School of Medicine at Mount Sinai

Dr. Dev Joneja,
Founding Donor,
Gangwal School of Medical Sciences & Technology, IIT Kanpur

Prof. Manindra Agrawal,
Director, IIT Kanpur



The discussions explored how emerging technologies, AI-driven healthcare, interdisciplinary research, and global collaboration can help address some of the world's most pressing healthcare challenges while making quality healthcare more accessible and affordable.



The evening concluded with a networking reception that encouraged meaningful interactions among donors, alumni, healthcare professionals, researchers, and industry leaders, fostering new collaborations in support of IIT Kanpur's vision for the Gangwal School of Medical Sciences and Technology.



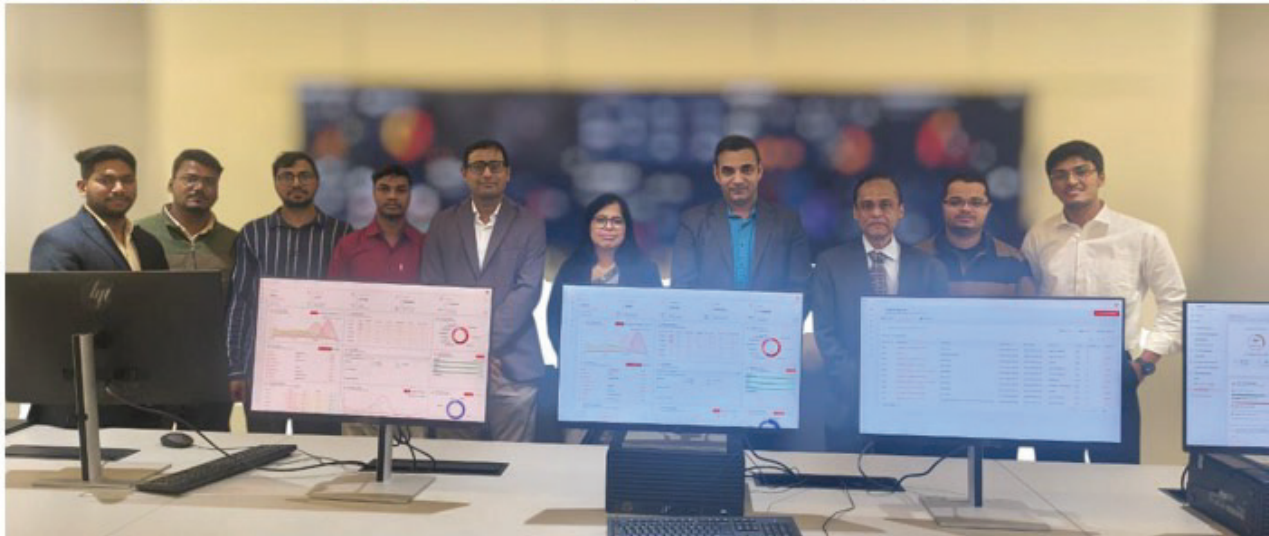
IIT Kanpur extends its sincere gratitude to the **Consulate General of India, New York**, for graciously hosting the event and providing an exceptional platform to showcase this transformative initiative. The Institute deeply appreciates the support and hospitality extended by **H.E. Amb. Binaya Pradhan** and the Consulate team, whose partnership was instrumental in bringing together distinguished members of the global Indian community to engage with IIT Kanpur's vision of reimagining the future of medicine.

C3iHUB GOES LIVE AT SAIL BHILAI

Securing the backbone of Indian industry

As India's industrial base digitises under Industry 4.0, interconnected SCADA and IoT networks have become its most exposed surface; a single intrusion can halt production or compromise safety.

C3iHub, IIT Kanpur's DST-funded cybersecurity innovation hub, has deployed and gone live with a Security Operations Center (SOC) at the Steel Authority of India's Bhilai Steel Plant, one of the country's most critical industrial installations.



Crucially, the SOC defends IT and operational technology (OT) environments together delivering round-the-clock monitoring, real-time threat detection, vulnerability management, and coordinated incident response across enterprise and industrial systems. It reflects C3iHub's wider mandate: translating advanced cybersecurity research into deployable solutions, backed by a startup ecosystem and specialised training for defence, government, and industry.

From assessment to deployment, IIT Kanpur offers industry a trusted partner for securing complex IT-OT environments and invites infrastructure operators and technology leaders to build that resilience together.

THE HUMAN FIREWALL: IIT KANPUR AND Realme INDIA TRAIN DEFENCE PERSONNEL IN CYBER DEFENCE

In cybersecurity, technology is only half the defence, the other half is people. The most advanced systems can be undone by a single unguarded click, which makes the readiness of frontline personnel central to national security. It is precisely this gap that IIT Kanpur has set out to close.

C3iHub, the institute's cybersecurity innovation hub, has partnered with realme India to launch the CyberSuraksha Initiative, a structured cyber defence programme for India's defence and law-enforcement personnel. The inaugural two-day workshop at C3iHub trained 47 participants from the Indian Army officers, JCOs, and Jawans from units of the Kanpur Brigade Station through practical demonstrations and hands-on sessions covering cyber hygiene, digital threat awareness, incident response, cybercrime trends, and emerging risks. Participants left equipped both to defend their own systems and to serve as cyber-awareness ambassadors within their units.

