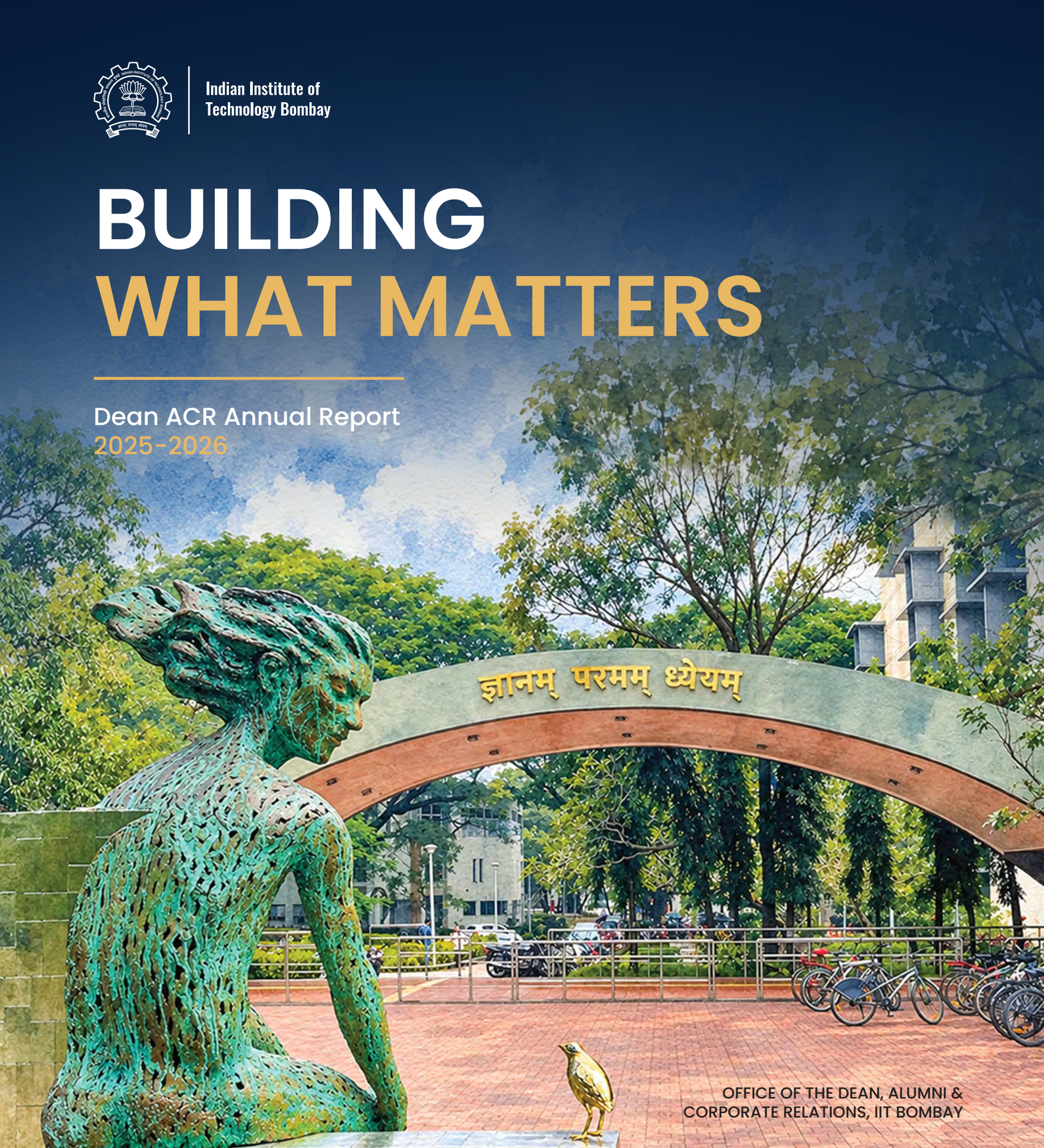
Indian Institute of Technology Bombay

BUILDING WHAT MATTERS

Dean ACR Annual Report 2025-2026



OFFICE OF THE DEAN, ALUMNI & CORPORATE RELATIONS, IIT BOMBAY


INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
भारतीय प्रौद्योगिकी संस्थान मुंबई
ज्ञानम् परमम् ध्येयम्



THE ICONIC ARCH – **“GYANAM PARAMAM DHYEYAM”**

The Iconic Arch, bearing IIT Bombay’s motto “Gyanam Paramam Dhyeyam”—Knowledge is the supreme goal—is the visual thread of this year’s Annual Report. A familiar landmark on campus, at the entrance of the Infinity Corridor, it is a fitting image for the work reflected in these pages: an Institute building on its strengths, creating new capacity and responding to emerging opportunities in research, education, innovation and infrastructure. In this report, the Arch symbolises connection: between people, ideas, resources and partnerships, and between the Institute’s foundations and its ambitions.

Last year, the Infinity Corridor provided the frame for the Annual Report, reflecting the many paths and possibilities that come together at IIT Bombay. The Arch carries that story forward, connecting the Institute’s enduring foundations with its evolving ambitions. This journey is shaped not only by the work within the Institute, but also by the wider community that contributes to it—alumni who remain connected to their alma mater, corporates and industry partners who collaborate on shared priorities, well-wishers who support the Institute’s aspirations, and institutions that build meaningful partnerships with IIT Bombay.

The 2025–26 Annual Report of the Office of the Dean, Alumni and Corporate Relations reflects this continuing journey. It brings together the year’s developments across research, infrastructure, entrepreneurship, education and other institutional priorities, while highlighting the relationships and partnerships that have helped enable them. Together, these contributions reflect a shared commitment to strengthening IIT Bombay and creating greater possibilities for the generations ahead.

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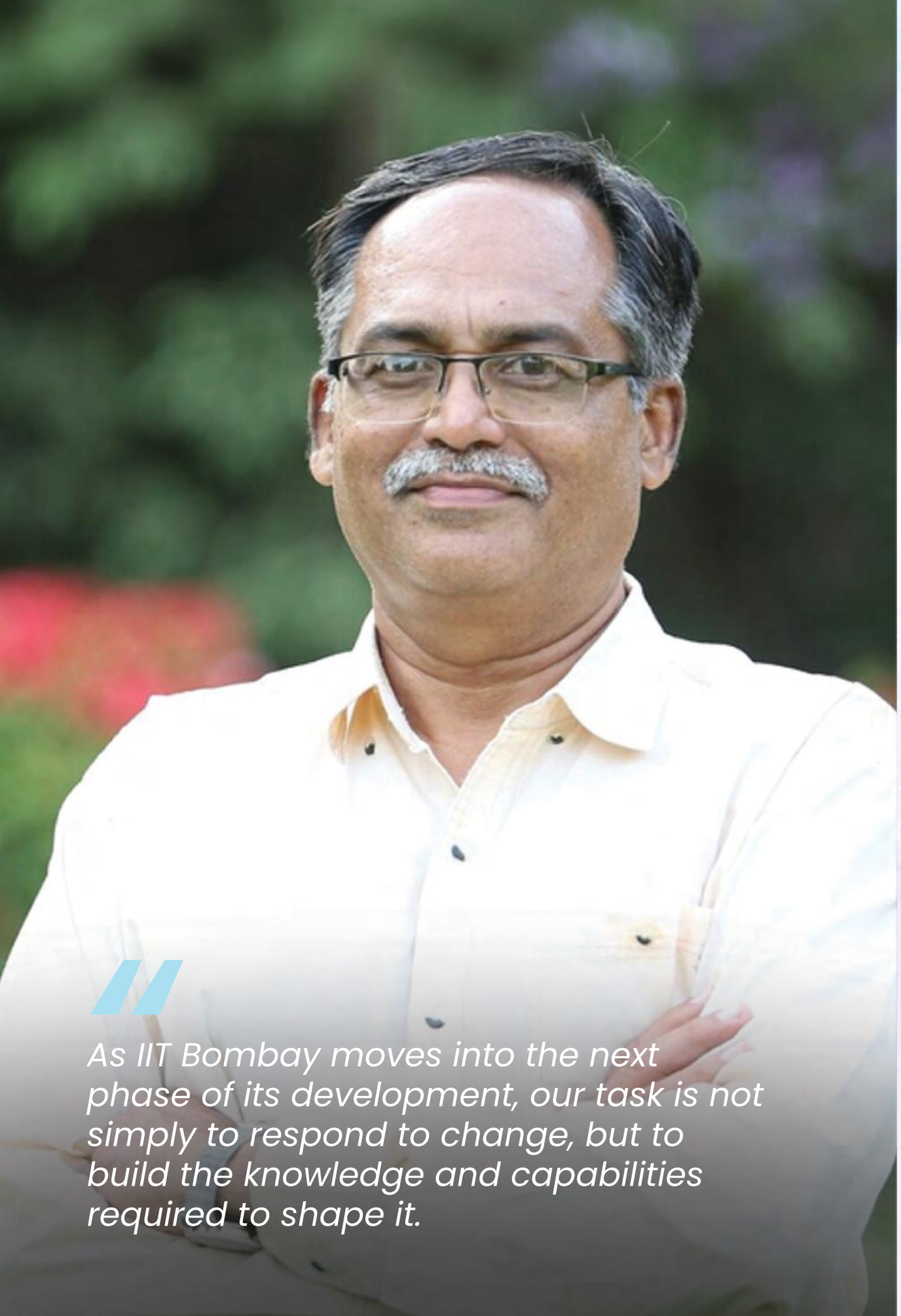
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MESSAGE FROM THE DIRECTOR



As IIT Bombay moves into the next phase of its development, our task is not simply to respond to change, but to build the knowledge and capabilities required to shape it.

Dear Alumni and Industry Partners,

IIT Bombay is at a point where the questions before a technology institution are becoming larger, more interconnected and more consequential.

Our Strategy Plan 2026–2030 and Beyond sets out three themes: Learning-Centric Education, Frontier Research Leadership, and Industry- and Society-Relevant Research and Translation. Together, they reflect a fundamental responsibility: to prepare our students for a rapidly changing world while strengthening the pathways through which knowledge and research can contribute to society.

Meeting that responsibility requires us to think beyond individual disciplines and beyond the boundaries of our campus.

The strength of IIT Bombay has always rested in its people. Our faculty pursue questions that advance knowledge and open new directions for research. Our students bring curiosity and ambition to those questions. Our alumni carry what they learned here into companies, universities, public institutions and ventures across the world, often returning with experience, ideas and networks that enrich the Institute in turn.

Industry brings another important perspective. It places research in the context of real technological and societal challenges, creates opportunities for collaboration and translation, and helps connect academic capability with problems at scale.

These relationships matter because the work of a university does not end with discovery. Knowledge must be taught, tested, questioned and, where possible, translated into forms that can be used. Some of that work produces visible outcomes within a year. Much of it takes considerably longer.

This Annual Report records both. It documents progress across research, education, innovation, student development and institutional capacity during 2025–26, while recognising that many of the initiatives represented here form part of a longer trajectory.

Our alumni and industry partners have contributed to that trajectory in many ways: through mentorship, collaboration, philanthropy and continued engagement with the Institute. IIT Bombay Heritage Foundation and IIT Bombay Alumni Association have played an important role in sustaining these connections, and I acknowledge their continued engagement with the Institute.

As IIT Bombay moves into the next phase of its development, our task is not simply to respond to change, but to build the knowledge and capabilities required to shape it.

I invite you to read this report as an account of the progress made during the year, and of the work that continues.

With warm regards,

Prof. Shireesh Kedare
Director, IIT Bombay

MESSAGE FROM THE DEAN, ALUMNI AND CORPORATE RELATIONS



The Office of the Dean, Alumni and Corporate Relations has the responsibility of nurturing these relationships and connecting them meaningfully with IIT Bombay's priorities

Dear Alumni and Corporate Partners,

An IIT Bombay degree is earned on campus. The relationship with the Institute can extend far beyond it.

Across generations, alumni have sustained that relationship in different ways. They mentor students, support research and academic initiatives, share professional knowledge, create connections and contribute resources to areas they believe can make a difference. Corporate partners bring expertise, research questions and opportunities for collaboration. Together, these relationships extend the community around IIT Bombay far beyond the physical boundaries of the Institute.

The Office of the Dean, Alumni and Corporate Relations has the responsibility of nurturing these relationships and connecting them meaningfully with IIT Bombay's priorities.

That requires more than mobilising support. It requires understanding what the Institute needs, identifying where external engagement can genuinely add value, and ensuring that commitments are translated into work that can be accounted for.

This Annual Report documents initiatives across research, infrastructure, student development, entrepreneurship and other areas supported by our alumni and partners during 2025–26. They distinguish between work completed and work still underway, and place the emphasis where it belongs: on what the support enabled IIT Bombay and its people to undertake.

Our alumni and corporate community is part of that larger story.

IIT Bombay Heritage Foundation and IIT Bombay Alumni Association continue to play an important role in sustaining alumni engagement with the Institute. I am grateful for their continued partnership, and equally grateful to the individuals and organisations whose contributions, in many different forms, are represented throughout this report.

What matters ultimately is what those relationships make possible.

A scholarship matters because of the opportunity it creates for a student. Research support matters because of the questions it allows faculty and researchers to pursue. Infrastructure matters because of the work it enables. Mentorship matters because experience shared at the right moment can change the direction of an idea or a career.

The responsibility before us is therefore both simple and demanding: to build relationships worthy of IIT Bombay, and to ensure that those relationships serve the Institute's academic and societal purpose.

I look forward to continuing that work with you.

Warmly,

Prof. Upendra V. Bhandarkar
Dean, Alumni and Corporate Relations,
Professor, Department of Mechanical Engineering,
IIT Bombay


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INDIAN INSTITUTE OF TECHNOLOGY BOMBAY



IMPACT REPORT



THE CAPABILITIES INDIA WILL NEED

India’s progress towards Viksit Bharat will depend on its ability to create, govern, manufacture and deploy technologies that increasingly shape economic strength, public systems, and everyday life.

Across areas such as artificial intelligence, climate, sustainability, clean energy, quantum computing, semiconductors, health and biotechnology, cybersecurity, finance, advanced manufacturing, space tech, and molecular engineering, that capability depends on specialised talent, rigorous research, infrastructure for testing and validation, and pathways that connect ideas with industry, policy and society.

IIT BOMBAY IS BUILDING ACROSS EACH OF THESE DIMENSIONS

The Institute's Strategy Plan 2026–2030 and Beyond brings learning-centric education, frontier research leadership & industry–and society-relevant research translation into one institutional framework. Its ambition is visible not only in laboratories and publications, but in the systems that allow knowledge to travel: advanced computing and fabrication facilities, clinical and industrial collaborations, field platforms, manufacturing environments, entrepreneurial pathways, and a campus designed for interdisciplinary work.

During 2025–26, these capabilities continued to come together. Students advanced a chip towards fabrication. Health technologies moved through pre-clinical validation and regulated manufacturing pathways.

Artificial-intelligence systems were developed around Indian data and operating environments.

Sustainability research entered industrial sites, villages, farms, and the campus itself. Faculty discoveries progressed towards ventures through mentoring, entrepreneur matching, and early capital.
At the same time, new hostels, academic blocks, laboratories and collaborative spaces expanded the environment available to students, faculty, and researchers. Physical infrastructure and academic ambition are part of the same institutional story.

Partnership is an important part of this progress. Alumni, donors, foundations, and companies are supporting research platforms, laboratories, fellowships, field networks, and translational and entrepreneurial systems aligned with the Institute's strategic priorities.



PARTNERSHIP AND INSTITUTIONAL CAPACITY

Each kind of partnership contributes a distinct capability

A donor-supported manufacturing facility can help a therapy move from a laboratory towards a validated clinical-grade process. An industry collaboration can allow an algorithm, material, or monitoring system to be developed around real operating requirements.

Philanthropy can support long time horizons and create capabilities whose value will unfold across many years. Corporate social responsibility can connect research with sectoral needs, implementation networks, and communities of users. Alumni contribute resources as well as institutional memory, technical expertise, and the perspective gained through careers across industry, entrepreneurship, finance, technology, and public service.

Together, these relationships can extend the reach and continuity of institutional priorities.

The year's progress is visible in publications, patents, open datasets, prototypes, field trials, start-ups, trained talent, and industry collaborations. It has led to stronger research teams, students with experience of real systems, shared infrastructure, and deeper links between disciplines and external partners.



A JOURNEY THAT KEEPS GIVING

"IIT Bombay has been a cornerstone in my life, shaping my formative years and laying the foundation for my journey. As I celebrate 50 years of my association with this esteemed Institution, I am grateful to give forward and contribute to its future. This donation is more than just a financial contribution; it is a tribute to the place that has given me so much and a commitment to the students who will shape our world tomorrow."

- Mr. Nandan Nilekani, in 2023,
celebrating 50 years of association with IIT Bombay.



Mr. Nandan Nilekani's gift is acting as a powerful catalyst for IIT Bombay's growth and transformation. By supporting multiple dimensions of the Institute's ecosystem—from world-class research infrastructure and breakthrough research to faculty development, housing, and student opportunities—the contribution is enabling initiatives to move forward, strengthening institutional capabilities and creating an impact that extends well beyond any single project.

In this way, the contribution is helping IIT Bombay build the foundations for sustained excellence, innovation and opportunity across the Institute.



BUILDING WORLD-CLASS RESEARCH FACILITIES

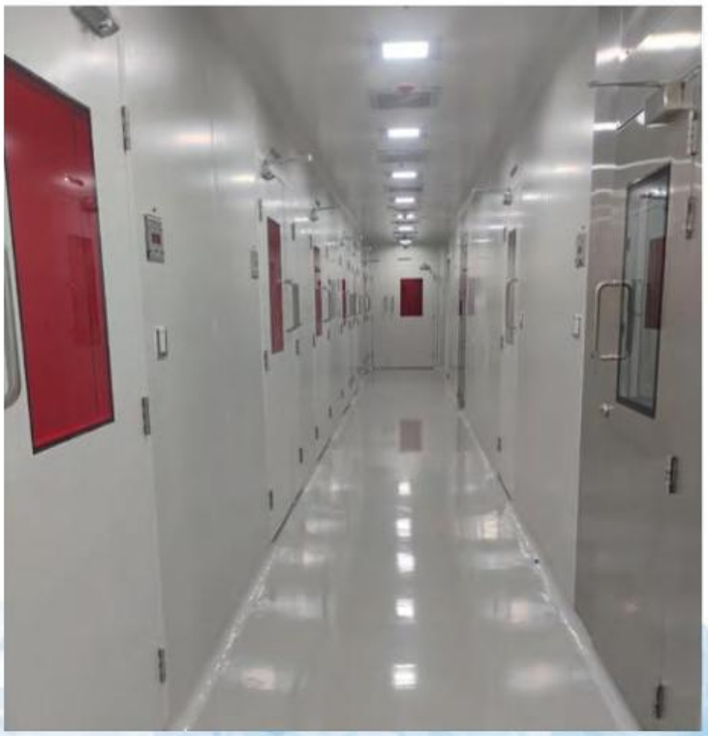
World-class research requires specialised facilities, advanced equipment and shared platforms that allow researchers to work at the frontiers of science and technology.

Mr. Nilekani's support is helping IIT Bombay build this capacity through facilities such as the Advanced Research Lab (ARL), Semiconductor Chiplet Packaging Laboratory, as well as the Pre-clinical facility.

The Advanced Research Lab (ARL) is envisioned as a shared research environment bringing disciplines together around advanced facilities and equipment. ARL will integrate four critical technical domains into a single cohesive ecosystem, featuring state-of-the-art facilities for Mechanical, Quantum Tech, Semiconductor Technologies and Ocean Engineering facilities. With concept design completed and the project team in place, it represents an important addition to IIT Bombay's future research capacity.

The **Semiconductor Chiplet Packaging Laboratory** will enable researchers to work on advanced semiconductor technologies and packaging approaches.

The Pre-clinical facility adds another critical layer to the Institute's healthcare research ecosystem, providing controlled environments in which promising medical technologies can be evaluated before they can progress towards human applications.



ENABLING BREAKTHROUGH RESEARCH AND FACULTY DEVELOPMENT

Some of the most important research begins with a question for which there is no obvious answer. Mr. Nilekani's gift is **giving faculty the freedom to explore** such questions, test early ideas and build evidence before a research pathway or application is fully established.

Current projects span areas such as healthcare, energy, advanced materials, computing and conservation. These include a gene-editing approach to spinal muscular atrophy using zebrafish, cell-free DNA for breast-cancer diagnosis, a secure neural-stimulator chip for brain-pacemaker applications, and platforms to screen potential drugs for obesity and diabetes.

Other projects include nanofibre air filters made using food waste, liquid-metal cooling technologies, catalysts that can break down ammonia at low temperatures, layered semiconductors for optoelectronic and quantum applications, data-science approaches that do not rely on neural networks, and low-cost additive manufacturing for aerospace and medical applications.

Support for the **Subrao M. Nilekani Chair Professorship** contributes to academic leadership in research, teaching and mentorship.

The planned **Faculty Housing Complex – Tower 1,** with homes, childcare and shared community spaces, is intended to strengthen the residential environment available to faculty and their families.

Together, faculty research funding, faculty leadership and faculty infrastructure create an ecosystem in which talented faculty and researchers can pursue ambitious ideas and build long-term academic programmes.



SUPPORTING STUDENT DEVELOPMENT

The **Tinkerers' Lab** and the **Studio** within the New Student Activity Centre are creating spaces that enrich student life beyond the classroom—giving students more opportunities to experiment, collaborate, create and learn from one another.

The Tinkerers' Lab gives students a hands-on environment to take ideas from concept to prototype, test different approaches, solve problems and learn through experimentation. It encourages students to question, iterate and think critically as they work on ideas and projects.

The Studio will add another dimension to student life, providing space for student clubs, cultural activities, media production, maker initiatives and interdisciplinary projects. It will enable students from different interests and disciplines to come together, exchange ideas and work collaboratively.
Together, these spaces give students greater freedom to pursue their interests outside the classroom, take initiatives, work in teams and develop practical skills.

This builds on Mr. Nilekani's earlier support for student hostels, extending his contribution to student life from creating better living spaces to enabling richer opportunities for students to connect, collaborate, create and innovate.





AI, DATA AND MACHINE LEARNING

Building the Intelligence for India and the world



Artificial intelligence, data, and machine learning now influence healthcare, public systems, industry, finance, and everyday services. IIT Bombay's work spans foundational research, education, and application, with particular attention to Indian data, operating conditions, privacy, cybersecurity, and trust.

The central challenge is not adoption alone, but the development of people, research capability, and institutions able to build and evaluate these systems responsibly.

Across the initiatives below, progress is seen through trained students, published research, open resources, deployed or tested systems, and the infrastructure created for further work.

FOUNDATIONAL INTELLIGENCE, INDIAN CONTEXTS

Centre for Machine Intelligence and Data Science (C-MInDS) has been generously contributed by founders **Ms. Vijaya Lakshmi** and **Mr. ARR Lakhamraju**; IIT Bombay alumnus **Mr. Mohan Lakhamraju**, IIT Bombay alumnus **Mr. Beerud Sheth**, IIT Bombay alumnus **Mr. Arpit Mathur**, **Ms. Nirmala** and **Mr. Ashok Deorah**, IIT Bombay alumnus **Mr. Kashyap Deorah**, and IIT Bombay alumna **Ms. Shruti Mahajan Deorah**; sponsors IIT Bombay alumni **Mr. Shariq Rizvi**, **Mr. Varun Kacholia** and **Dr. Shashidhar Thakur**; and donors IIT Bombay alumni **Mr. Rohit Karnik**, **Mr. Vijay Krishnan** and **Mr. Abhinandan Das**, along with **Turing.com, Gupshup, and SBI Foundation.**

~100 students graduated from its Interdisciplinary Dual Degree Programme since 2022.

Hosted within C-MInDS, the **SBI Foundation Hub for Data Science and Analytics** is applying artificial intelligence and data science to banking and financial services. Its work includes trustworthy AI, credit advisory, branch and Customer Service Point optimisation, generative AI for banking databases, and a Grand Challenge to develop a large language model using Indian banking data. Four projects were released as open-source work, and 15 further projects are under way.

The Hub's projects have generated 13 research papers and one journal publication, with students, doctoral scholars, and research associates working alongside banking professionals.

Wider collaborations with Honda, HSBC, Indian Cyber Crime Coordination Centre, Tata Consulting Engineers, and Dream11 open further pathways into mobility, secure finance, cyber applications, engineering workflows, and sports analytics.



IIT Bombay–HRTI Centre of Excellence in Vision, Multimodal AI and Geo-Intelligence (VIMAGE) is established with generous contribution from **HRTI Private Limited**. Its open-source systems combine vision, language, and audio for Indian contexts. The flagship GeoMeld initiative brings together optical, radar, elevation, canopy-height, and land-cover data in approximately 2.5 million aligned samples, creating a shared resource for climate monitoring, agriculture, disaster response, and urban planning.

VIMAGE is also examining how AI systems respond when they encounter unfamiliar inputs. Its reliability-aware research has materially reduced calibration error across a range of prompt templates, with relevance for medical diagnostics, autonomous systems, and protection against algorithmic bias. Workshops, internships, and schools are beginning to build a wider research community around these open resources.



FROM RESEARCH TO REAL-WORLD SYSTEMS

Technocraft Centre for Applied Artificial Intelligence (TCA2I), established in 2021 with the generous contribution of **Dr. Sharad Saraf** and **Mr. Sudarshan Saraf**, focuses on the difficult transition from research to deployment. Its work spans healthcare, cybersecurity, defence, telecommunications, digital twins, urban governance, and industrial decision-support systems. Research with Tata Memorial Centre is advancing mixed-reality neurosurgical simulation. Engagement with the Brihanmumbai Municipal Corporation includes AI-enabled health-record digitisation and data systems connected with ASHA workers.

Collaboration of **TCA2I** with **FedEx Center for Advanced Logistics and Focused Analytics** at IIT Bombay applies digital twins to logistics and smart warehouses, while work with Mazagon Dock Shipbuilders Limited focuses on predictive maintenance and operational-health monitoring.

TCA2I research was presented at leading international forums in computer vision and medical imaging. The Centre's work included brain-imaging systems, automated pharmaceutical inspection, indigenous endpoint-detection platforms, and AI-enabled security operations.



Koita Centre for Digital Health (KCDH), established with generous contribution from **Mr. Rizwan Koita** and **Ms. Rekha Koita**, places artificial intelligence inside the architecture of care. KCDH has secured Rs. 26 Crores in extramural research funding, launched 15 seed-funded projects and established high-performance computing capability for health-data modelling. Its work in disease modelling, radiology AI, and interoperability connects population intelligence, clinical decision support, and secure exchange of medical information.



The importance of this is seen in examples such as these - A healthcare model value depends on data quality, clinical interpretation, secure exchange, and the ability to operate across institutions. KCDH provides a setting in which those requirements can be built into the research from the outset.

TRUST BY DESIGN

As artificial intelligence enters finance, healthcare, banking and everyday lives, privacy, and accountability must form part of its design.



IIT Bombay TRUST Lab, established with generous contribution from **Dr. Shridhar Shukla**, brings together foundational research, technology development, capacity-building, and industry engagement around differential privacy, federated learning, secure computation, homomorphic encryption, applied cryptography, and privacy-preserving AI.

During the year, IIT Bombay TRUST Lab published 12 papers at leading international conferences and established seven advanced PULSE cybersecurity laboratories. Its colloquia, summer school, internships, and “Capture the Flag” competition are also widening the talent and practitioner community around digital trust.



Within this ecosystem, IIT Bombay and the Mphasis F1 Foundation have established **Mphasis AI and Cybersecurity Research Co-Lab in Privacy-Enhancing Technologies for Financial Security**. Its sector partnerships with RBL Bank, IFTAS, and C-DAC Pune are helping translate research into applications such as collaborative fraud detection, secure analytics, and stronger security operations.

HEALTH AND BIOTECHNOLOGY

Backing the Journey from Discovery to Care

Scientific breakthroughs begin in laboratories, but they reach people only when research, clinical practice, engineering, validation, and manufacturing can work together. IIT Bombay is building that connective tissue across digital health, early diagnosis, advanced therapies, affordable devices, and next-generation manufacturing.



DIGITAL CARE AND EARLIER DIAGNOSIS

Koita Centre for Digital Health (KCDH) brings engineering, data science, and clinical medicine into a shared ecosystem. KCDH has delivered more than 54 courses and trained over 65 students across PhD, Interdisciplinary Dual Degree, and minor programmes, while workshops reached more than 150 students across Maharashtra.

The educational model is designed to create clinician-engineers and technology specialists who understand both computation and the realities of care delivery. After one Med-Tech Symposium, Dr. Subhasri Subhadarsini of TNMC Mumbai reflected that the programme had helped her understand how doctors could engage with artificial intelligence and explore its role in healthcare.

KCDH has partnered with the World Health Organization, the ICMR National Institute for Research in Digital Health, and Johns Hopkins University. Collaborations with Tata Memorial Hospital and Narayana Health are aimed at connecting research with environments in which data systems must function accurately, securely, and at scale. For patients, the impact will be in continuity of care and better-informed clinical decisions.

Established in 2022 with generous contribution from **Mr. Sharad Sanghi**, **Sunita Sanghi Centre of Aging and Neurodegenerative Diseases (SCAN)** is combining biology, diagnostics, artificial intelligence, and assistive technologies to support earlier detection and monitoring for aging and neurodegenerative diseases. A multicentric study has collected ~450 patient samples and ~100 control samples; preliminary results from the ThT Assay show about 90% diagnostic accuracy, and the platform has reached Technology Readiness Level 5–6.

Collaboration with **Blockchain for Impact** is developing a less invasive diagnostic pathway. IIT Bombay researchers have created LoAR-Exo and HiAR-Exo microfluidic chips to isolate extracellular vesicles from saliva and urine in a single step. Early testing collected 17 times more particles from saliva and 12 times more from urine than the standard laboratory method. The work has international and Indian patent publications and received the Best Oral Presentation award at the inaugural conference of the Indian Society of Extracellular Vesicles at AIIMS New Delhi in 2025.

The work is directed towards a portable, one-step system that could make molecular signals easier to detect from saliva or urine while reducing laboratory processing.



ADVANCED THERAPIES AND THE TRANSLATIONAL SPINE

Alkem Centre for Advanced Research and Development of Applied Immuno-Therapeutics and Regenerative Medicines, established with support from Alkem Foundation, is building indigenous capability in cell and gene therapies, biomaterials, and regenerative medicine.

Its pipeline includes InCARTis for localised delivery in cancer immunotherapy, NanoDerma Heal wound dressings, RheuMod Gel for rheumatoid arthritis and bio-resorbable products for orthopaedic repair.

The projects are moving research towards scalable production in India. That work spans therapeutic design, biomaterials, process development, and regulatory pathways.

Wadhwani Research Centre for Bioengineering (WRCB) and **Wadhwani Innovation Centre (WIC)**, established with support from Dr. Romesh Wadhwani, support the progression from laboratory validation towards translation. WRCB has supported ~100 translational projects and enabled more than 18 start-ups. WIC is extending this approach through a hub-and-spoke network involving more than 10 partner institutions.

HiMedia Laboratories' CSR partnership adds shared cell-culture and molecular-biology infrastructure through the HiMedia-supported Bioinnovation Laboratory. The facility, inaugurated in September 2025, is accessible to researchers, start-ups, and industry partners.

HiMedia has also supported Entrepreneur-in-Residence fellows and research on precision diagnosis of triple-negative breast cancer and synthetic antibiotics against drug-resistant bacteria.

10X GMP Facility, established with support from Mr. Raj Nair, provides ISO 6 and ISO 7 sterile zones for converting laboratory protocols into validated manufacturing processes. InCARTis, NanoDerma Heal, bio-resorbable meshes, and orthopaedic bio-fixation products are among the programmes progressing through process validation.

The facility provides academic researchers and start-ups with documentation, environmental control, and process discipline required for clinical-grade manufacturing, addressing a practical gap between laboratory protocols and validated production processes.

Mr. Nandan Nilekani's funds have accelerated the **Central Pre-Clinical Facility** and the fully operational Interim **Pre-Clinical Facility**, adding the controlled infrastructure required before therapies and devices can progress towards human application.



AFFORDABLE DEVICES AND MANUFACTURING FOR SCALE

IITB–ICICI Biomedical Engineering and Technology Innovation Centre, generous contribution by **ICICI Foundation**, connects clinicians, engineers, designers, and entrepreneurs around medical-device development. Its multi-material 3D printing, signal-analysis, and surgical-simulation capabilities are intended to expand prototyping capacity and shorten development cycles.

The programme targets 100 prototypes, support for 100 medical-technology start-ups, and training for 1,500 healthcare innovators.

With support from **Cohizon Life Sciences Ltd.**, IIT Bombay is also developing capability in continuous electrochemical and mechanochemical processing.

The first continuous-flow electrochemical reactor prototype has completed design and is under trial, while national workshops are building skills in process intensification. The initiative is laying the groundwork for scale-up, vendor development, and technology transfer to larger companies as well as micro, small and medium enterprises.

Seen as a whole, the initiatives connect health data and early diagnosis with treatment, Pre-clinical validation, regulated manufacturing, affordable devices, and industrial scale-up.



FINANCE AND MARKETS

Building the Knowledge Behind India's Financial Future

As India's financial system grows in scale and complexity, IIT Bombay is building research and education capability across capital markets, quantitative finance, and inclusive finance. The initiatives combine academic programmes, Indian market data, practitioner engagement and field evidence.

Corporate and philanthropic partners enable different parts of this work.

FINANCIAL SCHOLARSHIP AND TALENT

Motilal Oswal Centre for Capital Markets (MOCCM), established with generous contribution from **Motilal Foundation**, is creating an ecosystem for financial scholarship, education, and engagement with regulators and practitioners.

Three programmes are being developed: a PhD in Financial Markets, a 36-credit executive postgraduate diploma, and an undergraduate minor. Together, they create an academic pathway from early exposure to advanced research in financial systems, regulation, and market innovation.

The research agenda spans quantitative finance, market microstructure, financial stability, digital assets, FinTech, RegTech, and artificial intelligence in finance.



Engagement with the Reserve Bank of India, the Securities and Exchange Board of India, BSE and the Multi Commodity Exchange is connecting academic inquiry with market and regulatory questions. Lectures and the FinNext symposium are convening researchers, practitioners, and policymakers around the future of finance.

The Black-Box Signal Hunt brought this engagement to students: 144 teams developed quantitative investment strategies and presented their work to an industry jury.



MODELS FOR INDIAN MARKETS



IIT Bombay–Citadel Securities Quantitative Research Lab, established with generous contribution from **Citadel Securities**, is developing tools grounded in Indian market data. Hosted at the Shailesh J. Mehta School of Management, it brings together faculty members across derivatives pricing, market microstructure, volatility, risk, and investor behaviour.

Projects are under way, including neural methods for complex derivatives, India-specific measures of order-flow toxicity, Nifty volatility forecasting, and research on social media and Indian initial public offerings. The common starting point is Indian market data and features.

The Lab has created an NSE100 limit-order-book reconstruction pipeline covering 44.6 million order records and 2.5 million trade records across 100 symbols. It has also tested an initial neural solver for derivatives pricing, trained forecasting models on 20 years of Nifty data, and recruited its first PhD scholar and postdoctoral researcher.

INNOVATION FOR INCLUSIVE FINANCE

With the generous contribution of **Bank of America Continuum India Private Limited**, **Department of Economics Innovation Lab (DoEIL)** approaches finance from the perspective of inclusion, MSME finance, digital transformation, climate finance and the use of data and artificial intelligence in financial systems.

Research projects have been initiated.
A roundtable, symposium, and advanced-econometrics workshop are building connections across academia, policy, and industry, while high-performance computing and secure data systems support large-scale analysis.

The work is intended to identify whether barriers to formal finance arise from information, documentation, product design, institutional process, or trust.

The initiatives create several routes into financial research, from undergraduate exposure and applied challenges to doctoral study, market modelling and policy-relevant evidence. It also gives students, researchers, and practitioners different points of engagement with the questions shaping Indian financial markets.



SUSTAINABILITY AND ENERGY

From Transition to Stewardship

Sustainability is integral to all that we do, guiding responsible energy use, resource conservation, and collective efforts towards a sustainable future. An energy system must remain secure while becoming cleaner. A village must conserve groundwater while protecting livelihoods. A rural home must remain affordable while offering thermal comfort, sanitation, clean energy, and reliable water. A road must endure years of use while reducing its dependence on carbon-intensive materials.

IIT Bombay is addressing these challenges at very different scales, from national energy systems and industrial infrastructure to individual farms, homes, and enterprises. The common thread is implementation: research must work in an industrial plant, on a campus, across an aquifer, or in the hands of a small producer.

ENERGY TRANSITION AND LIVING LABORATORIES

Green Energy and Sustainability Research Hub at IIT Bombay (GESH-IITB) brings academia, industry, government, and civil society together across clean energy, circular systems, climate resilience, sustainable infrastructure, and manufacturing. Its distinctive feature is the use of the campus as a living laboratory.

GESH has supported 17 early-stage projects, four translational projects, and six Living Lab projects, producing five technologies, 11 publications, five patent filings, and four emerging start-ups. The Hub also delivered 300+ hours of training to 250+ industry professionals and engaged 125 Living Lab fellows and volunteers.



An affordable solar-desalination system has produced up to 18 litres of freshwater per square metre a day at nearly one-third the cost of conventional reverse osmosis and has moved into pilot deployment in the Rann of Kutch. Other work includes climate-smart agricultural water management, the Aquasys water-monitoring platform, and a flood-resilience framework transferred to National Remote Sensing Centre.