The model's strength is its structure: it combines IIT Kanpur's research depth, realme India's industry outreach, and the operational expertise of the armed forces, a template for how corporate partnership can directly serve national capability. The inaugural batch is the first step in a multi-year effort to train more than 1,000 personnel across Uttar Pradesh.

For corporates seeking high-impact CSR and capacity-building partnerships, CyberSuraksha offers a clear path. IIT Kanpur welcomes partners ready to help build a cyber-secure India together.



IMPACTFUL PROJECTS

Research That Reaches the Real World

Inside IIT Kanpur's portfolio of impact where innovation, incubation, and industry partnership are turning ideas into outcomes across health, agriculture, education, and advanced manufacturing

At IIT Kanpur, the measure of research is not the paper it produces but the problem it solves. Across its incubation ecosystem and faculty laboratories, the institute and its corporate partners are advancing a growing portfolio of ventures and technologies that have moved decisively from concept to deployment. The projects below spanning healthcare, agriculture, education, semiconductors, and medical devices illustrate what translational research looks like in practice, and where industry can engage next.

Innovation with Impact: The Startup Portfolio

Startup Name

Medantrik Medtech Pvt. Ltd.

Technology

Transforming Respiratory Healthcare Through Innovation

Description

Medantrik has successfully completed design optimization, pilot manufacturing, firmware integration, and clinical validation of its respiratory healthcare device. The startup has already screened over 250 patients through trials conducted with leading medical institutions and has initiated intellectual property protection. Their progress positions them strongly for regulatory approvals and wider healthcare deployment.

Ksham Innovation Pvt. Ltd.

Making Mobility and Independence Accessible

Ksham Innovation completed the companion mobile application for its Able Glasses ecosystem and fabricated multiple high-fidelity prototypes for testing and certification. The solution empowers visually challenged individuals through assistive technology designed for independence and accessibility.

Strangify Technologies (Warta.ai)

AI Conversations Driving Inclusive Knowledge Access

Warta.ai has facilitated more than 27,000 conversations across 15+ languages, significantly expanding accessibility and user engagement. The platform is continuously learning from interactions to improve performance and multilingual support.

Appin Green Pvt. Ltd.

AI-Powered Soil Testing for Better Farming Decisions

Appin Green developed a functional colorimetric sensor card for NPK and pH testing and successfully integrated it with an AI-powered mobile application. Farmers can now receive rapid soil health insights through a simple smartphone interface.

Startup Name

AVN Agrobharat Pvt. Ltd.

Technology

Smart Dairy Analytics for Better Milk Quality

Description

AVN Agrobharat completed the MilkPro hardware-software platform with IoT integration, cloud analytics, and real-time milk quality testing. Pilot deployments are already operational at dairy collection centres.

Thinkraw Innovative Solutions Pvt. Ltd.

Digital Transformation in Fisheries

Thinkraw completed its mobile and desktop platforms for market integration and has initiated expansion efforts into West Bengal through NABARD-supported opportunities.

Samak Technologies (Moo Rakshak)

AI Nutrition Advisory for Livestock Farmers

The startup developed a region-specific least-cost feed recommendation engine that helps livestock farmers optimize feed costs while maintaining nutritional requirements.

Regenerix Resources Pvt. Ltd.

Tackling Stubble Burning Through Mechanization

Regenerix upgraded its stubble management machinery and successfully initiated field trials demonstrating improved operational efficiency and crop residue management.

Jarbits Pvt. Ltd.

Using Drones and AI to Predict Crop Diseases

Jarbits expanded its platform to generate crop-health and productivity maps while developing machine-learning models for early prediction of red rot disease in sugarcane.

PureMe Organics Pvt. Ltd.

Scaling Sustainable Production

PureMe installed upgraded machinery that increased packaging efficiency by nearly ten times, significantly improving production capacity and readiness for market expansion.

TALENT AND ACCESS: EDUCATION PARTNERSHIPS

Groww Foundation × IIT Kanpur Widening Access Through Scholarships

The institute brought the Groww Foundation together with student scholarship recipients for a meaningful exchange on the initiative's real-world impact. Under the Groww Scholar Program, 70 students at IIT Kanpur received support to pursue their academic aspirations with greater confidence and financial security. The engagement highlighted the importance of sustained corporate partnerships in widening access to world-class education. It stands as a strong example of how industry philanthropy, channelled effectively through IIT Kanpur, can directly empower talented students and help them realise their full potential.



Ansys Fellowship - Advancing India's Next Generation of Researchers

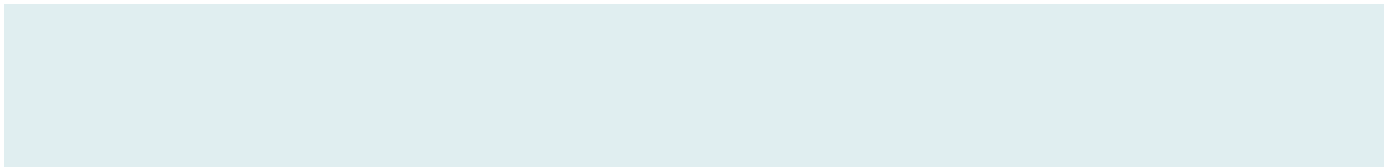
The Ansys Fellowship has enabled outstanding M.Tech scholars at IIT Kanpur to achieve significant research breakthroughs by removing financial barriers and allowing them to focus exclusively on innovation. With support from the fellowship, scholars have advanced research in nationally significant domains including 6G communication systems, high-resolution semiconductor circuits, solid-state sodium-ion batteries, and computational neuroscience. The programme has contributed to measurable outcomes such as novel 6G waveform designs, energy-efficient circuit architectures, a two-fold improvement in battery electrolyte conductivity, and biologically inspired computational models with implications for neurological disorders. By transforming financial support into research excellence, the fellowship is strengthening India's innovation pipeline and developing highly skilled researchers capable of addressing future technological and societal challenges.





SATHEE - AI-Enabled Learning at National Scale

SATHEE, developed by IIT Kanpur with support from the Ministry of Education, was featured in the "Real-World Impact of AI in Education" Casebook unveiled at the India AI Impact Summit 2026, and simultaneously launched a new AI-enabled version of its platform. The upgrade introduces a conversational tutor, instant doubt-solving, adaptive study plans, mock-test analytics, and career counselling all free of cost. Supporting JEE, NEET, CUET, and other major examinations in multiple languages, SATHEE demonstrates how AI can be deployed responsibly at national scale to bring quality exam preparation to students across underserved and rural India.





RESEARCH TO REAL-WORLD SOLUTIONS: MEDTECH

Project

GlucoEase – Non-Invasive Glucose Monitoring

Progress / Key Achievements

Developed a dual-wavelength near-infrared sensing platform integrating optical hardware, embedded systems, and data-driven modelling for continuous, non-invasive glucose monitoring. The technology is progressing towards an affordable, patient-friendly alternative to conventional blood glucose testing.

Impact

Eliminates painful finger-prick testing, improves patient compliance, enables continuous glucose monitoring, and enhances diabetes management, particularly for elderly patients, children, and underserved communities.

Project

BCI Robotic Hand Exoskeleton – Stroke Rehabilitation

Progress / Key Achievements

Built upon 15 years of research, the closed-loop Brain-Computer Interface (BCI) system synchronizes EEG signals with a robotic hand exoskeleton. Pilot clinical studies demonstrated complete recovery in eight chronic stroke patients who had previously plateaued in rehabilitation.

Impact

Has the potential to transform stroke rehabilitation by restoring hand function through neuroplasticity, improving recovery outcomes, and making advanced rehabilitation technologies more accessible across India.

Project

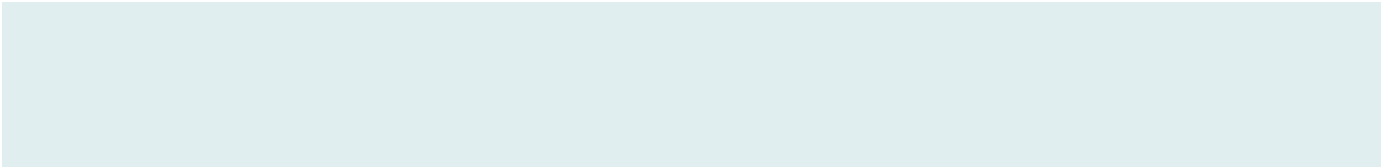
Percutaneous Cardiac Support Device (p-MCSD)

Progress / Key Achievements

Successfully developed and integrated the core subsystems, including the miniature blood pump, high-speed motor, torque cable, and guidewire into a functional prototype. The device has achieved the target flow rate and pressure in laboratory testing and is progressing towards blood compatibility and animal studies.

Impact

Offers an indigenous, cost-effective alternative to imported mechanical heart pumps, expanding access to life-saving cardiac support while strengthening India's medical device innovation ecosystem.





FUTURE-READY TECHNOLOGIES: SEMICONDUCTORS & ELECTRONICS

The NMTronics Center of Excellence is progressing towards establishing a best-in-class facility for electronics manufacturing, advanced research, and skill development at IIT Kanpur. Developed in collaboration with NMTronics India Pvt. Ltd., the Centre will deliver both basic and advanced training in Surface Mount Technology (SMT) and electronics assembly, equipping students from IIT Kanpur and universities across North India, while enabling practising engineers to upgrade their manufacturing capabilities. Preparatory activities, including infrastructure development, equipment procurement, and curriculum design, are currently underway. Once operational, the Centre will train 1,000–2,000 professionals annually, support advanced research in electronics, semiconductor packaging, IoT, and smart manufacturing, and foster hardware innovation, prototyping, and industry-academia collaboration, strengthening India's rapidly expanding electronics manufacturing ecosystem.