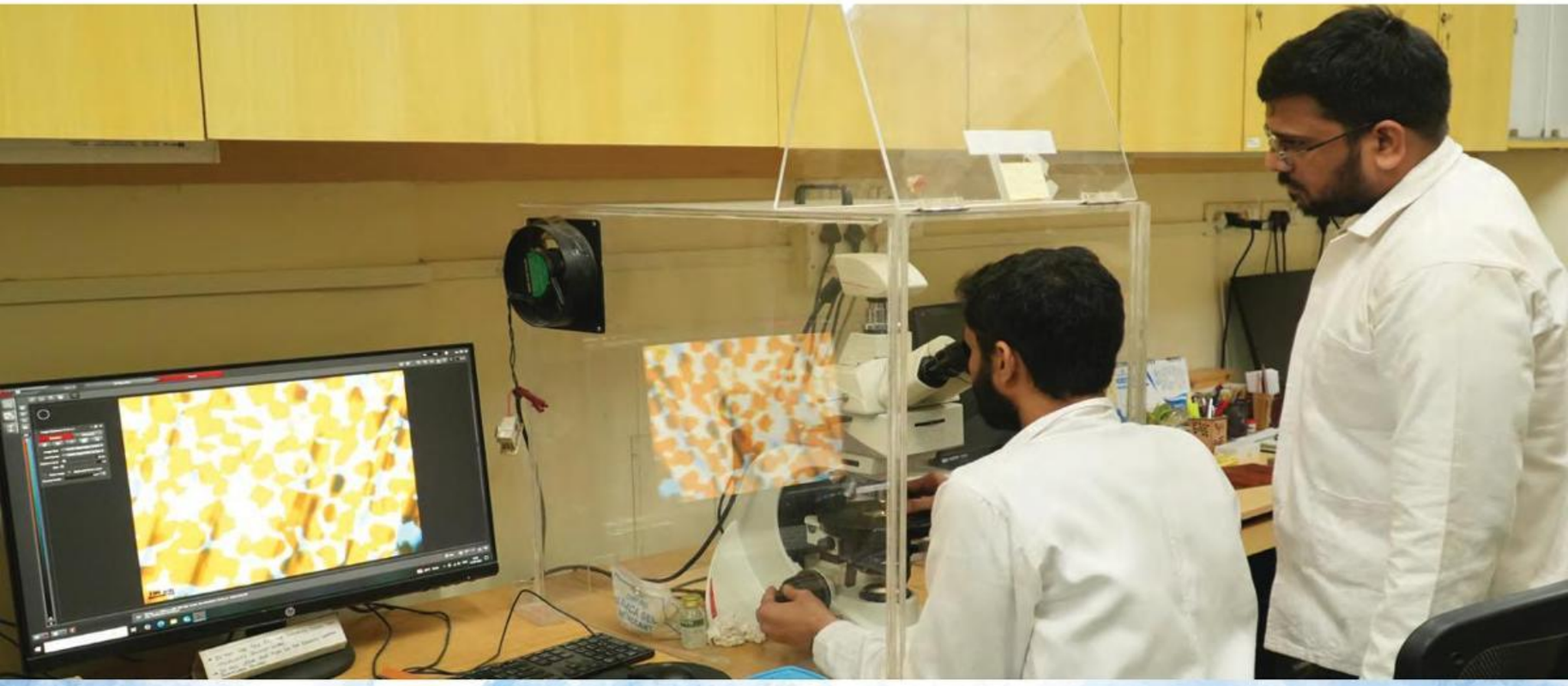
On campus, a biomass-gasification system at the staff canteen converts fallen leaves into cooking fuel. The pilot has reduced liquefied petroleum gas consumption by 40–50%, achieved efficiency of nearly 60% and cut approximately eight tonnes of carbon dioxide emissions annually. The technology has been licensed for scale-up. The value of the living-laboratory model lies in observing how a technology performs over time, how users respond, and what must change before wider deployment.

Centre of Excellence in Oil, Gas and Energy (CoEOGE) brings researchers together with industry partners across exploration, future-ready refineries, biofuels, water management, pipeline surveillance, battery storage, hydrogen technologies, and carbon management.

More than 110 faculty members from 17 departments are engaged with the Centre. During 2025, more than 26 mission-mode projects were under way and 15 new initiatives were launched. The Bridge-to-Gap programme adds a mechanism for helping translational research progress towards field deployment.

Drill-site wastewater systems are undergoing field testing, pipeline-inspection software has been benchmarked against global standards, and refinery anomaly-detection and Internet of Things-enabled monitoring tools are being developed around operating needs. Research is also advancing in batteries and carbon dioxide valorisation.

More than 1,500 industry professionals have been trained through 50 programmes, including initiatives with the Ministry of Petroleum and Natural Gas and leading public sector undertakings.



WATER, HOUSING AND COMMUNITY STEWARDSHIP

MAHA–MARVI, a partnership involving the ICICI Foundation for Inclusive Growth, IIT Bombay and Western Sydney University, is placing groundwater knowledge in the hands of rural communities. In the Sina sub-catchment of the Upper Bhima basin in Dharashiv, local residents have been trained as Bhujal Jankaars, or groundwater-informed citizen scientists, using simplified instruments to monitor water levels and aquifer behaviour.

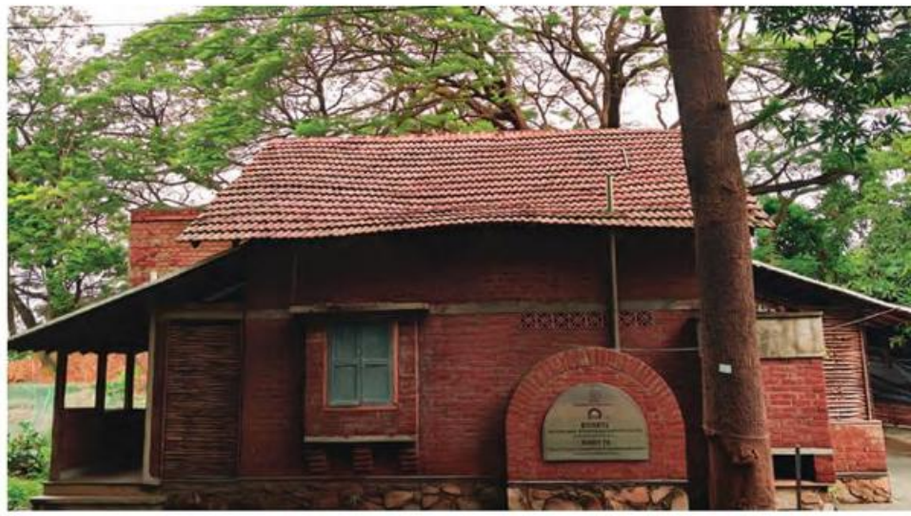
Participatory mapping turns measurements into shared knowledge. Villages can prepare annual water budgets, compare likely extraction with natural recharge, and make more informed choices about crops and irrigation. The Sina sub-catchment also functions as a living laboratory in which farmers and researchers can develop approaches suited to Maharashtra's geography.

The initiative is helping communities participate in generating and interpreting the information on which decisions are based. The next stage seeks to extend the model across Maharashtra, link groundwater information with livelihood decisions and develop a framework for recognising Water-Secure Villages.

HEARTS'74—Habitat for Everyone: Affordable, Resilient, Transformative, and Sustainable—is an alumni-led legacy initiative of IIT Bombay's Class of 1974. It is developing modular rural homes that combine climate resilience, thermal comfort, sanitation, clean energy, and water within government affordability benchmarks.

A full-scale prototype was unveiled during the Class of 1974 Golden Jubilee Reunion in January 2025 and now serves as a testbed for materials, thermal performance, and cost.

Sites are being identified for about 10 pilot homes across different climates and terrains, while three to four adaptable designs are being developed for standardised deployment. The long-term ambition is to work with government programmes and enable more than 100,000 climate-resilient homes over the next decade, subject to learning from the pilots.



GREENER MATERIALS AND LAST-MILE TECHNOLOGY

The **Roadstar Project** examines both the construction and maintenance of roads. Its geopolymer-concrete work uses fly ash and ground-granulated blast-furnace slag to reduce dependence on conventional cement. Twenty-two ambient-cured mixes were evaluated, eliminating the need for energy-intensive heat curing.

Replacing 30% of fly ash with slag enabled proper setting and strength development, while most mixes with sodium-oxide content of 7% or more exceeded 40 megapascals after 28 days, meeting IRC:44 requirements. The material achieved around 80% of its 28-day strength within the first week. A study on microsurfacing shows how better material selection can extend the performance of flexible roads.

The work tests environmental and engineering performance together. A lower-carbon material must still meet setting, strength, and durability requirements; the Roadstar results provide evidence on how industrial by-products and preventive maintenance can contribute to road infrastructure.

Generously contributed by **Coal India Limited, the Centre for Technology Alternatives for Rural Areas (C-TARA)** and the **Rural Technology Action Group (RuTAG)** are helping move technologies from pilot projects to sustained, real-world use. Seventeen technologies have reached more than 50,000 people across sectors including livelihoods, agriculture, clean energy, healthcare and digital inclusion.

MarketMirchi has connected around 40,000 rural users with markets through 58 training sessions, while more than 2,500 Subjee Coolers preserve produce for three to five days without electricity. Solar hydro-distillers, multi-purpose processors installed across four states, a portable digital stethoscope, and a solar food cart address other livelihood and service gaps.

In Hingna taluka, Nagpur, a 10-member women's self-help group used a solar hydro-distiller to create a micro-enterprise producing rose water and Shikakai-based herbal shampoo. At the SARAS Exhibition in January 2026, it generated a profit of ₹60,000 in one week. The example captures the full translation journey: a clean-energy technology became a productive asset and a source of income.





POLICY AND TECHNOLOGY

From Evidence to Action

Technology changes what societies can do. Policy determines how those possibilities are governed, who can benefit from them and whether they improve systems in practice. At IIT Bombay, the two are being developed as connected capabilities.

The work spans public policy, digital governance, logistics, advanced materials, space engineering, and technologies designed for resource-constrained communities.



POLICY WITH PURPOSE

Generously contributed by **Mr. Ashank Desai**, **Ashank Desai Centre for Policy Studies (ADCPS)** works at the intersection of academia, government, industry and communities. Its research spans digital governance and artificial-intelligence policy, social policy, urban and regional development, mobility, water and sanitation, energy transitions, and climate resilience.

During 2025–26, 71 doctoral scholars were engaged in advanced policy research. Graduates have moved into government institutions, academia, and international organisations. The Centre delivered 20 talks and lectures, released six policy briefs, and launched a newsletter - “The Polilogue Quarterly”.

A specialised programme on the Governance of Digital Technologies addressed AI systems, digital platforms, and emerging technologies. The Centre is also preparing an electronic postgraduate diploma in Digital Governance for professionals working across policy, technology, and public administration.

IIT Bombay Living Lab in Alleppey demonstrates how community-led policymaking can work in practice. Over eight years, it has engaged with water management, waste systems, and flood resilience, treating community participation as part of problem definition and solution design.

Students gain field experience, while researchers can observe why an intervention is accepted, resisted or adapted. Climate Resilient Coastal Cities Project extended this approach through 12 city-level studies, and the Centre's work with the Department of Science and Technology connects policy research with emerging technology sectors.



INTELLIGENCE IN MOTION

IIT Bombay–FedEx Center for Advanced Logistics and Focused Analytics (ALFA) connects academic research with the operational complexity of modern supply chains. Its work combines artificial intelligence, machine learning, advanced analytics, and operations research across demand forecasting, routing, multimodal logistics, warehouse systems and capacity planning.

The Centre focuses on people as central to the logistics system, studying fatigue, workload, and cognitive performance. Its interdisciplinary ecosystem includes 25 faculty members and 25 fellowships across PhD and MTech programmes.

12 research projects are underway. Executive education in AI-driven supply-chain analytics has begun. Seven student teams have received pre-incubation support through mentoring, prototyping assistance, and micro-grants.

Projects include low-cost autonomous retrofits for warehouse equipment, sensor-based cold-chain monitoring, reverse-logistics models, and systems for worker safety. The Centre's research has also reached international forums including NeurIPS 2025 and COMSNETS 2026.

The FedEx partnership gives researchers sustained exposure to operating conditions, allowing academic methods to be tested against real constraints.



FROM MOLECULES TO INDUSTRIAL SYSTEMS



Gogri Hub for Membranes Research, a unit of TRYST, was established with a generous contribution from IIT Bombay alumni **Mr. Renil Gogri, Mr. Mirik Gogri,** and the **Gogri family.**

It addresses a persistent translational gap: promising membrane research often remains at laboratory scale because of a lack of specialised facilities for industrial validation.

The Hub's work spans water purification and desalination, electrolysis and energy systems, pharmaceutical-solvent recovery, and industrial filtration. The Hub is developing nanoparticle-embedded membranes for alkaline water electrolysis, with the objective of improving the efficiency and affordability of green-hydrogen production.

The facility became operationally ready during 2025–26, adding heavy-duty experimental modules for evaluating performance and durability under industrial conditions. Its location within IIT Bombay Research Park brings researchers and industry partners together.

The next phase is expected to include industry-partnered pilots and development of the Hub into a broader national testing resource.

ENGINEERING CAPABILITY AND INCLUSIVE IMPACT

The Space Technology Innovation Lab (SITARE), established with a contribution from IIT Bombay alumnus **Mr. Deepak Satwalekar,** is being developed as a student-centred platform for satellite and space technologies.

Its multi-semester training framework covers conceptual design, simulation, fabrication, integration, testing, and validation.

SITARE-1, a compact payload being developed through SITARE Lab, aims to demonstrate pulsar-based navigation for future deep-space missions. Students are working on payload engineering, detector systems, electronics integration, fabrication, and validation, while also contributing to work related to gamma-ray-burst detection and space instrumentation.

Laboratory validation of detector systems and electronics has been completed. Planned testing capability, including a Thermovac chamber, will allow hardware to be evaluated under simulated environmental conditions.





Tata Centre for Technology and Design (TCTD) addresses the needs of resource-constrained communities. Its portfolio spans agriculture and food, education, energy, healthcare, water, waste management, and housing, with 119 funded projects and 51 intellectual-property outputs.

Technologies include **Gynaecam** for cervical-cancer screening, **Impulse Oscillometry Screening** for on-the-spot lung assessment, and a smartphone-based portable digital microscope.

Other work connects like sustainability with production and enterprise: jaggery-manufacturing systems.

ENTREPRENEURSHIP AND INNOVATION

Where Ideas Find Their Wings

Every breakthrough begins with a moment of possibility, or a question no one has answered. IIT Bombay has built an ecosystem that helps such ideas move from experimentation to prototypes, ventures, and public solutions.

Students take up design and making courses from their first year. Early-stage founders receive mentoring, grants, and space to test assumptions. Faculty innovators gain structured support to move intellectual property towards commercial ventures.

BUILDING VENTURE PATHWAYS

Established with a generous contribution from IIT Bombay alumnus **Mr. Bharat Desai** and his wife, **Ms. Neerja Sethi**, the **Desai Sethi School of Entrepreneurship (DSSE)** embeds entrepreneurship within the academic and research culture of IIT Bombay.

During 2025, it trained 1,411 students, mentored 199 venture teams and enabled 16 start-ups.

The flagship **IDEAS Programme** received 292 applications; 139 teams progressed to Level 1, 60 advanced to Level 2, and 14 ventures were channelled to **Society for Innovation and Entrepreneurship (SINE)** for incubation support.



More than 10,000 learners also participated through online and executive-education programmes.

The new **Desai Sethi School of Entrepreneurship** building, spanning approximately 1.2 lakh square feet, provides dedicated space for teaching, mentoring, prototyping, and interaction with industry and investors.

Groww Innovation Space and **IITB–Groww INV.ENT Program**, established with Groww Invest Tech Private Limited, strengthen the early stages of the journey. The programme supports work across artificial intelligence, climate and sustainability, healthcare, energy systems, and financial inclusion.

A proof-of-concept track helps teams validate ideas and build initial prototypes, while the Innovation Grand Challenge gives selected projects deeper, milestone-based support. Students learn problem framing, user validation, resource planning, and execution. Integration with DSSE and SINE creates a route from academic experimentation towards incubation and venture formation.

Project Titanium supports the transition of faculty research into enterprise. Hosted at SINE with generous contributions from IIT Bombay alumni **Mr. Rajesh Jain, Mr. Ramesh Mangaleswaran,** and **Mr. Sharad Sanghi,** it combines grants, entrepreneur matchmaking, commercial mentoring, and guidance on enterprise readiness.

During 2025–26, Project Titanium engaged 42 teams from 17 departments. Eleven teams have received grants. More than 100 prospective business co-founders were met, leading to seven successful matches.

A faculty-led electric-vehicle-charging venture secured a Rs. 2 Crore investment term sheet, while AI-based radiology technologies moved into regulatory validation. Other supported work spans reconnaissance robotics, green-hydrogen membranes, perovskite solar tandems, and analogue computing for low-power AI.



HDFC ERGO–IIT Bombay Innovation Lab helps academic research move towards deployment across climate risk, healthcare, wellbeing, insurance, and societal resilience.

MumbaiFlood.in combines weather modelling, radar data, citizen reports, and social-media analysis to provide 15-minute flood nowcasts. The system illustrates how an academic model can become part of city preparedness, giving citizens and public institutions more localised information during extreme rainfall.

The **Panchkosha** wellbeing platform, combining approaches from Yoga, Ayurveda, and cognitive behavioural therapy, has reached more than 1.3 Lakh users. The Lab is also supporting a needle-free Shock-Wave Syringe and a non-invasive system for oral-cancer screening.





IIT Bombay–Honeywell Centre of Excellence for Future Skills and Innovation, launched in December 2025 with support from Honeywell Hometown Solutions India Foundation, is widening access to sustainability education and innovation. Its ambition is to train more than 100,000 undergraduate students by 2030.

A 15-course interdisciplinary curriculum is being developed across resources, emissions, water and sanitation, waste management, decarbonisation, green finance, and sustainable development. Applied research has begun in natural-refrigerant cooling, pesticide contamination, and water and sanitation for small towns.

Workshops across Maharashtra attracted ~1,850 registrations and around 860 participants. More than 130 teams submitted ideas through the Sustainability Innovation Challenge, including smart bus stops that absorb carbon dioxide and methane, AI-enabled carbon-credit platforms for farmers, biodegradable footwear, and new road technologies. The model connects curriculum, applied research, mentorship, and future incubation.

LEARNING, MAKING AND INSTITUTIONAL CAPACITY

Nearly 1,400 undergraduates each year use facilities at the **Deepak and Maya Satwalekar and 1980 Design and Making Lab.** Through MS 101, a joint initiative of the Departments of Mechanical Engineering and Electrical Engineering, students work across mechanical design, computer-aided design, circuit theory, printed circuit boards, and embedded systems.

The facility is equipped with more than 250 workstations, 3D printers, laser cutters, soldering stations and workshop equipment. Materials are provided without additional cost, making hands-on engineering part of the common undergraduate experience rather than a specialist privilege.

The year's quadcopter project took first-year students through a complete engineering cycle. Teams designed and fabricated the frame, built a custom printed-circuit-board joystick, integrated the electronics and demonstrated flight, giving students direct experience of design, fabrication and systems integration.





The Design-and-Making Labs are a part of a wider ecosystem that includes **Kadayam S. Srinivasan MicroFactory, Harivallabh Nagar MicroFactory, Tinkerers' Lab** and other design-and-making facilities now housed under DSSE.

Innovation also depends on the institution's ability to execute. Generously contributed by IIT Bombay alumnus **Mr. Rajesh Mashruwala**, Leadership Capacity Building Initiative seeks to strengthen professional leadership across academic and administrative functions.

Its focus includes strategic execution, external partnerships, outreach and revenue capability, and professional functions including human resources, legal, information technology, faculty services, and student services.

SEMICONDUCTORS

The Technology That Powers Tomorrow

Almost everything that shapes modern life has something tiny at its heart: a chip in a phone, a processor in a vehicle, the intelligence inside a medical device, and the systems that power factories and communication networks.

Semiconductor capability requires more than fabrication capacity. It depends on design expertise, specialised infrastructure, research, and a deep talent pipeline spanning the full chip-development cycle.