READY TO SCALE: IIT KANPUR'S NEXT WAVE OF HIGH-IMPACT INNOVATION

Research-backed projects positioned to move from proven concept to national impact and the partnerships that can take them there

Some of the most consequential technologies begin not as finished products but as validated ideas waiting for the right partner to scale them. The projects below sit precisely at that threshold. Each is grounded in working prototypes, laboratory results, or established frameworks at IIT Kanpur, and each addresses a problem of real national consequence in education, defence and sensing, robotics, mobility, and the environment.

Thematic Area	Project	Challenge Addressed	IIT Kanpur Innovation	Potential Impact & Applications
Talent & Digital Readiness	Digital Skills Assessment Platform (DSAP)	Existing assessments primarily evaluate theoretical knowledge and fail to measure practical digital competencies, limiting workforce readiness.	An AI-powered, multilingual, mobile-first platform that evaluates real-world digital skills through hands-on tasks, providing personalised assessments and analytics aligned with NEP 2020.	Establishes a national benchmark for digital competency, strengthens employability, supports curriculum reforms, and enables evidence-based workforce planning through large-scale analytics.
Defence & Quantum Sensing	Quantum RF Sensor	Conventional RF sensors suffer from thermal noise, limited sensitivity, and calibration challenges, restricting performance in strategic applications.	A calibration-free quantum sensor leveraging Rydberg atomic states to deliver ultra-sensitive, broadband radio-frequency detection suitable for field deployment.	Advances sovereign quantum capability, strengthens defence electronics, satellite and secure communications, and enables next-generation precision sensing technologies.
Robotics & Autonomous Systems	Ground-to-Air Hybrid Robot	Ground robots cannot overcome difficult terrain, while aerial drones have limited endurance due to high energy consumption.	A hybrid robotic platform capable of autonomous transformation between ground mobility and aerial flight, supported by intelligent energy-aware navigation.	Enhances disaster response, search-and-rescue missions, infrastructure inspection, border surveillance, agriculture, and industrial asset monitoring by combining endurance with mobility.





Thematic Area	Project	Challenge Addressed	IIT Kanpur Innovation	Potential Impact & Applications
Sustainable Mobility	Wireless Charging for Electric 3-Wheelers	Charging downtime directly reduces the earning potential of electric auto-rickshaw drivers while creating challenges for urban charging infrastructure.	Wireless charging pads integrated into parking bays and auto-stands, coupled with Vehicle-to-Grid (V2G) capability for intelligent energy exchange.	Improves driver livelihoods, accelerates EV adoption, strengthens urban charging infrastructure, supports smart-grid integration, and contributes to cleaner urban transportation.
Water Security & Circular Economy	Treatment & Re-circularity of Highly Polluted Effluents	Highly polluted industrial wastewater is expensive, energy-intensive to treat, and difficult to reuse, resulting in freshwater depletion and environmental degradation.	An integrated, low-energy treatment framework enabling pollutant removal, water recovery, and recovery of valuable salts and nutrients within a circular economy model.	Reduces industrial water consumption, enables wastewater reuse, lowers treatment costs, supports environmental compliance, and promotes sustainable industrial water management.

The Opportunity for Industry

Each of these projects is built on demonstrated science and engineering at IIT Kanpur and each is now ready for the partnership that turns potential into scale. Whether through co-development, pilot deployment, sponsored research, technology licensing, or CSR-aligned investment, industry partners have a rare opportunity to engage these innovations early, shape them around real-world needs, and share in the impact they are designed to create. IIT Kanpur invites forward-looking corporates, investors, and government partners to help move the next wave of Indian innovation from promise to deployment.



WHERE CONVERSATIONS BECOME COLLABORATIONS

How industry visits to IIT Kanpur are turning shared challenges into lasting partnerships

At IIT Kanpur, partnership often begins with a single visit. As corporate leaders walk the institute's laboratories and meet its faculty, an abstract interest in innovation becomes a concrete plan to build together. Across recent months, organisations from housing finance to global defence have come to explore IIT Kanpur's research strength and left with the foundations of genuine collaboration. The engagements below show that pattern in action.

LIC Housing Finance Ltd. (LIC HFL)

LIC Housing Finance came to IIT Kanpur seeking technology-driven solutions with real social impact and found several. At the Department of Sustainable Energy Engineering, discussions centred on innovative waste management, including photovoltaic-powered incinerator technologies that improve both energy efficiency and environmental sustainability. The delegation also explored morphing drone

research and advanced engineering work at the Departments of Mechanical Engineering and Design, where faculty showcased projects with significant potential for large-scale societal benefit. Concluding with laboratory tours and detailed collaboration discussions, the visit underscored how academia-industry partnerships can translate research into solutions for pressing real-world challenges.



Indian Polyurethane Association (IPUA)

The Indian Polyurethane Association visited IIT Kanpur to explore a joint initiative on the sustainable upcycling of polyurethane waste, a growing environmental challenge. Discussions focused on efficient routes to break PU back into its core building blocks, polyols and amines, using low-cost, recyclable catalytic systems, alongside complementary and solvent-minimal approaches

designed to work across flexible foams, automotive components, footwear, and rigid PUs. IPUA agreed to support the effort by supplying the required polymer materials, streamlining the research workflow. Both partners committed to open, continuous collaboration on a cause that is at once environmental and societal.



Cummins India

Cummins India visited IIT Kanpur to deepen its industry-academia engagement across research, talent, and technology. With the Office of Research and Development, the delegation discussed collaborative projects, intellectual property frameworks, and internship and recruitment pathways. At C3iHub, the team explored advanced cybersecurity training and side-channel analysis capabilities, while faculty from Electrical and Sustainable Energy Engineering led in-depth discussions on power electronics - grid-forming inverters, solid-state transformers, DC circuit breakers, and DC-DC conversion. Concluding with laboratory tours and shared problem statements, the visit laid the foundation for a long-term partnership focused on innovation and capacity building.



MKU Limited

IIT Kanpur hosted MKU for exploratory talks toward a long-term research partnership. MKU is a global defence and homeland-security leader serving forces and agencies across more than 100 countries. The engagement brought together faculty from Aerospace, Materials Science, Electrical, and Mechanical Engineering to examine emerging challenges in defence technologies, advanced materials, aerospace systems, electronics, and next-generation manufacturing. By pairing MKU's deep industry expertise with IIT Kanpur's multidisciplinary research strength, both sides identified clear avenues for collaboration. The discussions laid a foundation for partnerships that can accelerate technology development and contribute meaningfully to national capability building.



PNB Housing Finance - PEHEL Foundation

Some visits convert into commitment on the spot. Representatives of PNB Housing Finance toured the Gangwal School of Medical Sciences and Technology, viewing first-hand the progress being made on its operation-theatre infrastructure. The outcome was decisive: PEHEL Foundation, the CSR arm of PNB Housing Finance, has agreed to fund the establishment of a state-of-the-art Operation Theatre Complex at the School. The initiative will help close critical infrastructure gaps, expand access to affordable care, and advance medical education and research - a clear example of how an industry visit can become a lasting, high-impact CSR partnership.

SBICAP Securities Limited visits IIT Kanpur

A delegation from SBICAP Securities Limited visited IIT Kanpur to explore the institute's growing footprint in healthcare innovation, with a particular focus on the Gangwal School of Medical Sciences and Technology (GSMST). The visitors were keen to understand how the institute is advancing healthcare as part of its broader societal impact mandate, bridging transformative engineering and medical research to address pressing public health challenges. During the visit, the delegation toured key facilities, including the state-of-the-art Transplant ICU, and engaged with faculty and researchers on ongoing initiatives. They expressed strong appreciation for IIT Kanpur's vision of translating academic excellence into meaningful, real-world healthcare outcomes for society.



An Open Invitation

Each of these visits tells the same story: when industry meets IIT Kanpur's multidisciplinary strength, curiosity becomes capability, and conversations become collaboration. From sustainable technology and power electronics to defence, advanced materials, and healthcare infrastructure, the institute offers partners a place where real-world challenges meet research that can solve them.

Collaboration with IIT Kanpur enables organisations to co-develop innovative technologies, accelerate product development, access world-class research infrastructure and expertise, foster talent development, and create scalable solutions with meaningful societal and industrial impact. IIT Kanpur warmly invites corporate, technology, and philanthropic organisations to visit, engage, and build the next generation of transformative solutions together.



FROM PATENT TO PRODUCT: IIT KANPUR'S LICENSED TECHNOLOGIES IN THE FIELD

How research from IIT Kanpur's laboratories is reaching farmers, hospitals, and markets through technology licensing that turns patents into applied impact

A patent is a promise; a licensed product is its fulfilment. At IIT Kanpur, technology translation is a deliberate strategy converting protected, peer-validated research into commercial products through industry licensing partners who carry it to market and scale. The two technologies below show what that pathway delivers: measurable impact in agriculture and healthcare, reaching the people who need it most.

Soil Nutrient Sensing Device Licensed to ScaNxt Scientific Technologies (Indian Patent No. 559066)

Indian farmers have long waited up to a fortnight for soil-health results from distant district laboratories. IIT Kanpur's soil nutrient sensing technology licensed to ScaNxt Scientific Technologies and commercialised as Bhu-Parikshak collapses that wait to 90 seconds. The portable, wireless device needs just five grams of dry soil to measure six critical parameters, including nitrogen, phosphorus, potassium, organic carbon, clay content, and cation exchange capacity, then recommends precise fertilizer doses through a multilingual mobile app.

Its impact is already national and global:

Over **90,000** farmers

across **21+** states served

more than **400,000** samples tested from 150,500+ acres

300+ industry and manufacturer collaborations

and reach into five-plus international markets together building a real-time soil-health data bank for India while curbing fertiliser overuse.