IIT Bombay is developing these elements at several levels. Students are gaining experience across the chip-development cycle, new infrastructure is extending work into advanced packaging, and industry-supported programmes are connecting students and faculty with companies, policymakers, and investors.



DESIGNING SILICON FROM SCRATCH

Generously contributed by IIT Bombay alumnus **Mr. Jitendra Mohan,** and **Ms. Swapna Samant**, **JM–SS Integrated Circuit Design and Test Lab** brings the chip-development lifecycle into the academic curriculum. Students move from transistor-level design and system architecture to physical design, verification, fabrication workflows, testing, and bench-level characterisation.

During its inaugural pilot phase, ~270 B.Tech., Dual Degree, M.Tech., and PhD students were trained through the revamped digital integrated-circuit design curriculum, and around 130 progressed to intensive hands-on laboratories.



The Lab established a fully student-driven hardware-software development stack and a collaborative cloud-based platform for chip layout, physical verification, and management of reusable intellectual-property blocks under commercial foundry sign-off protocols.

The flagship project challenged students to design and validate a complete RISC-V System-on-Chip. Teams developed custom hardware architectures, memory controllers, communication buses, firmware, linker scripts, and bare-metal boot code, ultimately running a functional micro-Linux kernel on their hardware.

The system underwent hardware-in-the-loop validation on FPGA platforms, and the strongest architectures were integrated into a production layout.

The student-designed chip completed the final Design Rule Check and Layout Versus Schematic verification required ahead of fabrication.

Preparations were completed for the Lab's first silicon tapeout, using the TSMC 65-nanometre process.

The next stage will involve chip bring-up, electrical characterisation and performance validation.

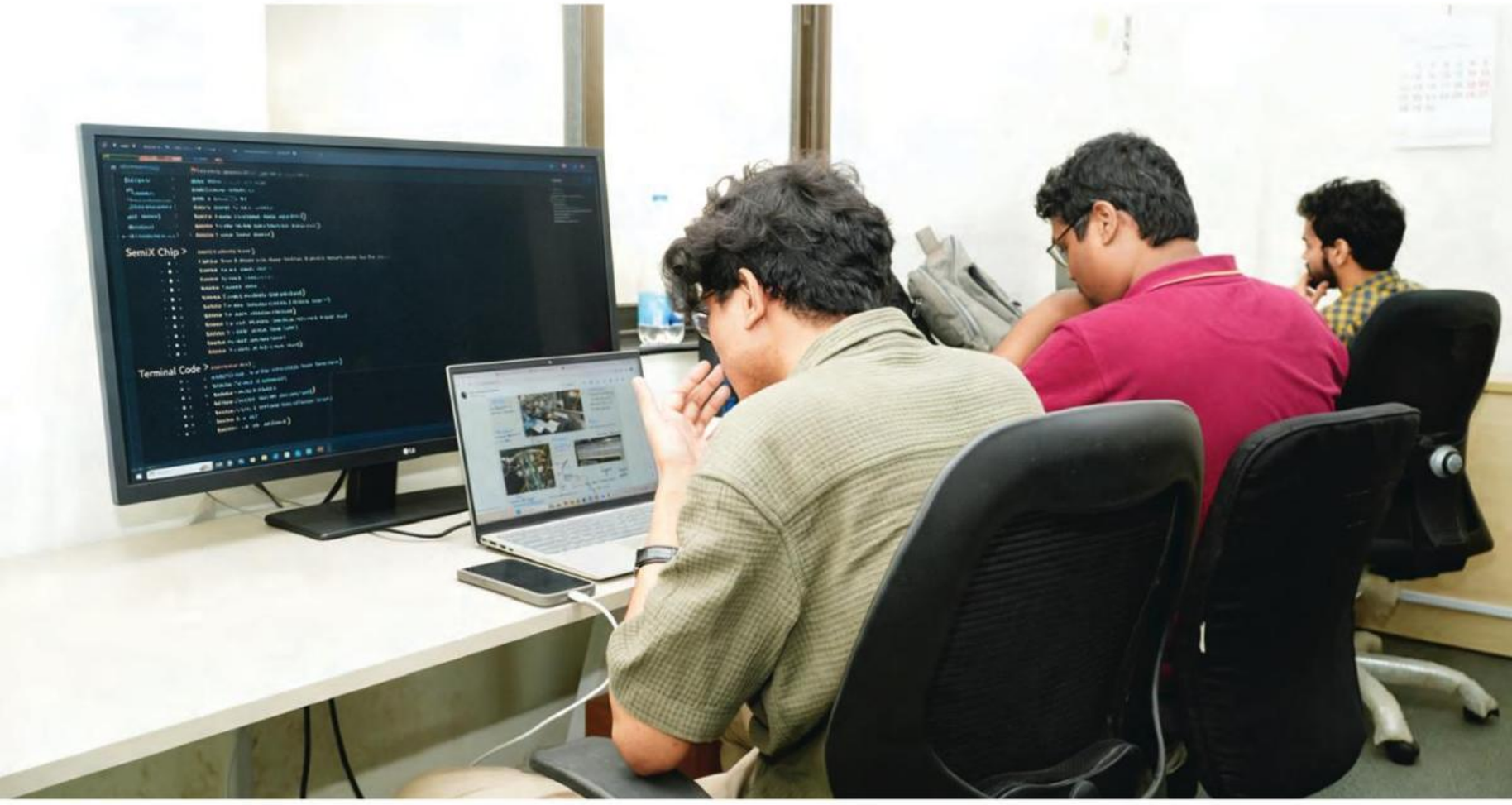
RESEARCH INFRASTRUCTURE AND THE TALENT PIPELINE

Mr. Nandan Nilekani's gift is helping establish Semiconductor Chiplet Packaging Laboratory, adding research infrastructure in an area central to India's semiconductor ambitions. The facility complements the design-to-tapeout experience of JM–SS Lab by extending IIT Bombay's capability across another stage of the technology chain.

SemiX broadens the ecosystem further through talent development, faculty capability, and industry engagement. Contributed by the **OPPO India**, four programmes conducted between January and June 2026 reached around 180 participants across students, faculty, industry, government, and the investment community.

India Fabless Semiconductor Design Acceleration Workshop, conducted with the India Cellular and Electronics Association, brought around 70 participants from government, industry, academia, and investment together around product opportunities, intellectual-property creation, capital, and design infrastructure.

A workshop with Innatera gave approximately 50 students hands-on exposure to neuromorphic edge artificial intelligence and RISC-V systems through Spiking Neural Networks and energy-efficient edge computing.



Train-the-Trainer Semiconductor Packaging Workshop at COEP Pune developed the capability of around 20 faculty members in advanced packaging, heterogeneous integration, and chiplet architectures. The session conducted through Semiconductor Student Alliance connected around 40 students with Professor Juzer Vasi on careers in microelectronics and photovoltaics.

One programme takes students into emerging technical fields; another strengthens faculty capability; another convenes the fabless ecosystem; and another provides professional mentorship. Together, JM–SS Lab, Semiconductor Chiplet Packaging Laboratory and SemiX work across education, design, verification, fabrication, packaging, and industry connection.



INFRASTRUCTURE AND CAMPUS DEVELOPMENT

Building Capacity for What Comes Next

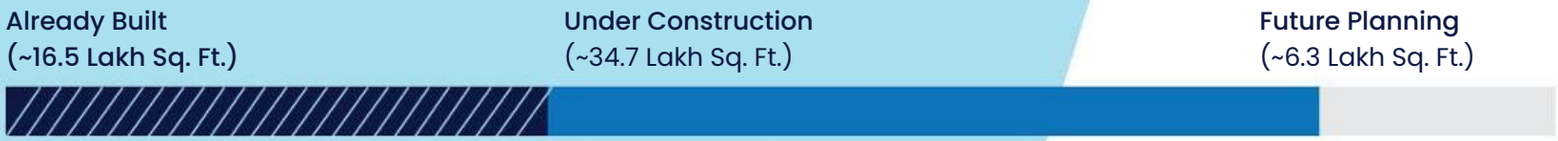
A campus is never made only of buildings. It is made of the lives that unfold within them: the first night away from home, the friendships that last for decades, the laboratory where a question becomes a discovery, and the shared space where an unexpected conversation becomes an idea.

As IIT Bombay's student and research community continues to grow, the Institute's Infrastructure needs to grow to match the same. The Infrastructure programme at Institute combines the creation of new residential, academic, and research infrastructure with the renewal of legacy spaces for a new generation of students, faculty members, and researchers.

Infrastructure Development - The Journey

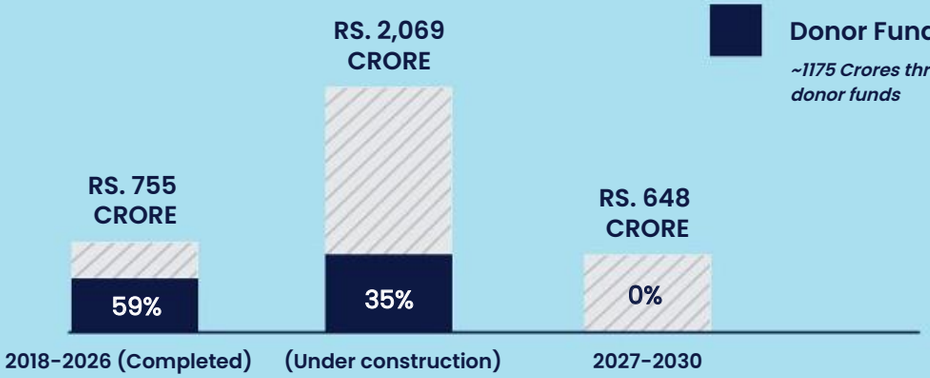
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Infrastructure Investment



5.75 M Sq. Ft. Expansion by 2030

Further growth in the pipeline



INFRASTRUCTURE SPOTLIGHT

A campus grows the way a community does: by making room for what comes next.

Since 2015, IIT Bombay has been expanding with that purpose. By 2030, it will add 57.5 lakh sq. ft. of space through an infrastructure investment of about Rs. 3,500 crore. Around 16.5 lakh sq. ft. is already built, 34.7 lakh sq. ft. is under construction, and 6.3 lakh sq. ft. is in future planning.

Alumni, corporates, and philanthropic partners have committed Rs. 1,175 crore—about one-third of this investment—across hostels, academic buildings, laboratories, research facilities, and faculty housing, enabling the Institute to build at a scale and pace commensurate with its academic ambitions.

LIVING AND BELONGING

The story is told most clearly in student housing. In 2005, a student shared the campus with about 5,000 peers; today, nearly 14,000 students call it home. Student numbers grew faster than hostel capacity, and the deficit reached about 5,000 beds. The Institute has since delivered about 3,500 of them, with donor contributions covering 48% of the funding.

Hostel 5 was among the first major restorations, and it showed how an existing hostel could be reimagined with alumni support. It became the template for the historic Evergreen Complex, an alumni-led project that created 1,100+ beds across three hostels. The Institute has also rebuilt Hostels 17 and 19.

Hostel 4 was completed and inaugurated during 2025–26. It offers 1,150 single-occupancy rooms with natural light and ventilation, along with accessible rooms, a modern dining hall, gymnasium, laundromat, and community spaces. Together, these create a space for shared life and community building. Hostel 4 has received a generous contribution from the **Chellaram Foundation**, and its dining hall has been generously contributed by **Dr. Pramod Chaudhari.**

The new building gives students personal space while retaining the common environments through which independence, peer support, and lasting friendships develop.

The next chapter is already taking shape. Hostel 6 is in the architectural planning and technical assessment stage. Its redevelopment, made possible by the generous anchor contributions of alumni **Mr. Nakul Aggarwal** and **Mr. Ritesh Arora**, along with the generous contribution of **Mr. Ramesh Mangaleswaran**, will improve room layouts, privacy, common spaces, dining, and wellness facilities. A further 3,200 beds are in the pipeline. Hostels 6 and 9 will begin reconstruction early next year, adding 2,000 beds and fully meeting the Institute's student housing needs.



Hostel 9, generously contributed by IIT Bombay alumnus **Mr. Jitendra Mohan** and **Ms. Swapna Samant**, entered active design development during the year. Its planning combines privacy with community life, sustainable construction, and universal-design principles. Site investigations and topographical surveys have been completed.

The combined additional rooms with accessibility, sustainability, and contemporary amenities, will preserve the community life that remains central to the student experience.



ENTERPRISE AND ACADEMIC CONVERGENCE

The Desai Sethi School of Entrepreneurship building, A91 Eco Hub, and **New Student Activity Centre** together account for 4.54 lakh square feet already built.

A further 27.3 lakh square feet is under construction or in design, including Lakhamraju Building, Motilal Oswal Knowledge Centre, Wadhwani Hub, the renewed Nandan Nilekani Main Building, and the Green Energy and Sustainability Research Hub building.

The projected 75% expansion in academic space by the end of the decade is a future estimate.

The new building of Desai Sethi School of Entrepreneurship, inaugurated in January 2025, gives IIT Bombay's entrepreneurship ecosystem a home for teaching, mentoring, prototyping, and pre-incubation. Its value lies in the community it can bring together: students, researchers, mentors, investors, industry partners, and incubators.



Motilal Oswal Knowledge Centre, or **Academic Block 1,** will bring together **Motilal Oswal Centre for Capital Markets**, the Department of Metallurgical Engineering and Materials Science, and **Ashank Desai Centre for Policy Studies**.

Academic Block 2, Lakhamraju Building, will bring together **Centre for Machine Intelligence and Data Science, SBI Foundation Hub for Data Science and Analytics, IIT Bombay–FedEx Center for Advanced Logistics and Focused Analytics (FedEx-ALFA),** the Department of Industrial Engineering and Operations Research, and related computational disciplines.



Lakhamraju Building will provide high-performance computing, predictive-modelling, and logistics-simulation infrastructure. Flexible workspaces and seminar areas will bring researchers, students, and corporate partners into sustained contact.



NEW CAPACITY FOR SCIENCE AND TRANSLATION

Academic Block 3 will house the Department of Earth Sciences and the Department of Civil Engineering, creating specialised capacity from geological analysis to heavy-duty structural testing.



Academic Block 4 will house **Green Energy and Sustainability Research Hub**, new undergraduate laboratories for Chemistry and Physics, and facilities supporting semiconductor research. It will connect foundational scientific education with advanced work in clean energy, sustainable materials, and emerging technologies. Both projects entered active design and statutory approvals during 2025–26.



Academic Science Building 1 forms part of the same expansion of laboratory-intensive science infrastructure. **Academic Science Building 2, Wadhwani Hub,** is being developed as an integrated home for life sciences, digital health, and translational research.

Wadhwani Hub will house **Wadhwani Innovation Centre, Koita Centre for Digital Health, Alkem Centre for Advanced Research and Development of Applied Immuno-Therapeutics and Regenerative Medicines,** and an on-site **Pre-clinical Facility.** Its purpose is to shorten the time taken between biological discovery, computation, pre-clinical validation, and healthcare application.



Reinforced-concrete work reached the tenth floor during the year. Interior fit-outs and equipment planning are underway. The building is being conceived not as a set of separate laboratories, but as a translational environment in which digital health, bioengineering, pre-clinical capability, and entrepreneurship can reinforce one another.

Advance Research Lab and Research Hub are planned to add 2.74 lakh square feet of specialised research space.

A TRANSFORMATIVE PHILANTHROPIC PARTNERSHIP

Mr. Nandan Nilekani's support connects heritage conservation, research infrastructure, faculty community and student life within one philanthropic programme.

Nandan Nilekani Main Building is undergoing structural strengthening, roof rehabilitation, façade restoration, improved lighting and public-space upgrades. **A Wall of Achievements** in the first-floor lobby will celebrate IIT Bombay's contributions to education, research, innovation and nation-building, allowing an iconic building to carry its history into another generation.



Advance Research Lab is envisioned as an interdisciplinary facility with advanced laboratories, shared scientific infrastructure, and collaborative space. Concept design has been completed and the project team is in place; the facility's research outcomes remain to be realised in the future.



The **New Student Activity Centre**, made possible by the generous contribution of the Class of 2000, adds dedicated space for student life to the campus. Within it, the Studio will support student clubs, cultural programmes, maker activities, media production, collaborative design, and interdisciplinary experimentation.

These activities are central to how students discover interests, create communities and work with peers from other disciplines.





New Faculty Housing will add ~150 apartments, providing residential capacity for faculty members.

Tower 1 of the Faculty Housing Complex is planned to provide residences, childcare, and common facilities. It forms part of IIT Bombay's wider effort to expand faculty residential capacity.



LEGACY

Shared Purpose Across Generations



For IIT Bombay alumni, a reunion brings a shared past into the present. A legacy project gives that connection an ongoing purpose. A batch identifies a purpose, brings its members together, and helps create an asset or programme that becomes part of institutional life.

These initiatives have developed into a continuing tradition of collective giving across generations of alumni.

In 2025–26, 24 batches, spanning the Classes of 1963 to 2010, collectively contributed Rs. 25 crore through their Batch Legacy Projects, with pledges totalling Rs.66 crore for 2025–26.

Their support reaches across student development, faculty welfare, research, entrepreneurship, and campus life. The causes differ, but each expresses a continuing relationship between a batch and the Institute.

A SHARED CONNECTION TO CAMPUS

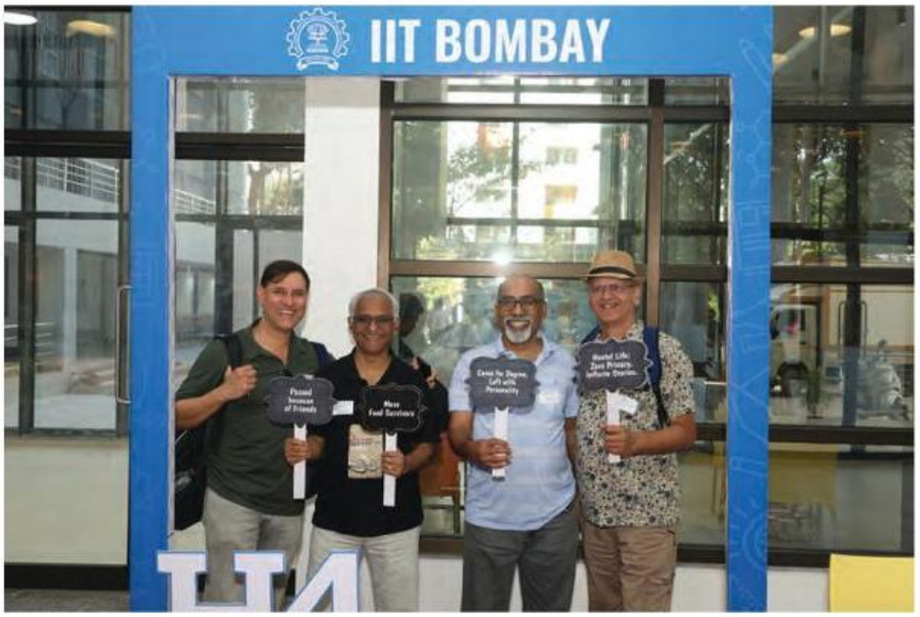
Project Evergreen is an alumni-led initiative, powered by 2,700 alumni donors from the Class of 1962 to the Class of 2024 and supported by over 25 corporate partners. Across Hostels 7, 8, and 21, this support has shaped everyday hostel life.

Student lounges, cafés, study spaces, and wellness facilities serve successive generations of students. Together, the three hostels offer 848 rooms and 1,127 beds, the largest student housing project in IIT Bombay's history.