Electrochemical Bilirubin Sensor - Licensed to Sensa Core Medical Instrumentation (Indian Patent Nos. 495150, 502024 & 514208)

Rising incidences of neonatal jaundice have made rapid bilirubin testing a pressing clinical need yet conventional analysis remains slow and lab-bound, even as the death toll from jaundice has climbed over recent decades. IIT Kanpur's reagent-less electrochemical sensor, licensed to Sensa Core Medical Instrumentation, quantifies bilirubin from a single drop of blood in just 60 seconds. The portable, strip-based system brings safe, convenient testing to hospitals, nursing centres, and pathology labs, enabling the regular monitoring essential to effective treatment particularly for vulnerable newborns and patients on medications that elevate bilirubin levels. By moving sensitive diagnostics from the central laboratory to the point of care, the technology makes monitoring faster, simpler, and far more accessible.

License the Future With IIT Kanpur

These technologies represent only part of a growing portfolio of patented innovations ready for commercialisation. For manufacturers and companies, licensing offers a direct route to market-ready, IP-protected technology backed by IIT Kanpur's research depth and translational support. From agriculture and healthcare to energy and advanced manufacturing, the institute invites industry partners to license its innovations and bring the next generation of impactful products to the world.





WORLD-CLASS TESTING, WITHIN REACH: IIT KANPUR'S FACILITIES FOR INDUSTRY

How IIT Kanpur's accredited testing and characterization centres help companies build safer products, validate faster, and innovate without heavy capital investment

For most companies, validating samples and demonstrating product performance are critical steps before commercialization. Whether it is testing a prototype, validating material samples, obtaining certification, or ensuring compliance with industry standards, access to advanced testing facilities is essential. At IIT Kanpur, companies can submit their samples for testing, characterization, and validation through accredited, world-class laboratories. This helps organizations generate reliable data, reduce development risks, save time and cost, and accelerate the journey from innovation to market. Two of the institute's facilities highlight the breadth and quality of sample testing and validation support available to industry partners.

EMI/EMC & Electrical Safety Test Facility

Bringing a new electronic or medical device to market means proving it is electromagnetically compatible and electrically safe testing that is costly, time-consuming, and often sends Indian companies overseas. IIT Kanpur's EMI/EMC and Electrical Safety Test Facility removes that barrier. Established in 2019 and NABL-accredited in 2024, the BIRAC-funded centre provides both pre-compliance and full compliance testing against internationally recognised IEC, ISO, and CISPR standards including the IEC 60601 series critical for medical devices. By delivering affordable, high-quality validation close to home, the facility helps industries and startups develop safe, reliable products that meet global safety and performance benchmarks and reach the market faster. Learn more: <https://www.iitk.ac.in/emc/>

Advanced Centre for Materials Science (ACMS)

For over thirty-five years, IIT Kanpur's Advanced Centre for Materials Science (ACMS) has brought a complete materials ecosystem under one roof - fifteen advanced laboratories spanning microscopy and imaging, materials characterization, mechanical testing, and thermal and surface analysis. For industry, the value is direct: access to instruments such as field-emission and transmission electron microscopy, X-ray diffraction and photoelectron spectroscopy, universal testing machines, and high-temperature creep and fatigue testing without the heavy capital cost of building such capability internally. The centre supports industrial R&D, failure analysis, and quality assurance across semiconductors, aerospace, automotive, coatings, and biomedical engineering, giving companies the precise data they need to optimize products and accelerate innovation. Learn more: <https://www.iitk.ac.in/acms/about.html>

Test, Validate, and Build With IIT Kanpur

These facilities represent one of the most accessible ways for industry to engage with IIT Kanpur. Whether validating a medical device for global certification, analysing a material failure, or assuring product quality, companies and startups gain affordable, accredited, and expert-supported testing backed by the institute's deep research base. IIT Kanpur invites industry partners to use these facilities not just as a service, but as a starting point for deeper, lasting collaboration.

VALIDATE YOUR SAMPLES | VERIFY PERFORMANCE
ACCELERATE MARKET READINESS



SIGNED FOR THE FUTURE: IIT KANPUR'S NEW STRATEGIC PARTNERSHIPS

New strategic MoUs extend IIT Kanpur's research from the laboratory into national infrastructure and global industry

A Memorandum of Understanding is more than a signature; it is the formal architecture through which research becomes national capability. Few recent agreements signed at IIT Kanpur illustrate the breadth of that ambition, few reshaping India's indigenous digital infrastructure, the other connecting the institute to a global leader in energy-efficient engineering.

BSNL × IIT Kanpur - Advancing Indigenous Telecom and Digital Infrastructure

In one of its most strategically significant partnerships of the year, IIT Kanpur and Bharat Sanchar Nigam Limited (BSNL) signed an MoU on 11 June 2026 to jointly research, develop, test, deploy, and commercialise next-generation telecom and digital technologies. Signed by Prof. Manindra Agrawal, Director, IIT Kanpur, and Shri Jitendra Garg, PGM, BSNL, the partnership pairs the institute's research excellence with BSNL's nationwide infrastructure and operational scale. A central focus is Direct-to-Mobile (D2M) broadcasting, a field in which IIT Kanpur has emerged as a national leader, with D2M capable of delivering educational content, public information, disaster communications, and emergency alerts directly to hundreds of millions of mobile devices without relying solely on cellular networks. The collaboration also spans 4G/5G and future networks, BharatNet-enabled applications, AI/ML network analytics, cybersecurity, cloud and edge computing, and indigenous communication systems building toward the goals of Digital India and Atmanirbhar Bharat through pilots, proofs-of-concept, IP creation, and commercialisation of scalable solutions.