It is also the first building on campus to earn Indian Green Building Council (IGBC) Gold certification, reflecting a commitment to sustainable infrastructure.

Batch priorities extend across the wider campus and into communities beyond it. The Class of 1993 has supported grey-water recycling and a lecture hall. The Class of 1976's chosen causes include the Alumni Centre, **CoE for Critical Minerals**, hostel infrastructure, financial aid, and faculty support. Through **HEARTS'74**—Habitat for Everyone: Affordable, Resilient, Transformative, and Sustainable, the Class of 1974 connects its legacy with climate-resilient rural housing as well as student accommodation.





The same attachment to campus is expressed through **Hostel Legacy,** which enables contributions towards redevelopment and upkeep of hostels. **Hostel 4,** remembered by generations as the "Madhouse", has entered a new phase through redevelopment supported by the alumni, including contributions towards rooms and wings. Renewal of **Hostels 6 and 9** similarly carries established hostel identities into residential environments designed for future students.

BACKING CURIOSITY AND ENTERPRISE

The Class of 1980 has supported hands-on learning through the **Class of 1980 Design and Making Lab,** alongside Kshitij Lawns, and other campus infrastructure. To mark its 45th reunion, the batch contributed towards equipment for IIT Bombay **Centre for Semiconductor Technologies (SemiX)**. Its legacy connects practical student learning with an expanding field of advanced research.

The Class of 1973 has backed **EV Power Train Lab,** a facility for interdisciplinary work on electric-vehicle powertrains, alongside recognition for faculty research.

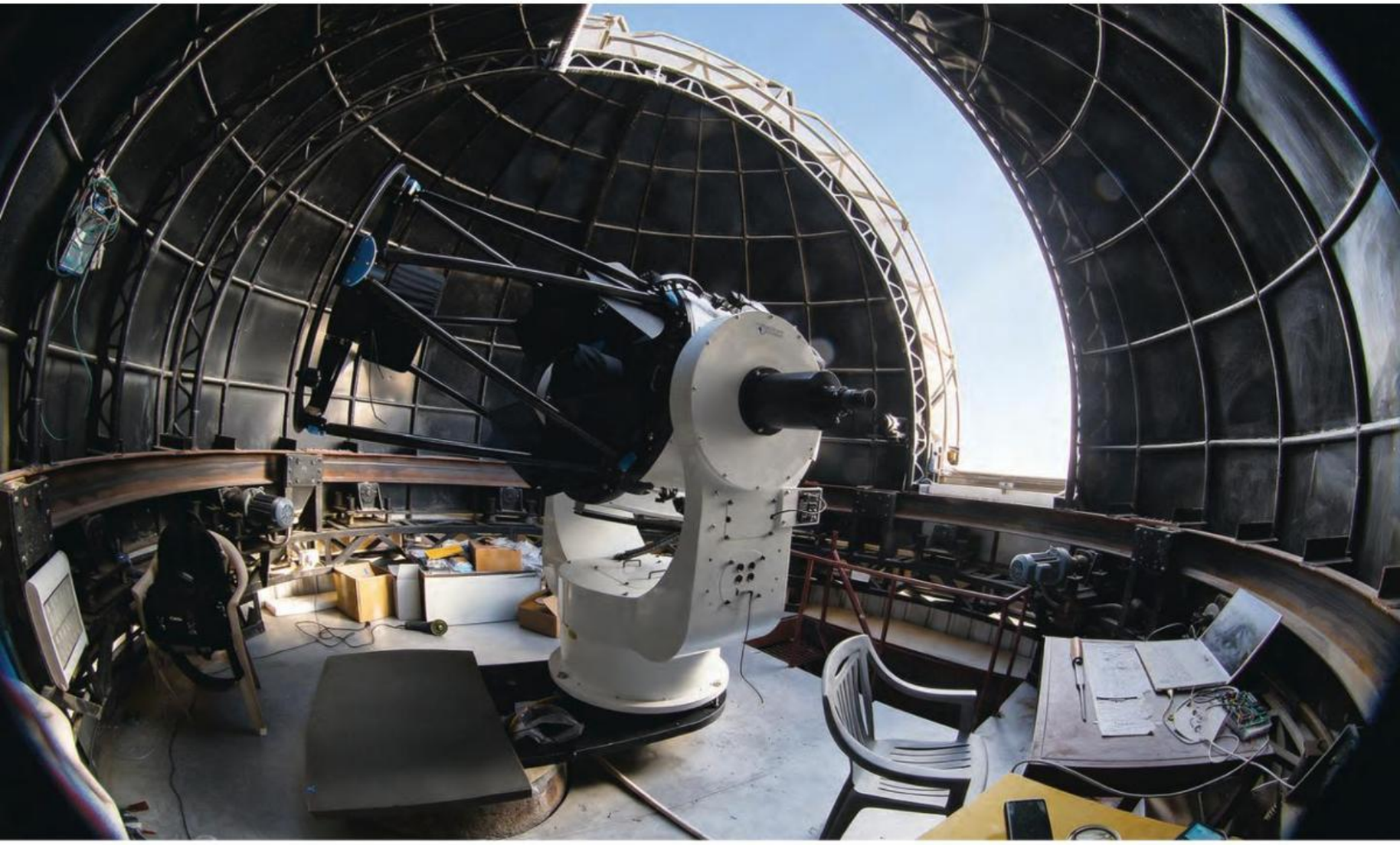




For the **Class of 1996,** support extends from student engineering to venture creation. The batch committed to the Student Technology Teams Endowment Fund and the SINE Endowment Fund. Through the **Society for Innovation and Entrepreneurship (SINE)**, the latter supports early-stage technology ventures with funding, mentoring, and incubation.

Curiosity-driven science offers another expression of legacy. The Class of 1994 has supported operations of **GROWTH-India Telescope** at Hanle, Ladakh, since 2020. This support has contributed to 22 refereed publications and nearly 100 discovery announcements.

Through batch commitment and collective action, alumni help IIT Bombay care for its community, expand opportunity, and carry knowledge forward. What begins with one person or one batch becomes part of the experience of those who follow.



STUDENT DEVELOPMENT

The Confidence to Learn, Explore and Grow

An IIT Bombay education is reflected in the knowledge students acquire, the interests they discover, and the confidence with which they pursue their ambitions. Financial support, wellbeing, mentoring, and opportunities for research all contribute to that experience, helping students participate fully in academic and campus life.

Alumni, foundations, and corporate partners help sustain this broader understanding of student development. Their engagement reaches from undergraduate education to doctoral research, supporting both academic achievement and personal growth. A scholarship gives a student greater freedom to concentrate on learning; a mentor encourages a new direction; a research opportunity allows curiosity to develop into a sustained academic interest.



OPPORTUNITY AND CONFIDENCE

Named Scholarships and Financial Aid Programme (FAP) support access to education while giving students greater confidence in planning their futures.

In 2025–26, alumni and supporters provided Rs. 14.34 crore through Named Scholarships, supporting 517 undergraduates.



For **Avani Jangir**, a childhood fascination with space developed into an Aerospace Engineering education at IIT Bombay. Scholarship support allowed her family to approach that education with reassurance. “We never had to think twice about how we would pay the fees,” she recalled. Her experience illustrates how assistance can give students the freedom to remain focused on their goals.

Financial Aid Programme adds continuity to this support through an honour-based, interest-free model. Beneficiaries repay assistance over time, allowing funds to support future students.



WELLBEING AS PART OF EDUCATION

Student development also includes the ability to understand oneself, build healthy relationships, support peers, and find a sense of purpose. **Student Flourishing Hub**, launched in collaboration with the Class of 1998 and supported by Class of 1997 and Class of 1999, built on earlier alumni-supported wellness initiatives supported by Class of 1986 and Class of 1992, brings these dimensions into the IIT Bombay experience. Its work connects personal resilience with a wider culture of care and participation.

Wellness Course was integrated into the first-year undergraduate curriculum . Peer-mentoring programmes also prepare students to listen with empathy and support one another.

Leadership development and alumni interaction add perspectives on responsibility, careers and personal direction. Here, alumni engagement contributes experience and mentorship alongside financial support.

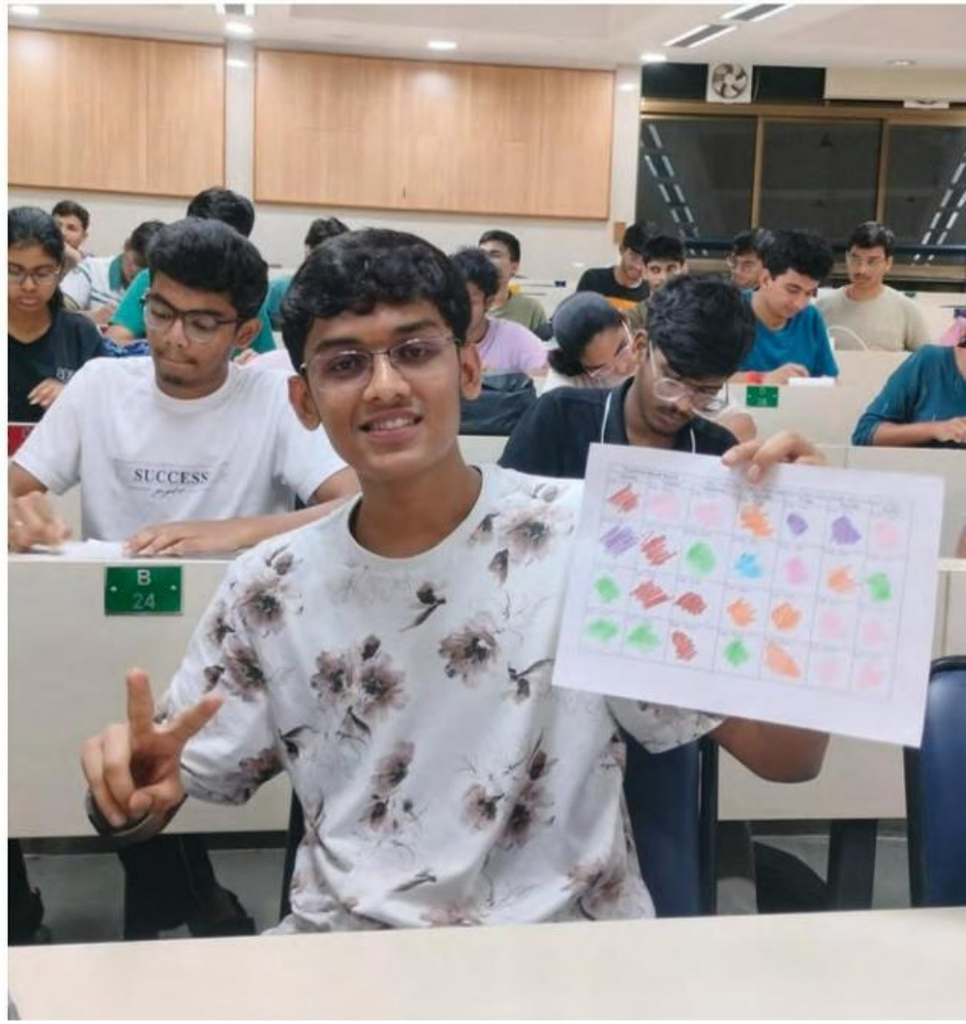


CURIOSITY, RESEARCH AND ACHIEVEMENT

Opportunities to undertake research give students a different relationship with knowledge: they begin to frame questions, investigate possibilities and contribute to the work of a wider academic community.

Alumni Dr. Vinaya Kapoor and Dr. Samir Kapoor support this progression through **Summer Program for Undergraduate Research in Sustainability (SPURS)** and **Accelerating Climate, Energy and Sustainability Solutions (ACCESS) Award**. SPURS introduces undergraduates to hands-on, faculty-mentored research, while ACCESS recognises interdisciplinary innovation addressing climate and sustainability challenges. Their contribution connects early academic exploration with a broader commitment to research that can serve society.

At postgraduate and doctoral levels, Fellowships combine financial assistance with opportunities to engage with industry and research communities. Supported by corporations, foundations, alumni, and philanthropists, the fellowships enable students to pursue research while developing academic and professional experience.





Naik and Rastogi Award for Excellence in PhD Research, instituted through the support of Mr. Sandeep Naik and Mr. Shantanu Rastogi, celebrates outstanding doctoral work across disciplines.

Alumni and partner support reaches students through several parts of their IIT Bombay experience: academic assistance, wellbeing, mentoring, and research exposure. Each serves a different need, while collectively giving students greater room to make choices, develop confidence, and pursue their interests with purpose.

FACULTY DEVELOPMENT

Shared Purpose Across Generations

IIT Bombay's academic strength depends on faculty who create knowledge, teach, mentor, and build fields of research over time.

Alumni, philanthropic, and corporate support the faculty to help and sustain their work. Fellowships encourage the new faculty, **Named Chairs** honour and support research, and awards recognise achievement in teaching, discovery, and technology development. Support for retired teachers extends that relationship post-retirement.

ENCOURAGING ACADEMIC GROWTH

The early years of an academic career are a period of developing ideas, establishing research interests, and growing as a teacher and mentor. **Young Faculty Fellowship**, supported by several alumni, helps IIT Bombay nurture faculty at this stage.

The C1973 Faculty Award for Research Excellence (C1973 FARE) recognises promising early-career faculty researchers at IIT Bombay during the Institute's Teachers' Day celebrations. Supported by the Class of 1973, the award fosters research excellence, curiosity, and innovation across disciplines.



SUSTAINING INQUIRY AND DISCOVERY

Named Faculty Chairs honor academic and research work across engineering, science, management, humanities, and emerging areas such as quantum computing, digital trust and climate studies.

A Chair gives faculty greater continuity to develop research questions over time, mentor students and younger researchers, build collaborations, and deepen expertise within the Institute.

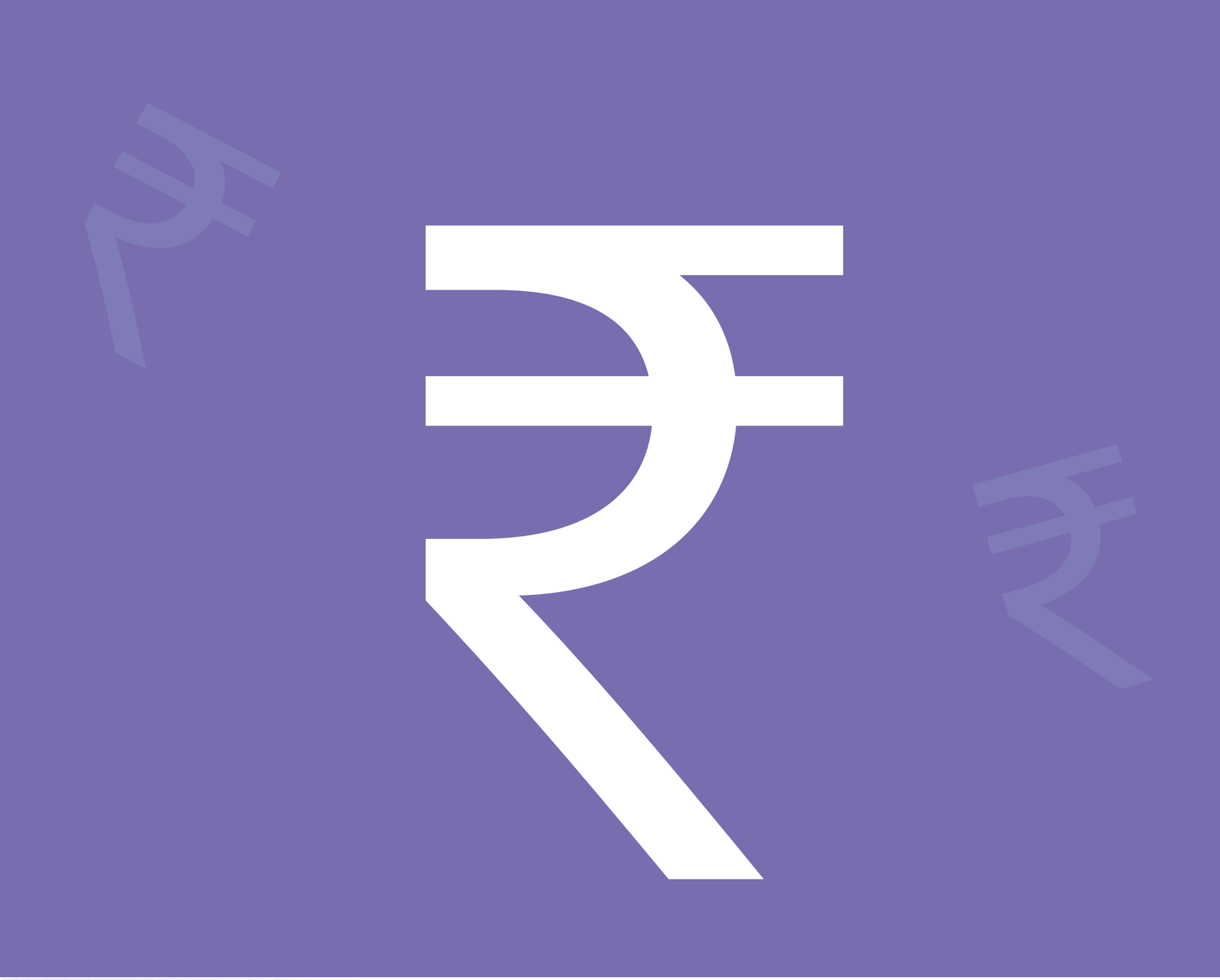
Dhananjay Joshi Fundamental Research Award, established through an endowment by Dr. Veena Joshi in memory of Mr. Dhananjay Joshi, supports foundational science and engineering under this award, the current research is with GROWTH-India Telescope which combines the study of transient cosmic events with opportunities for students to participate in observations, modelling, and analysis.





A CONTINUING CULTURE OF CARE

The relationship between alumni and faculty continues beyond the classroom and beyond retirement. **Retired Faculty Wellness Fund (RFWF)** provides supplementary medical insurance for retired faculty members and their families, with annual premiums paid by the Fund. Conceived as “Gurudakshina” by the Class of 1984 and subsequently supported by several batches, it has become a continuing commitment to those who helped shape generations of students.