Danfoss × IIT Kanpur - Joint Research and Open Innovation

IIT Kanpur and Danfoss Industries Private Limited have signed an MoU to pursue joint research, open innovation, and technology development spanning collaborative problem statements, product improvement, testing, and evaluation.

Dean of Research & Development, IIT Kanpur, and Senior Director and Head of DIIC at Danfoss, the partnership connects the institute's multidisciplinary research strength with a global leader in energy-efficient engineering and electrification. By bringing real industry problem statements directly into IIT Kanpur's laboratories, the collaboration is designed to accelerate practical, innovation-driven solutions and to strengthen the bridge between academia and industry, turning shared technical challenges into co-developed outcomes.



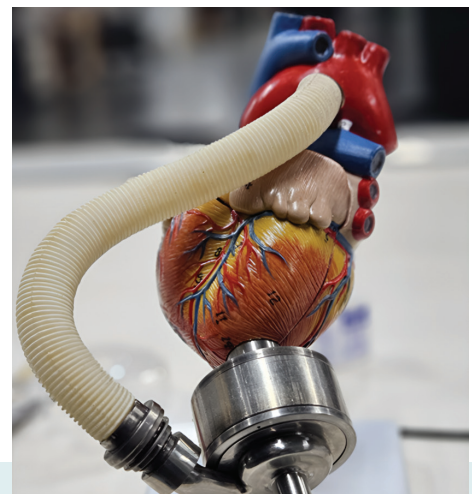
NMTronics (India) Private Limited



NMTronics (India) Private Limited has further strengthened its ongoing collaboration with IIT Kanpur through a revised and extended CSR commitment. The enhanced funding will bolster the NMTronics Center of Excellence for Electronics Manufacturing and Skills Development. This extension aims to facilitate the procurement of advanced equipment and expand the Center's capabilities in advanced research and hands-on training. The initiative is expected to nurture industry-ready talent, accelerate indigenous electronics manufacturing, and contribute to strengthening India's technological ecosystem, thereby creating a sustained and meaningful impact on society.

Portescap India Private Limited

Portescap India Private Limited has renewed its collaboration with IIT Kanpur under its CSR initiatives, reinforcing a long-standing partnership. Building on earlier collaborations, this continued partnership will support advanced research in critical domains such as healthcare technologies and precision-driven robotic systems. The initiative focuses on developing indigenous solutions for medical devices and engineering applications, contributing to affordable and accessible healthcare. This renewed association reflects a shared commitment to leveraging innovation and research to address real-world challenges. It further aims to create meaningful societal impact across healthcare, education, and technology, while strengthening the institute's research ecosystem and translational capabilities.



Portescap

A REGAL REXNORD BRAND

KEWAL ENGINEERING PRIVATE LIMITED

Driving impact at the grassroots, Kewal Engineering Private Limited has agreed to implement the “Skilling Leather Stitchers” program aimed at empowering rural youth. The initiative focuses on delivering structured vocational training to enhance employability and foster sustainable livelihoods. By equipping participants with industry-relevant skills, the program addresses critical skill gaps and creates pathways for income generation. This collaboration underscores a shared commitment to inclusive development, strengthening community resilience and enabling socio-economic upliftment, while contributing to long-term, scalable impact at the grassroots level.



CRISIL Limited

Strengthening industry-academia collaboration, IIT Kanpur has collaborated with CRISIL Limited to support academic enrichment and student recognition initiatives. Through an endowment contribution, the association establishes the CRISIL Lecture Series and the CRISIL Student Award,

fostering knowledge exchange and academic excellence within the Department of Intelligent Systems. The initiative also enables research collaboration, student orientation, and enhanced campus engagement, including internships and recruitment opportunities. By integrating industry insights with academic rigor, this engagement reinforces IIT Kanpur's commitment to nurturing talent, advancing interdisciplinary learning, and creating meaningful opportunities for students.



POWER FOUNDATION OF INDIA (PFI)

Expanding its commitment to advancing policy-driven research, Power Foundation of India has endowed the “PFI Distinguished Chair Professorship on Power Sector Regulation and Policy” at IIT Kanpur. Supported by a significant endowment, this initiative strengthens faculty-led research, interdisciplinary collaboration, and thought leadership in India's evolving energy landscape.

It will enable cutting-edge research, policy engagement, and capacity building in regulatory frameworks, while fostering closer interaction between academia, industry, and government.

This initiative reinforces IIT Kanpur's role as a national leader in energy research and its commitment to shaping a sustainable and resilient power sector.



HINDUSTAN COPPER LIMITED

Education remains a key focus area for IIT Kanpur's outreach and social impact initiatives, reflected in its collaboration with Hindustan Copper Limited to implement the SATHEE (Self-Assessment, Test, and Help for Entrance Exams) program under CSR.

The initiative aims to provide free, high-quality coaching and mentorship for competitive exams such as JEE, NEET, and SSC to 150 underprivileged students from mining regions across Jharkhand, Madhya Pradesh, and Rajasthan. Through SATHEE Kendras, the program enhances equitable access to education by integrating digital learning with localized academic support, empowering students from marginalized communities.



APTIV COMPONENTS INDIA PRIVATE LIMITED

• APTIV •

With a focused commitment to strengthening healthcare delivery at the Gangwal School of Medical Sciences and Technology (GSMST), IIT Kanpur has recently partnered with Aptiv Components India Private Limited. Through this collaboration, Aptiv has supported the establishment of two dedicated 8-bed EWS bays, aimed at expanding access to affordable, high-quality healthcare for underserved populations. This initiative enhances patient care through efficient triaging, streamlined treatment, and improved management under schemes like Ayushman Bharat-PMJAY. By strengthening inclusive healthcare infrastructure, it improves outcomes, reduces delays, and reinforces a shared commitment to equitable, technology-enabled, and socially responsive healthcare at GSMST, IIT Kanpur.

M/S. REALME MOBILE TELECOMMUNICATIONS (INDIA) PRIVATE LIMITED

In a significant step towards digital resilience, IIT Kanpur has joined hands with realme India for Realme Cyber Suraksha. This initiative focuses on strengthening cyber awareness and promoting safe digital practices among students and government professionals across Uttar Pradesh. The programme adopts a structured, practice-oriented approach, combining institutional capacity building with large-scale

training delivered through blended learning formats. Over its implementation period, it aims to reach 5,000 participants, equipping them with critical skills in cyber hygiene, online fraud prevention, and digital safety. Supported under realme's CSR commitment, the partnership reflects a shared vision of building a secure and responsible digital ecosystem with long-term societal impact.



Partner With IIT Kanpur

Each of these agreements opens a long-term framework for research, development, testing, and commercialisation from national digital infrastructure to advanced industrial engineering. For organisations seeking a research partner with proven depth and deployment reach, an MoU with IIT Kanpur is the first step toward co-developing technologies that scale. The institute welcomes industry, public-sector, and strategic partners ready to build India's technological future together.

VOICES OF PARTNERSHIP

“It is an absolute honor to be recognized by IIT Kanpur, an institution at the forefront of innovation, research, and transformative impact. Our association with IIT Kanpur has been truly enriching. What stands out is the institute's commitment to developing practical, outcome-driven solutions that create real value for society. We are proud to partner with IIT Kanpur and look forward to strengthening this collaboration to drive innovation and create lasting impact. We sincerely thank IIT Kanpur for this recognition and for making us a part of this remarkable journey.”



Mr. Yogesh Kumar

Vice President - Technology,
Wabtec Corporation



Mr. Tanuj Mishra

Director, Business Management,
Tower Research Capital

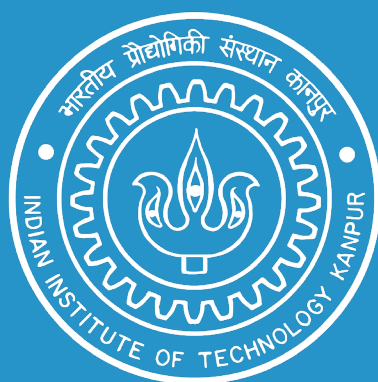
“It is a great honor for Tower Research to receive this recognition from IIT Kanpur and the Centre for Digital Innovation & Social Transformation (CDIS). Our partnership has been built on a shared belief that technology can create meaningful and lasting social impact. Through our CSR initiatives, it has been a privilege to support projects that have delivered tangible benefits to society, including AI-driven grievance management, the AI Centre of Excellence, sustainable cities, and the hospital management system deployed during the Mahakumbh. We are proud of what we have accomplished together and look forward to strengthening this partnership to drive many more impactful innovations. We sincerely thank IIT Kanpur for this recognition and for making Tower Research a part of this inspiring journey.”

“It is a privilege for Regal Rexnord Corporation (Portescap) to partner with IIT Kanpur in driving innovations that create meaningful social impact. Over the past seven years, our collaboration has been a rewarding journey, with several innovations progressing from ideas to products that are making a real difference. IIT Kanpur's commitment to product design, research, and development aligns perfectly with our vision of enabling technology that benefits society at scale. We congratulate the entire IIT Kanpur team on their remarkable achievements and look forward to strengthening this partnership to create innovations that benefit India and the world.”



Mr. Dheeraj Saxena

Director, Innovation & Technology,
Regal Rexnord



IIT Kanpur

CONTACT US

MR. RAJAT SHARMA

Vice President - Development,
IIT Kanpur Development Foundation,
Indian Institute of Technology Kanpur

+91 98108 98246 | corpconnect@dora.iitk.ac.in