OVERALL FINANCIALS

OVERALL FINANCIALS 2025–26

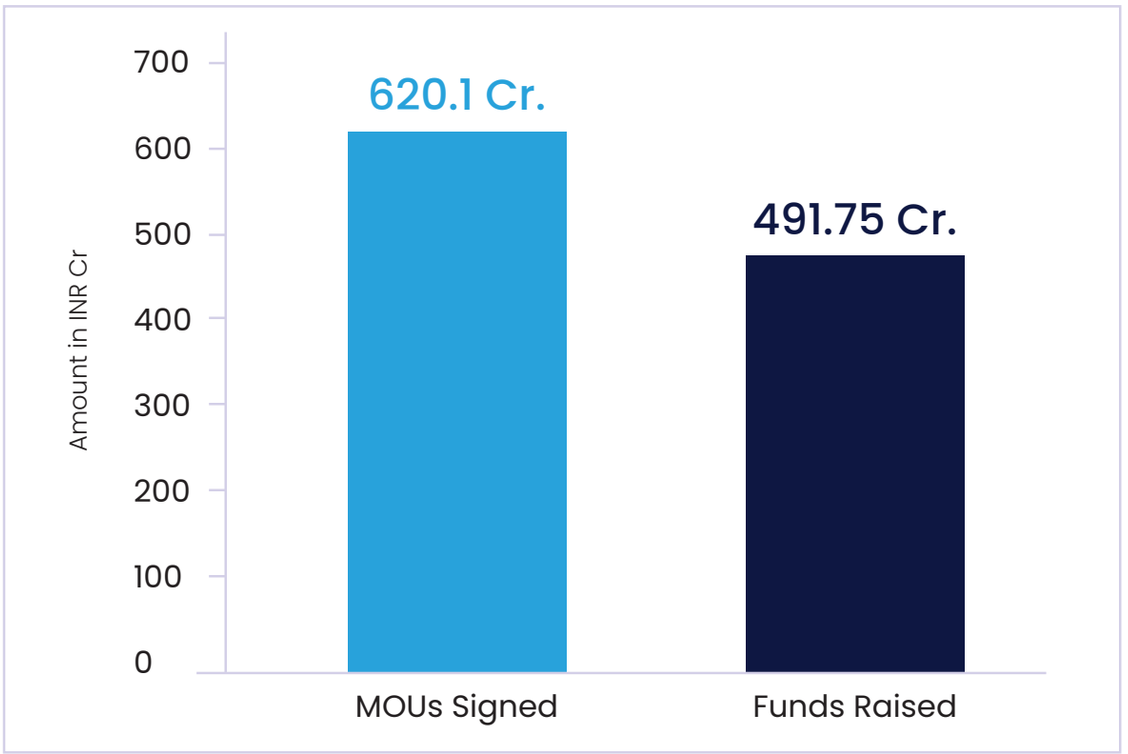
IIT Bombay's financial strength is built on the collective trust and commitment of its stakeholders— alumni, corporate supporters, government, industry partners, and well-wishers who believe in the Institute's vision and its future.

These contributions are more than financial commitments; they are expressions of gratitude, a sense of belonging, and an aspiration to help IIT Bombay build technology and people for Nation building.

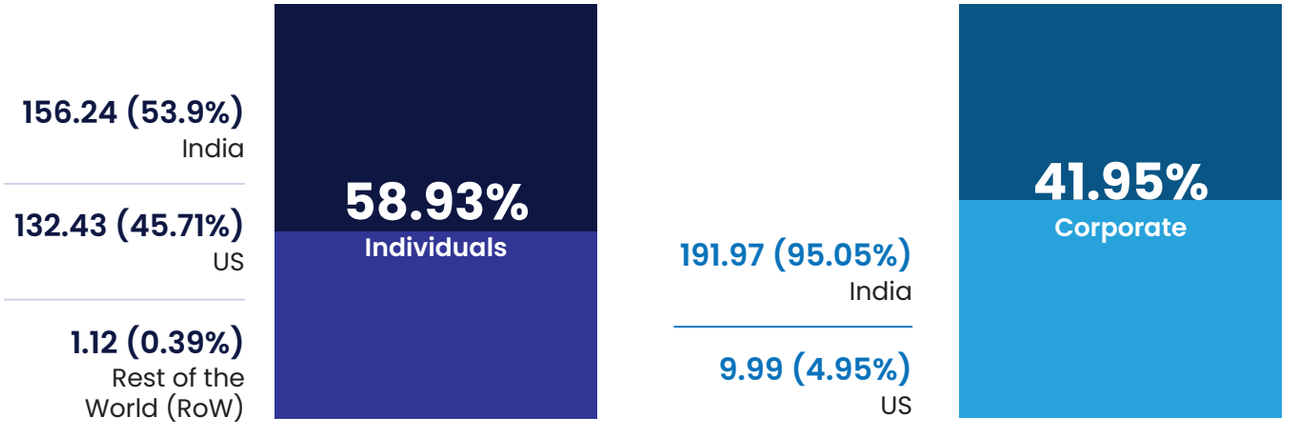
This support enables the Institute to advance cutting-edge research, build world-class infrastructure, and create opportunities that nurture the leaders and innovators of tomorrow.

In 2025-26, Dean Alumni and Corporate Relations office received huge support from alumni, Industry and other well wishers.

2025-26: MOUs SIGNED AND FUNDS RAISED



FUNDS RAISED – BY SOURCE | 2025-26



Total

348.21 INR Cr.	142.42 INR Cr.	1.12 INRCr.
India	US	Rest of the World

FUNDS RAISED BY CAUSES

₹217.50 Cr.
Infrastructure

₹192.09 Cr.
Centres and R&D

₹42.66 Cr.
Strategic Development and Others

₹25.09 Cr.
Student Development

₹8.78 Cr.
Faculty Development

₹5.64 Cr.
Entrepreneurship



KEY INSTITUTE EVENTS

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CELEBRATING EXCELLENCE, INSPIRING GENERATIONS



Relive moments from IIT Bombay's 67th Foundation Day celebrations.

IIT BOMBAY'S 67TH FOUNDATION DAY

IIT Bombay's Foundation Day is a celebration of the people who have shaped the Institute's legacy and continue to carry it forward. Foundation Day brings the Institute community together to recognise achievement in teaching, research and public service, while honouring faculty members and alumni whose work reflects the breadth of the Institute's academic and societal contribution.

IIT Bombay celebrated its 67th Foundation Day on 10 March 2026. **Prof. (Dr.) Balram Bhargava**, Padma Shri awardee, National Academy of Sciences Meghnad Saha Distinguished National Chair and former Director General of the Indian Council of Medical Research, was the Chief Guest.

HONOURING DISTINGUISHED ALUMNI

The Institute also recognised IIT Bombay alumni through the **Distinguished Alumnus Awards (DAA)** and **Young Alumni Achiever Awards (YAAA)**, spanning contributions to academia, industry, entrepreneurship and public service.

The Distinguished Alumnus Award (DAA) recognises alumni for outstanding contributions to their profession, society and the wider community.



DAA RECIPIENTS FOR 2026:

Name	Degree, Department, Batch	Awarded Category
Mr. Kirat Patel	B.Tech., Mechanical Engineering, 1975	Contributions in the Corporate Sector
Mr. K. B. S. Anand	B.Tech., Mechanical Engineering, 1977	Contributions in the Corporate Sector
Prof. Y. S. Prakash	B.Tech., Electrical Engineering, 1988	Contributions in Academia
Dr. Subrata Rakshit	B.Tech., Engineering Physics, 1988	Contributions in Government / Public Service / Social Sector
Prof. Srinivasan Iyengar	5-Year Integrated MSc, Chemistry, 1990	Contributions in Academia
Prof. Prashant Shenoy	B.Tech., Computer Science and Engineering, 1993	Contributions in Academia
Mr. Abhay Pandey	B.Tech., Computer Science and Engineering, 1993	Contributions in Entrepreneurship
Dr. Ranjit Rath	MSc, Earth Sciences – Applied Geology, 1994	Contributions in Government / Public Service / Social Sector
Dr. Kalyan Handique	B.Tech., Chemical Engineering, 1995	Contributions in Entrepreneurship
Dr. Mahesh Kumar	B.Tech., Computer Science and Engineering, 1999	Contributions in Entrepreneurship
Dr. Sachin Katti	B.Tech., Electrical Engineering, 2003	Contributions in the Corporate Sector

Instituted in 2011, the Young Alumni Achiever Award (YAAA) recognises alumni under the age of 40 for accomplishments in their chosen fields.

YAAA RECIPIENTS FOR 2026:

Name	Degree, Department, Batch	Awarded Category
Prof. B. Aditya Prakash	B.Tech., Computer Science and Engineering, 2007	Contributions in Academia
Prof. Aaditya Ramdas	B.Tech., Computer Science and Engineering, 2009	Contributions in Academia
Prof. Gauri Joshi	Dual Degree, Electrical Engineering, 2010	Contributions in Academia
Mr. Rohit Agarwal	B.Tech., Metallurgical Engineering and Materials Science, 2012	Contributions in the Corporate Sector
Mr. Sibarata (Shibam) Das	B.Tech., Civil Engineering, 2012	Contributions in Entrepreneurship
Mr. Sneh Vaswani	Dual Degree, Metallurgical Engineering and Materials Science, 2013	Contributions in Entrepreneurship
Ms. Ashima Mittal	B.Tech., Civil Engineering, 2014	Contributions in Government / Public Service / Social Sector



A DAY TO RECONNECT, CELEBRATE, AND GIVE BACK

IIT BOMBAY ALUMNI DAY 2025

Alumni Day is one of IIT Bombay's most cherished annual traditions, bringing together alumni across generations to celebrate the Institute and the community that continues to strengthen it. The annual gathering recognises service to the alumni community, acknowledges alumni leadership and philanthropy, and creates a forum for continued engagement with IIT Bombay's priorities.

The Institute recognised IITB alumni through the **Distinguished Service Awards (DSA)**, **Chapter Service Awards (CSA)**, donor recognition and announcements from alumni batches.

HONOURING DISTINGUISHED SERVICE

The Distinguished Service Awards (DSA) were conferred upon:

Recipient	Degree, Department, Batch
Mr. Mukund Kulkarni	B.Tech., Mechanical Engineering, 1971
Mr. Abhay Nadkarni	B.Tech., Mechanical Engineering, 1981
Ms. Suhasini Sabnis	MSc, Mathematics, 1982
Mr. Shamrao Kattimani	B.Tech., CSE, 1989, and M.Tech., CSE, 1991
Late Mr. Sushil Singh	B.Tech., Civil Engineering, 1991



Explore highlights from Alumni Day 2025 and the Distinguished Service and Chapter Service Awards.

CELEBRATING CHAPTER LEADERSHIP

The Chapter Service Awards (CSA) were conferred upon:

Recipient	Degree, Department, Batch	Chapter
Mr. Alkesh Shah	B.Tech., Electrical Engineering, 1985	IITBHF, Boston
Mr. Amit Shiwalkar	B.Tech., Electrical Engineering, 1996	IITBHF, Southern California
Mr. Deepak Iyer	B.Tech., Electrical Engineering and Materials Science, 1997	IITBHF, Houston
Mr. Hrishikesh Sathawane	B.Tech., 1997, Engineering Physics, 1997	IITBHF, SF Bay Area
Mr. Arpit Kothari	B.Tech., Chemical Engineering, 2016	IITBAA, Indore
Mr. Shubham Jain	B.Tech., Computer Science and Engineering, 2016	IITBAA, United Kingdom Chapter
Ms. Karen Nimmy Stephen	M.Tech., Electrical Engineering, 2018	IITBAA, Japan



CELEBRATING PHILANTHROPY AND LEADERSHIP



The Institute acknowledged alumni contributions and thanked the Institute's donors. IIT Bombay also unveiled a Donor Wall recognising its top donors of 2025.

The Silver Jubilee Batch, **Class of 2000**, announced a **Rs. 50 crore** Legacy Contribution to IIT Bombay. The commitment will support student initiatives and strengthen research capabilities at the Institute.



IIT Bombay also felicitated **Mr. Kirat Patel** (B.Tech., Mechanical Engineering, 1975) on becoming the first Chairman Emeritus of the IIT Bombay Alumni Association.



IIT Bombay Distinguished Alumnus **Mr. Kanwal Rekhi** (B.Tech., Electrical Engineering, 1967) presented his book, The Ground-breaker: Risks, Rewards and Lessons from a Legendary Entrepreneur. The book traces his journey from IIT Bombay to Silicon Valley, including his entrepreneurial career and continued engagement in mentoring future founders.

The Institute also launched the fifth edition of GO-IIT Bombay, its fundraising campaign for 2025–26.

A MEMORABLE FAREWELL, A NEW BEGINNING



INSTITUTE VALEDICTORY FUNCTION 2025 (VALFI 2025)

The **Institute Valedictory Function**, or Valfi, marks the graduating class's transition from campus life to the IIT Bombay alumni community.

It brings students together one final time to recognise the friendships and experiences that shaped their years at the Institute and to begin a lifelong association with IIT Bombay as alumni.

Valfi 2025 continued this tradition for the graduating Class of 2025.

The evening opened with addresses from the Institute leadership. Speaking to the Class of 2025, Prof. Shireesh Kedare said, ***"you are now ambassadors of IIT Bombay's legacy of excellence in science, technology, and beyond."***

Two esteemed IIT Bombay alumni delivered the keynote addresses:

- **Mr. Aniket Deb (B.Tech.+ M.Tech. Dual Degree, Chemical Engineering, 2013)**, Co-founder of Bizongo.
- **Ms. Shreya Mishra (B.Tech. M.Tech. Dual Degree, Mechanical Engineering, 2012)**, Co-founder of SolarSquare Energy.



A FITTING FINALE

Student performances, the Valfi T-shirt graffiti tradition and a celebratory dinner concluded the evening, bringing the graduating class together before they began the next stage of their journeys.

CONNECTING STUDENTS AND ALUMNI

ALUMINATION 2025 – STUDENT ALUMNI RELATIONS CELL (SARC)

Organised by the Student Alumni Relations Cell (SARC), Alumination 2025 brought more than 100 alumni and over 1,000 students together under the theme 'An Aureate Ascent'. The programme created multiple forums for students to hear directly from alumni and other speakers about careers, creative work, leadership and entrepreneurship.



EVENT HIGHLIGHTS

- Beyond the Horizon featured filmmaker Mr. Nitesh Tiwari and music artist Mr. Kavish Seth, who spoke about their professional journeys and experiences.
- Dean ki Adalat brought Prof. Suryanarayana Doolla and Prof. Upendra Bhandarkar together for an open dialogue with students.
- Un-Engineering featured Mr. Michael Patra and Mr. Ashank Desai, who shared perspectives from their professional journeys.
- Start It Up brought together Mr. Rajeev Agrawal, Mr. Ankit Mehta and Mr. Jaideep Poonia for a conversation on entrepreneurship and innovation.

ALUMNI MEETS AND ROADSHOWS

IIT Bombay continues to deepen engagement with its vast and globally dispersed alumni community through Alumni Meets and Roadshows across India and around the world.

During 2025–26, IIT Bombay engaged alumni through meets and roadshows in India, North America and the United Kingdom. These interactions gave Institute leadership an opportunity to share current priorities and future plans, hear alumni perspectives and identify ways for alumni to remain connected and contribute.

INDIA

Bengaluru, Mumbai and Pune | November–December 2025

During November and December 2025, IIT Bombay, along with IIT Bombay Alumni Association (IITB AA), organised Alumni Meets in Bengaluru, Mumbai and Pune. Prof. Shireesh Kedare, Director, IIT Bombay, Prof. Upendra Bhandarkar, Dean, Alumni and Corporate Relations, and other Institute representatives led discussions on current priorities and future directions.

The meetings brought together alumni, IIT Bombay Alumni Association (IITBAA) representatives, local chapter leaders and industry participants. Chapter representatives also shared updates on local initiatives, creating a direct exchange between the Institute and alumni communities in each city.







UNITED STATES OF AMERICA

U.S. Roadshow | October 2025

IIT Bombay, together with the IITB Heritage Foundation, held a series of Alumni Meets as part of its annual U.S. Roadshow in October 2025, with engagements across South Florida (Miami), Bay Area, Pittsburgh and New York.

Prof. Shireesh Kedare, Director, IIT Bombay, and Prof. Upendra Bhandarkar, Dean, Alumni and Corporate Relations, were part of the Institute team that met alumni across the four U.S. cities.

Prof. Kedare spoke about IIT Bombay's academic and research priorities and the role alumni can play in supporting them. Prof. Bhandarkar discussed alumni-engagement initiatives, including hostel and department reunions.



Boston | June 2025

In Boston, alumni met Prof. Kedare and Prof. Ravindra Gudi during the June 2025 North America Roadshow. Discussion covered IIT Bombay's strategic roadmap, upcoming Centres of Excellence and ways for alumni to stay connected with and contribute to the Institute.



Chicago | June 2025

In Chicago, Prof. Kedare and Prof. Gudi, along with IITB Heritage Foundation, met the alumni community. Discussions covered IIT Bombay's future priorities, new Centres of Excellence and opportunities for continued alumni engagement.



REST OF THE WORLD



Toronto | June 2025

At the Toronto event in June 2025, IIT Bombay announced three new IIT Bombay Alumni Association chapters in North America: Greater Toronto Area, Calgary and Vancouver.

Prof. Kedare and Prof. Gudi also acknowledged the alumni efforts that enabled IIT Bombay to secure 'Qualified Donee' status in Canada, as recognised by the Canada Revenue Agency (CRA). The status allows eligible contributions towards the advancement of science and technology to qualify for tax credits and deductions under Canadian law.

London | September 2025

In September 2025, IIT Bombay, in collaboration with the IIT Bombay Alumni Association (IITBAA), hosted an Alumni Roadshow at Bombay Palace, London.

Institute representatives shared recent developments and future priorities, while alumni discussed ways to remain connected and contribute. The meeting also provided a forum for questions and ideas from the alumni community.

CONNECTING FACULTY, ALUMNI AND INDUSTRY

FACULTY ALUMNI NETWORK (FAN) MEET 2025

The Faculty Alumni Network, known as FAN, brings together IIT Bombay faculty, alumni who hold faculty positions at institutions around the world, and industrial researchers across countries to deliberate on emerging areas of research and to build collaborative programmes.





The Faculty Alumni Network (FAN) Meet 2025, held at the Georgia Institute of Technology (Georgia Tech), Atlanta, from 20–22 June 2025, brought together faculty, alumni, industry leaders and researchers. Discussions covered emerging technologies, engineering education, biotechnology, advanced logistics and translational research. Keynote addresses were delivered by Ms. Karie Davis-Nozemack, Senior Vice Provost for Academic and Business Operations, Georgia Tech, and Prof. Shireesh Kedare, Director, IIT Bombay. Their addresses opened three days of discussions across academic and industry perspectives.







DRIVING CROSS-DISCIPLINARY DIALOGUE

FAN 2025 included six thematic sessions examining opportunities and challenges across research, education, technology and industry. Topics included health and biotechnology, semiconductors, green supply chains, next-generation manufacturing and engineering education.

The discussions identified areas where deeper collaboration between faculty, alumni, researchers and industry could support research translation, education and technology development.

Key themes from the panels and breakout sessions included:

- **Translational Research & Entrepreneurship**
- **Innovation in Engineering Education**
- **IoT & Industry 4.0/5.0**
- **Healthcare & Biotech**
- **Advanced Logistics & Green Supply Chains**
- **SemiX (Semiconductor Ecosystem)**

4TH ANNUAL CSR CONCLAVE 2025

IIT Bombay hosted its 4th Annual CSR Conclave in 2025, bringing together a vibrant community of 500+ participants, including 230+ industry leaders, CSR professionals, experts, researchers and changemakers committed to harnessing technology and innovation for national development.

Built around the theme of technology-led nation building, the Conclave provided a platform for meaningful dialogue and collaboration between academia and industry. Across 16+ sessions featuring 30+ distinguished speakers, discussions explored four priority areas with significant potential for societal impact: Artificial Intelligence and Machine Learning, Sustainability, Healthcare, and Last-Mile Impact.

A key attraction of the Conclave was the Innovation Showcase, featuring 20+ stalls that offered participants a closer look at cutting-edge research, technologies and solutions emerging from IIT Bombay.

The Conclave also marked the launch of the 2025 CSR Catalogue, a comprehensive platform featuring 276+ ready-to-collaborate projects spanning CSR, ESG and R&D domains.

More than an annual gathering, the CSR Conclave serves as a bridge between ideas and implementation, creating pathways for sustained partnerships between IIT Bombay and industry.

COMING HOME, ACROSS GENERATIONS

REUNIONS AND COMMUNITY CELEBRATIONS

Milestone reunions brought IIT Bombay alumni back to campus during the year, reconnecting batchmates with one another and with the Institute. Alongside the social dimension of these gatherings, several batches used their reunions to support student programmes, research infrastructure and other Institute priorities.

The reunions also gave alumni an opportunity to see changes across the campus and hear about IIT Bombay's current work and future plans.

DIAMOND JUBILEE REUNION – CLASS OF 1965

IIT Bombay welcomed the Class of 1965 back to campus for its Diamond Jubilee Reunion. Nearly six decades after entering the Institute, members of the batch returned to reconnect with classmates and revisit the campus.

The programme included yoga sessions, visits to hostels and departments, a tour of the Arun Firodia Research Floor, exposure to IIT Bombay's green initiatives and new student living spaces under Project Evergreen, and a musical evening.



DIAMOND JUBILEE REUNION OF THE CLASS OF 1966



IIT Bombay hosted the Diamond Jubilee Reunion of the Class of 1966, welcoming one of the Institute's pioneer batches back to campus. Sixty years later, the class returned with the same camaraderie and conviction that first defined them. The reunion celebrated renewed friendships and a quiet pride in the remarkable journey they have shared.

The Class of 1966, which includes eight Distinguished Alumni Awardees, contributed to its Diamond Jubilee Legacy Project, supporting the Tinkerers' Lab and the Financial Aid Programme. The contribution builds on the batch's Golden Jubilee support for the Tinkerers' Lab and its continued support for Project Evergreen and student scholarships.

GOLDEN JUBILEE REUNION – CLASS OF 1976

The Class of 1976 returned to IIT Bombay for its Golden Jubilee Reunion, reconnecting with classmates and revisiting the campus fifty years after graduation.

The batch announced its legacy contribution towards Hostel Infrastructure, the Centre of Excellence on Critical Minerals, Metals and Materials, the Alumni Centre, the Financial Aid Programme, the Young Faculty Fellowship and the Institute Development Fund.

Prof. Shireesh Kedare, Director, IIT Bombay, spoke about the Institute's progress and alumni engagement, while the reunion programme also included an evening with the YPO orchestra.



45TH REUNION – CLASS OF 1980



The Class of 1980 returned to IIT Bombay with their families for their 45th Reunion.

During the reunion, the batch pledged support to SemiX, IIT Bombay's Centre for Semiconductor Technologies. The contribution is intended to support the purchase of fabrication equipment for the Nano Fabrication facility, strengthening the Institute's research infrastructure.

RUBY JUBILEE REUNION – CLASS OF 1985



The Class of 1985 returned to campus for its Ruby Jubilee Reunion, reconnecting with classmates and marking forty years since graduation.

Prof. Shireesh Kedare, Director, IIT Bombay, and Prof. Ravindra Gudi, Deputy Director, are both members of the Class of 1985, giving the reunion an additional connection to the Institute's current leadership.

SILVER JUBILEE REUNION – CLASS OF 2000

The Class of 2000 marked its Silver Jubilee Reunion as part of IIT Bombay Alumni Day 2025, bringing alumni back to campus twenty-five years after graduation.

The batch announced a Rs. 50 crore Legacy Contribution to IIT Bombay. The commitment will support student initiatives and strengthen research capabilities.

The celebrations continued with a Director's High Tea, where alumni felicitated their favourite professors from their time at IIT Bombay.



LIFELONG FACULTY MEET

Conceived by Prof. Shireesh Kedare, Director, IIT Bombay, the Lifelong Faculty Meet was launched to reconnect the Institute with retired faculty members and recognise their contribution to IIT Bombay's teaching, research and institutional development.

The initiative provides a platform for retired faculty to return to campus, remain connected with the Institute and participate in discussions on its future.



The inaugural meet brought together 90 faculty members and their families. Discussions covered the evolution of teaching and learning, translational research and the relationship between research priorities, societal needs and national priorities.

HOSTEL CELEBRATION DAY 2025





On 20 December 2025, Hostel Celebration Day brought together more than 550 alumni from Hostels 4, 6 and 9, spanning batches from 1967 to 2025. The day brought IIT Bombay's largest-ever alumni gathering on campus and the first joint celebration by alumni of the three hostels.

Hostel 4 alumni became the first occupants of the newly constructed hostel during the celebration. Alumni of Hostels 6 and 9 returned to their former hostels, with many staying in rooms they had occupied as students.

The new design for Hostel 9 was also unveiled during the gathering, giving alumni a view of the hostel's planned redevelopment.

POST GRADUATE REUNION & DEPARTMENT CONCLAVES

On 26 March 2026, IIT Bombay welcomed post graduate alumni back to campus for the second edition of its annual **Post Graduate Reunion**, reconnecting them with the Institute and its research community.

Prof. Shireesh Kedare, Director, IIT Bombay, called for greater leadership in research, noting that India is already among the top five globally in several technology domains and setting an ambition to move into the top two.

Prof. Ravindra Gudi, Deputy Director, Finance, Infrastructure, and Administration (FIA), reflected on changing career paths, while **Prof. Milind Atrey**, Deputy Director, Academics, Research, and Translation (ART), discussed IIT Bombay's research ecosystem and shared that nearly 80% of postgraduate alumni continue to work in their core specialisation areas and contribute to research and innovation across sectors.

Prof. Upendra Bhandarkar, Dean, Alumni and Corporate Relations, spoke about the Institute's growing focus on postgraduate alumni engagement and encouraged alumni to remain connected with its research and innovation ecosystem.



NEW DEPARTMENT CONNECTIONS

The reunion introduced Department Conclaves for Mechanical Engineering, Civil Engineering, Chemistry, Chemical Engineering, Earth Sciences and Metallurgical Engineering and Materials Science (MEMS). Alumni, faculty and students exchanged ideas, revisited laboratories and engaged with student innovations.

The programme also created opportunities for postgraduate alumni to reconnect with batchmates, faculty and current researchers, strengthening engagement between the Institute and its postgraduate community.



INFRASTRUCTURE PROJECTS

90
ACADEMIC BLOCK 1

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ACADEMIC BLOCK 2

93
ACADEMIC BLOCKS 3 & 4

94
ACADEMIC SCIENCE BUILDING 2 – WADHWANI HUB

96
ARL, FACULTY HOUSING, STUDIO

97
HOSTEL 4

98
HOSTEL 6

99
HOSTEL 9

100
MAIN BUILDING



WHERE DISCIPLINES CONVERGE

MOTILAL OSWAL KNOWLEDGE CENTRE (ACADEMIC BLOCK 1)

The Motilal Oswal Knowledge Centre (Academic Block 1) is being developed as an interdisciplinary academic facility bringing together research in capital markets, materials science, technology, and public policy.

The building will house the Motilal Oswal Centre for Capital Markets, the Department of Metallurgical Engineering and Materials Science, the JSW Technology Innovation Hub, and the Ashank Desai Centre for Policy Studies within a single integrated facility.

Spread across approximately 2.1 lakh square feet, the Centre is designed to support specialised research as well as shared laboratories, seminar spaces, and common facilities for collaboration across disciplines.

Watch how IIT Bombay is building the infrastructure for its next chapter.

SPARKING IDEAS

To support this multidisciplinary vision, the Centre will feature:

- Advanced research facilities supporting work in **Metallurgy, Materials, Earth Science, Chemical Engineering, Mechanical Engineering and Physics.**
- Dedicated spaces for **capital markets and policy research**, including facilities supporting research in capital markets.
- Collaborative zones and seminar spaces that bring together **researchers, policymakers and government stakeholders.**
- Shared infrastructure designed to facilitate interaction across disciplines and support the translation of technical research into **evidence-based policy frameworks serving the national interest.**

TAKING SHAPE

During 2025–26, the foundation and substructure were completed and construction progressed into the superstructure phase, with work advancing on the upper floors.

The building's structural systems are being designed for the specialised weight and utility requirements of metallurgy laboratories and high-density data centres.

The project is scheduled for completion in June 2027.



POWERING AN INTELLIGENT FUTURE



LAKHAMRAJU BUILDING (ACADEMIC BLOCK 2)

The Lakhamraju Building (Academic Block 2) is being built to expand IIT Bombay's infrastructure for artificial intelligence, data science, operations research, logistics and related computational research.

Planned as a shared academic and research facility, the building will bring together centres and departments working across computation, analytics and industrial systems.

The building will add more than 1.8 lakh square feet of specialised built-up area to the Institute's academic infrastructure.

The building has been planned to bring together several of IIT Bombay's leading centres in computation and operations within a single collaborative ecosystem:

- Centre for Machine Intelligence and Data Science (C-MInDS).
- SBI Foundation Hub for Data Science and Analytics.
- Centre for Climate Studies (CCS).
- Centre for Systems & Control (SysCon).
- IIT Bombay–FedEx Center for Advanced Logistics and Focused Analytics (FedEX ALFA).
- Department of Industrial Engineering and Operations Research.

By bringing these disciplines together, the facility is intended to support collaboration across machine intelligence, data analytics, logistics, operations research, and industrial applications.

Purpose-built infrastructure will support this multidisciplinary environment through:

- High-performance computing centres for advanced data analytics.
- Predictive modelling laboratories for financial systems.
- Specialised logistics simulation chambers to model complex global distribution networks.
- Flexible collaborative workspaces and seminar spaces that encourage dialogue between researchers and corporate partners.

Together, these facilities have been designed to enable the rapid exchange of technical knowledge and help transform computational breakthroughs into commercial-grade tools for industry.

NEW SPACES FOR THE SCIENCE OF TOMORROW

ACADEMIC BLOCKS 3 AND 4

Academic Blocks 3 and 4 are being planned to expand IIT Bombay's academic and research infrastructure across earth sciences, civil engineering, sustainability, clean energy, and the basic sciences.

The two blocks will add laboratory-intensive capacity while bringing related disciplines into closer proximity.

Academic Block 3 will house the Department of Earth Sciences and the Department of Civil Engineering, with specialised infrastructure ranging from geological analysis to heavy-duty structural testing.

Academic Block 4 will house the Green Energy and Sustainability Hub, new undergraduate laboratories for Chemistry and Physics, and also support semiconductor research.

Together, the two blocks will add approximately 2.99 lakh square feet of space.



PREPARING GROUND

During 2025–26, the project progressed through the pre-construction phase into active design and statutory approvals.

A HOME TO NEXT-GEN LIFE SCIENCES

WADHWANI HUB (ACADEMIC SCIENCE BUILDING 2)

The Wadhwani Hub (Academic Science Building 2) is underconstruction. It will be home for life sciences, translational research and digital health at IIT Bombay.

The Wadhwani Hub is planned to bring together laboratories, translational research centres and collaborative spaces within one building, supporting work from scientific discovery through pre-clinical validation and healthcare applications.



ENABLING INTERDISCIPLINARY INNOVATION

The facility, spanning approximately 1.6 lakh square feet, will host:

- **The Wadhwani Innovation Centre:** supporting the development of healthcare technologies and startups.
- **The Koita Centre for Digital Health:** advancing research at the intersection of healthcare, data science, and artificial intelligence.
- **Pre-clinical Facility:** supporting pre-clinical research and validation.
- **Alkem Centre for Advanced Research and Development of Applied Immuno-Therapeutics and Regenerative Medicines.**



KEY UPDATES

The construction advanced from major civil works towards internal systems integration. Key milestones included:

- Structural construction progressed to the upper levels of the building.
- Execution of interior fit-outs started.
- Building utilities and engineering systems were developed to meet the specialised requirements of life sciences research, including advanced power supply, ventilation, and environmental control systems for biology laboratories, computational facilities and the on-site animal facility.

BUILDING FOR THE FUTURE

The building is also being designed for sustainability and long-term adaptability.

The facility is being designed in alignment with GRIHA (Green Rating for Integrated Habitat Assessment) green building standards, with energy-efficient systems and sustainable building practices.

BUILDING TOMORROW'S CAMPUS



With support from **Mr. Nandan Nilekani**, IIT Bombay is developing three infrastructure projects spanning research, faculty housing and student life.

The projects are at different stages of development:

Advance Research Lab (ARL):

Envisioned as a state-of-the-art interdisciplinary research facility, the ARL will house advanced laboratories, shared scientific infrastructure, and collaborative spaces for faculty and researchers. With the concept design completed and the project team in place, it is set to become a cornerstone of IIT Bombay's expanding research ecosystem, enabling pioneering work across emerging areas of science, engineering, and technology.

Tower 1 of the Faculty Housing Complex:

Designed to strengthen the campus community, the project will provide high-quality housing for faculty members through thoughtfully planned residential units integrated with childcare facilities, common spaces, and other supporting infrastructure. By creating a vibrant living environment on campus, it will help attract and retain outstanding faculty while enriching the Institute's academic ecosystem.

The Studio:

Planned as a vibrant hub for extracurricular activities, innovation, and community engagement, the Studio will provide dedicated spaces for student clubs, cultural programmes, maker activities and interdisciplinary interactions. It will also support collaborative design, media production, and creative experimentation, complementing IIT Bombay's growing emphasis on experiential learning.

Together, the projects extend IIT Bombay's campus infrastructure across three distinct needs: shared research facilities, faculty accommodation, and student activity spaces.

HOSTEL 4

COMPLETED AND OPERATIONAL

Completed during 2025–26, Hostel 4 adds 1,150 single-occupancy rooms to IIT Bombay's residential infrastructure. The project is supported by the **Chellaram Foundation. Dr. Pramod Chaudhari** has supported the 800-capacity dining hall.

Key Highlights:

- Provides ***1,150 single-occupancy*** rooms.
- Rooms are designed to maximise ***natural light and ventilation.***
- Includes ***dedicated accessible rooms*** with attached facilities ***for differently-abled students.***





HOSTEL 6

MODERNISING A CAMPUS LEGACY

Hostel 6 is being redeveloped as part of IIT Bombay's long-term renewal of student residential infrastructure.

Made possible by the generous anchor contributions of alumni **Mr. Nakul Aggarwal** and **Mr. Ritesh Arora**, along with the generous contribution of **Mr. Ramesh Mangaleswaran**, the project will replace the ageing building with a higher-capacity residential facility for students.

Key Highlights:

- During 2025–26, the project moved into the architectural planning stage.
- Schematic designs are being refined to optimise space utilisation and resident comfort.
- Building plans are being developed in alignment with the campus master plan and applicable building requirements for high-density residential facilities.

Student amenities include:

- Collaborative study hubs.
- Recreation and wellness spaces.
- Advanced dining facilities.
- Recreational infrastructure.



HOSTEL 9





DESIGNING THE FUTURE OF RESIDENTIAL EXCELLENCE

Hostel 9 is being redeveloped as a higher-capacity student residence while retaining the identity of the original hostel.

Generously contributed by alumni **Mr. Jitendra Mohan and Ms. Swapna Samant**, the project entered active design development during 2025–26. Shared spaces, accessibility and resource-efficient infrastructure are being addressed through the design process with around 1100 rooms planned.

Key Highlights:

- In 2025–26, the project entered the active design development stage.
- The design places emphasis on responsible building practices and resource management.
- Universal design principles are incorporated to improve accessibility for students with disabilities.
- Construction is expected to be completed by 2029.

Student amenities include:

- Modern dining halls.
- Wellness centres.
- Community spaces for collaborative study and peer interaction.

HERITAGE MEETS THE FUTURE

NANDAN NILEKANI MAIN BUILDING

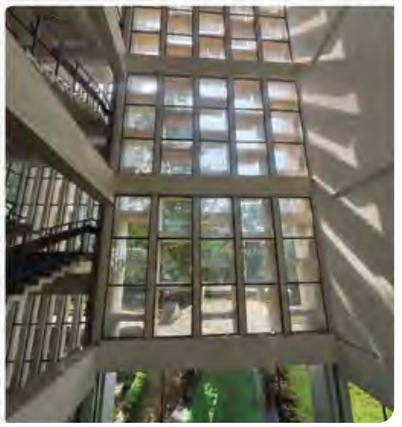
For generations of students, faculty and alumni, the Main Building has been one of IIT Bombay's most recognisable campus landmarks.

The Institute has undertaken a comprehensive renovation to preserve the building's architectural character while strengthening its structure and upgrading public and functional spaces.

The first-floor lobby is also planned to include a Wall of Achievements documenting IIT Bombay's milestones and contributions across education, research, and innovation. Upgrades to public spaces and rain-curtain systems are also part of the renovation.








Nandan Nilekani Main Building



CENTRES OF EXCELLENCE

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ALKEM CENTRE FOR ADVANCED RESEARCH AND DEVELOPMENT OF APPLIED IMMUNO-THERAPEUTICS AND REGENERATIVE MEDICINES

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REIMAGINING AFFORDABLE HEALTHCARE

ALKEM CENTRE FOR ADVANCED RESEARCH AND DEVELOPMENT OF APPLIED IMMUNO-THERAPEUTICS AND REGENERATIVE MEDICINES

VISION

For many in India, access to advanced medical treatment is shaped more by affordability needs. Cell and gene therapies have opened new possibilities in treating cancer, genetic disorders, and degenerative diseases, but most remain expensive because they are developed and manufactured abroad.

The Alkem Centre for Advanced Research and Development of Applied Immuno-Therapeutics and Regenerative Medicines at IIT Bombay was created to change that equation. Established through a partnership with the Alkem Foundation, the Centre is focused on building indigenous capabilities in advanced therapeutics so that advanced treatment is accessible to all.

Its larger vision is to help India emerge as a global centre for affordable cell and gene therapies, while reducing dependence on imported biopharmaceuticals. The Centre's work aligns closely with the country's growing focus on self-reliance in healthcare technologies, advanced manufacturing, and deep-tech innovation.



SCIENCE WITH CLINICAL PURPOSE

The Centre works across multiple areas of translational medicine, bringing together expertise in biotechnology, engineering, biomaterials, and regenerative medicine.

Research in immuno-therapeutics is focused on developing affordable indigenous alternatives to high-cost CAR T-cell therapies and biologics. In regenerative medicine, researchers are engineering biomaterials and scaffolds that can support tissue repair and recovery.

The Centre is also exploring the use of artificial intelligence to accelerate therapeutic discovery and optimise manufacturing systems for complex therapies.

Underlying these efforts is a broader goal: building end-to-end indigenous platforms for cell and gene therapies that can eventually move from laboratory research to scalable clinical production within India.

BUILDING TRANSLATIONAL INFRASTRUCTURE

- Wadhwani Hub (ASB2), where Alkem Centre will be housed, has reached a major milestone this year with the 100% RCC structural completion till 10th floor.
- Phase 1 equipment procurement has been successfully finalised.
- To maintain research momentum, preliminary work, and equipment calibration are currently being executed within interim laboratory spaces in the Institute, setting the stage for a seamless transition once the ASB2 floor is fully commissioned.

FROM LABORATORY TO APPLICATION

The project pipeline is designed with a strong translational focus, addressing real clinical challenges through indigenous innovation.



INCARTIS
Implantable scaffolds for lentiviral delivery in cancer immunotherapy through localised therapeutic delivery; currently progressing through the Investigational New Drug (IND) pathway



NANODERMA HEAL
Bio-engineered wound dressings using electrospun nanofibers for surgical and chronic non-healing wounds; SOPs currently being finalised for process trial launch



RHEUMOD GEL
Injectable phytochemical delivery system for localised treatment of rheumatoid arthritis aimed at reducing systemic side effects; undergoing process validation trials



REGENERATIVE BONE FIXATIONS
Development of bio-resorbable grafts, pins, and screws for ACL repair designed to avoid secondary removal surgeries



LOOKING AHEAD

- The long-term vision of the Centre is the creation of a bedside-ready ecosystem that removes the logistical hurdles between the lab and the hospital. By preparing research protocols for alignment with sterile, regulatory-compliant conditions, the initiative ensures that future academic breakthroughs can be manufactured to strict standards.
- Developing domestic therapeutic platforms is intended to reduce dependence on imported technologies as the Centre's research and manufacturing infrastructure becomes operational.
- The next phase will focus on commissioning the Centre's infrastructure, advancing its therapeutic pipeline, and building the regulatory and manufacturing pathways required for clinical translation.

POLICY WITH PURPOSE

ASHANK DESAI CENTRE FOR POLICY STUDIES (ADCPS)



VISION

India's policy challenges today are increasingly interconnected. Climate resilience, digital governance, urban development, access to services, and technological transformation—they all demand solutions that are informed, inclusive, and grounded in reality.

With the generous contribution of IITB alumnus, **Mr. Ashank Desai**, the **Ashank Desai Centre for Policy Studies (ADCPS)** at IIT Bombay was established in 2016 to help bridge this gap. The Centre works at the intersection of academia, government, industry, and communities, translating research into actionable policy solutions that respond to real-world needs. ADCPS works across public policy research, education and engagement, with an emphasis on equity, evidence, innovation, and impact.

At a time when India is expanding digital public infrastructure, strengthening its AI ecosystem, and pursuing the broader goals of Viksit Bharat, the role of evidence-based policymaking has become increasingly important. ADCPS contributes to this evolving landscape by ensuring that policy conversations remain connected to both research and lived realities.

BRIDGING POLICY & PRACTICE

The Centre approaches policymaking as a collaborative and interdisciplinary process. Its work combines field-based research, academic programmes, practitioner engagement, and policy advisory inputs to ensure knowledge moves beyond theory.

It works across critical policy domains. In digital governance and technology policy, the Centre explores frameworks linked to data governance, artificial intelligence, and digital public infrastructure. In social policy, its research focuses on issues such as education, labour, ageing, and identity systems.

Other areas of work include urban and regional development, mobility and infrastructure systems, water and sanitation, energy transitions, climate resilience, and the broader relationship between technology and society.

Across these domains, the emphasis remains on generating research that can inform implementation and contribute to more effective governance systems.

SHAPING FUTURE POLICY LEADERS

ADCPS is helping build a new generation of policy thinkers and practitioners equipped to navigate increasingly complex governance challenges.

- 71 doctoral scholars engaged in advanced policy research during 2025–26.
- Graduates placed across government institutions, academia, and international organisations.
- 20 high-impact talks and lectures featuring global experts across policy domains.
- Workshops and training programmes that strengthened engagement between researchers and practitioners.
- Specialised programme on Governance of Digital Technologies, focusing on AI systems, digital platforms, and emerging technologies.
- Six policy briefs released on governance and public policy challenges.
- Expanded collaborations with national and international institutions.
- Launch of “The Polilogue Quarterly” policy newsletter to deepen public policy dialogue.

POLICY IN ACTION

- From coastal resilience to digital governance, ADCPS continues to demonstrate how research can shape solutions on the ground. IIT Bombay Living Lab in Alleppey demonstrates community-led policymaking in practice.
- Eight years of work on water management, waste systems, and flood resilience.
- Strong emphasis on community participation to improve adoption and long-term sustainability.
- Hands-on learning opportunities for students through field engagement.
- Development of policy models that can be adapted in other regions.
- Contributions to the Department of Science and Technology (DST) and Centre for Science, Technology & Innovation Policy.
- Research and policy support in digital governance and innovation systems.
- Bridging technical expertise with policymaking frameworks in emerging technology sectors.
- Climate Resilient Coastal Cities Project completed 12 city-level studies on climate adaptation, urban resilience, and sustainable coastal development.



TURNING KNOWLEDGE INTO IMPACT

The work is anchored in a simple idea: policy research must ultimately improve systems, institutions, and everyday lives.

- Policy research informing governance systems in areas such as water and digital governance.
- Contributions to more efficient and transparent service delivery approaches.
- Continuous engagement with governments, institutions, and communities to connect research with implementation.
- Community-led approaches improving trust, participation, and sustainability.
- Students and researchers contributing evidence-based thinking across governance, research, and institutional leadership roles.
- Ongoing work in AI, digital systems, and sustainability shaping emerging policy conversations.

LOOKING AHEAD

ADCPS is preparing to deepen its engagement with emerging policy areas.

In 2026, it plans to launch an e-PGD in Digital Governance aimed at professionals working at the intersection of policy, governance, and technology.

Future research areas include the governance and auditing of AI systems, digital public infrastructure, including Open Network for Digital Commerce (ONDC), industrial and manufacturing policy, and institutional reform studies such as the Goa-IDC project.

The Centre also plans to scale successful models such as the Living Lab into new geographies while strengthening dissemination through policy briefs, digital platforms, and interdisciplinary collaborations.

By combining academic rigour with field engagement, ADCPS continues to demonstrate how policy research can contribute meaningfully to nation-building. Supported by philanthropy and collaborative partnerships, the Centre is helping shape governance systems that are practical, inclusive, and future-ready.



BUILDING INDIA'S AI FUTURE

CENTRE FOR MACHINE INTELLIGENCE AND DATA SCIENCE (C-MInDS)

VISION

Artificial intelligence is no longer confined to laboratories or technology firms. It is reshaping healthcare, manufacturing, finance, mobility, governance, scientific discovery, and everyday life rapidly. For India, the challenge is larger than simply adopting AI tools. It is about building the research, talent, infrastructure, and institutional capability required to shape the future of AI itself.

The Centre for Machine Intelligence and Data Science (C-MInDS) at IIT Bombay has received generous contributions from founders **Ms. Vijaya Lakshmi** and **Mr. ARR Lakhamraju**; IIT Bombay alumnus **Mr. Mohan Lakhamraju**, IIT Bombay alumnus **Mr. Beerud Sheth,** IIT Bombay alumnus **Mr. Arpit Mathur**, **Ms. Nirmala** and **Mr. Ashok Deorah**, IIT Bombay alumnus **Mr. Kashyap Deorah**, and IIT Bombay alumna **Ms. Shruti Mahajan Deorah**; sponsors IIT Bombay alumni **Mr. Shariq Rizvi**, **Mr. Varun Kacholia** and **Dr. Shashidhar Thakur**; and donors IIT Bombay alumni **Mr. Rohit Karnik, Mr. Vijay Krishnan** and **Mr. Abhinandan Das**, along with **Turing.com**, **Gupshup**, and **SBI Foundation**. Conceived as an interdisciplinary hub for AI and Data Science, the Centre brings together researchers, students, faculty, industry, and government partners to create solutions that are technically rigorous while remaining relevant to Indian realities.

With more than 75 Associated Faculty members across all major departments of IIT Bombay, CMInDS pursues state-of-the-art research, and provides advanced education in the fundamentals and applications of AI.

At a time when India is scaling its national AI ecosystem and digital infrastructure, C-MInDS is contributing to a broader effort to position the country as a creator of AI systems and foundational technologies, rather than just their consumers.



ADVANCING AI ACROSS DISCIPLINES

The Centre works across both foundational and applied domains of AI and Data Science. Its research spans machine learning, optimisation, robustness, and large-scale

AI systems, alongside applications in healthcare, finance, mobility, and engineering design. These efforts are supported through interdisciplinary academic programmes and industry partnerships that encourage collaborative problem-solving across domains.

A consistent focus across the Centre's work is responsible and inclusive AI, ensuring that advances in technology remain aligned with societal needs and practical deployment challenges.

BUILDING TALENT AND RESEARCH CAPACITY

C-MInDS combines AI research and education across degree programmes, research projects, and industry-linked initiatives.

The Centre's faculty and students have also continued to contribute to leading global research conversations.

- ~100 students graduated from the Interdisciplinary Dual Degree Program (IDDDP) since 2022.
- 13 graduates completed the MS by Research programme.
- More than 1,100 applications received annually for MS and PhD programmes.
- Two faculty members awarded ANRF ARG–MATRICS grants.
- A PMRF Fellow secured second position at the IndoML 2025 Graduate Forum for research poster.
- A faculty research team received the Aadhaar Samvaad Award for R&D Partnership on Contactless Biometrics.

TRANSLATING AI INTO REAL-WORLD SYSTEMS

C-MInDS is building an ecosystem where foundational AI research is closely linked to deployment, industry collaboration, and national priorities.

The SBI Foundation Hub for Data Science and Analytics, hosted under C-MInDS, continues to advance applied AI work in the BFSI sector through projects focused on generative AI, climate-aware banking, fraud detection, multilingual banking technologies, and operational optimisation.



The Centre's collaborations extend across industry and public systems, including:

- **Honda:** AI for mobility systems.
- **HSBC:** Secure financial technologies.
- **Indian Cyber Crime Coordination Centre (I4C):** Fraud detection and cyber applications.
- **Tata Consulting Engineers:** Generative AI for engineering workflows.
- **Dream11:** Large-scale machine learning for sports analytics.

These partnerships support a translational AI ecosystem that combines research, engineering capability, and domain expertise to build scalable technologies with both national and global relevance.

EXPANDING ACCESS TO AI EDUCATION

Alongside research, C-MInDS is working to broaden access to AI education beyond the IIT Bombay campus.

Its e-Post Graduate Diploma (e-PGD) programme in AI & Data Science has expanded to nearly 510 learners across three cohorts.

The Centre has also delivered executive education and specialised AI training programmes for organisations such as the Confederation of Indian Industry (CII), the Department of Personnel and Training (DoPT), and the Aditya Birla Group, covering themes including AI for business leadership and data-driven decision-making.

Through the NEXT AI initiative, C-MInDS conducts monthly topic-focused courses that support deeper engagement with emerging areas in AI and Data Science.

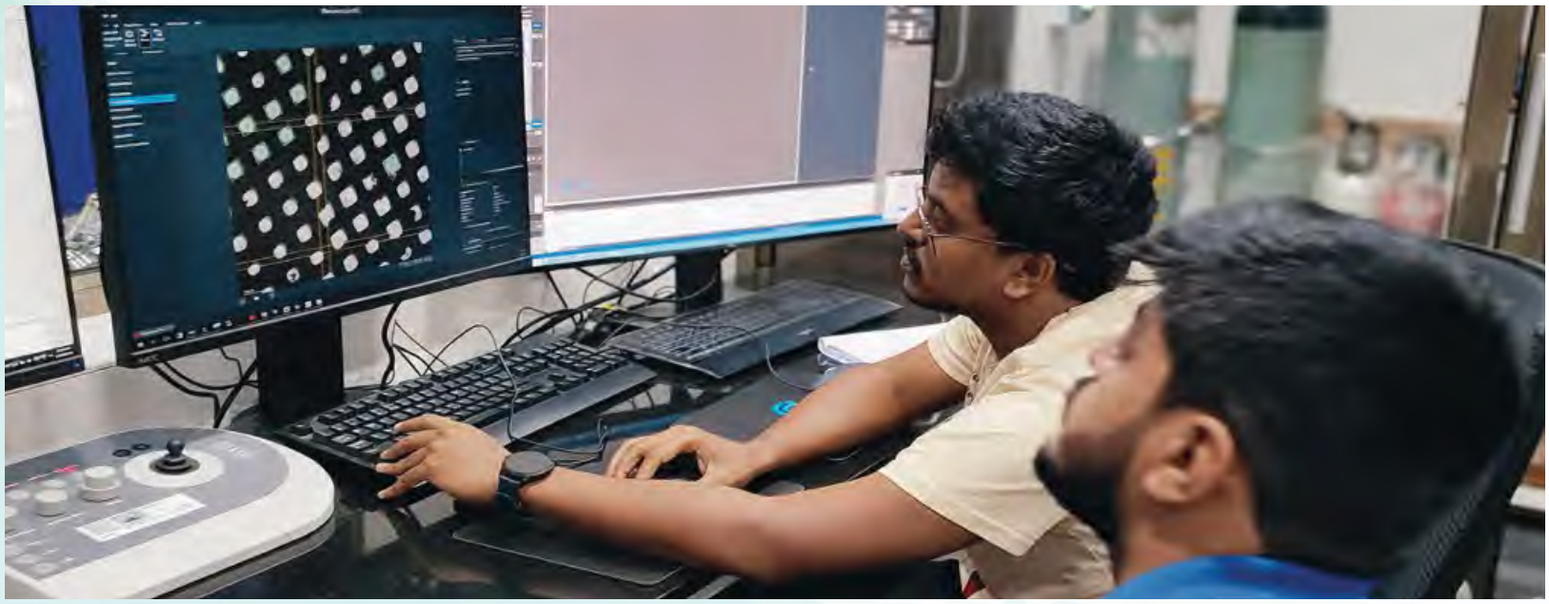
SHAPING THE AI CONVERSATION

Beyond technology development, the Centre is emerging as an important platform for dialogue on the scientific, societal, and policy dimensions of AI.

C-MInDS has convened and participated in several national and sector-focused platforms that brought together stakeholders from academia, government, industry, and research institutions.

Key engagements included:

- Conclave on AI for Science, held on 8 January, 2026, as a pre-summit meeting under the India–AI Impact Summit 2026.
- C-MInDS-led session on "AI in Science and Engineering" at Tech Connect 2025 with nearly 500 participants across physical and virtual formats.
- "Deccan Digital Dialogue: AI, Talent, and the GCC Ascent," organised with HSBC Technology India in Pune, as part of another pre-summit event linked to the India–AI Impact Summit 2026.



LOOKING AHEAD

The Centre's next phase will deepen work in foundational AI, education and interdisciplinary research.

Over the next decade, the Centre aims to strengthen its position as a globally recognised institution for AI research while deepening work in foundational AI and large-scale interdisciplinary collaboration.

POWERING THE ENERGY TRANSITION

CENTRE OF EXCELLENCE IN OIL, GAS AND ENERGY (CoEOGE)

VISION

The Energy sector is undergoing a period of deep transition. The need to strengthen energy security while improving efficiency, reducing emissions, and building future-ready systems is reshaping how the country approaches oil, gas, and emerging energy technologies.

The Centre of Excellence in Oil, Gas and Energy (CoEOGE) at IIT Bombay was established to help address these interconnected challenges through collaborative, mission-oriented research and technology development.

Working closely with public sector undertakings and industry partners, the Centre focuses on creating scalable and field-deployable solutions across the energy value chain, while also strengthening technical talent and research capability.

Its broader vision is to emerge as a national hub for high-impact energy innovation, supporting India's transition towards secure, sustainable, and technology-driven energy systems through research, translation, and capacity building.

At a time when India is expanding investments in cleaner fuels, energy efficiency, hydrogen, storage technologies, and industrial decarbonisation, the Centre's work reflects the growing importance of indigenous innovation in the country's long-term energy strategy.



SOLUTIONS ACROSS THE ENERGY ECOSYSTEM

CoEOGE's work spans a wide spectrum of the energy sector, from conventional hydrocarbons to emerging clean energy systems.

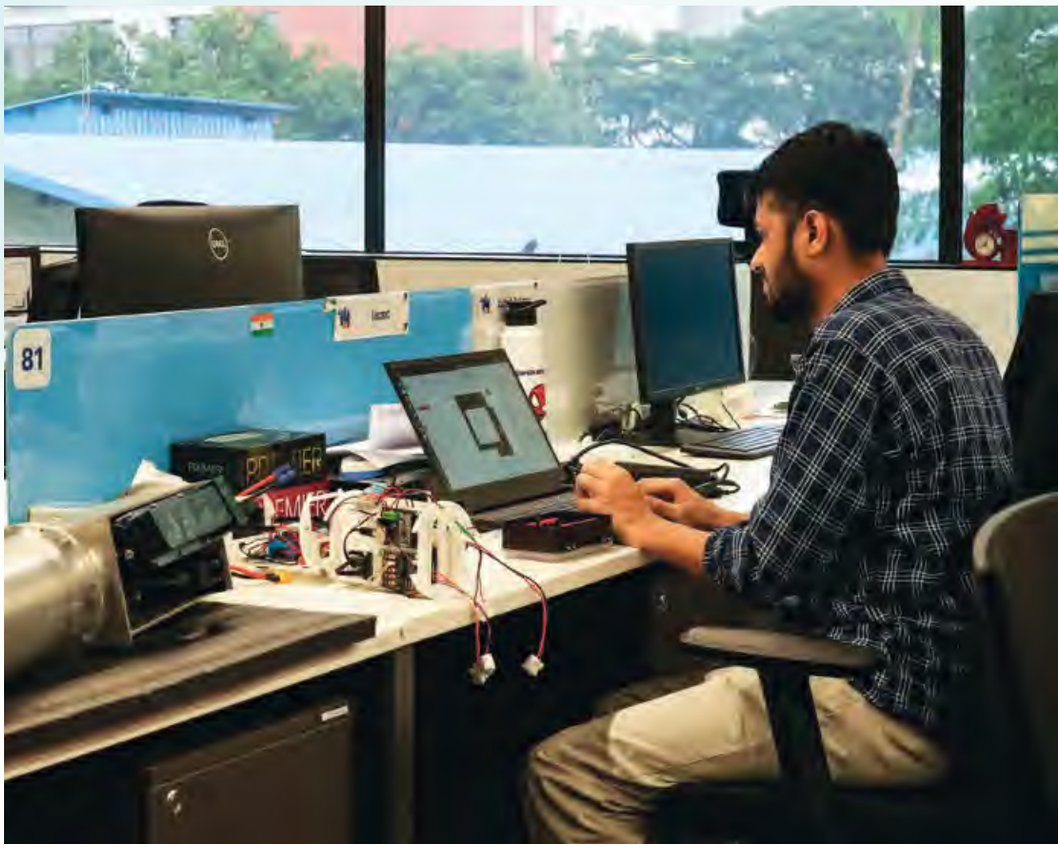
Research areas include upstream exploration and production, future-ready refineries, biofuels and biochemicals, water management, pipeline monitoring and surveillance, battery storage, hydrogen technologies, carbon management, and broader energy sustainability.

The Centre's approach combines academic research with industry-led problem solving, ensuring technologies are designed not only for scientific advancement but also for deployment in operational environments.

EXPANDING RESEARCH AND INDUSTRY ENGAGEMENT

The Centre has continued to build strong momentum across research, translational initiatives, and professional training.

- More than 110 faculty members engaged across 17 departments.
- Over 26 mission-mode projects underway during 2025.
- 15 new initiatives launched during the year.
- Introduction of a Bridge-to-Gap programme to accelerate translational research.
- More than 1,500 industry professionals trained across 50 programmes.
- Training initiatives conducted in partnership with the Ministry of Petroleum and Natural Gas (MoPNG) and leading PSUs.



This expanding ecosystem reflects the Centre's growing role as a collaborative platform connecting academia, industry, and national energy priorities

INDUSTRIAL SOLUTIONS FROM RESEARCH

The Centre's projects increasingly focus on field testing and industrial validation.

- Drill site wastewater management systems undergoing field testing.
- Pipeline inspection software benchmarked against global standards.
- Refinery anomaly detection tools for operational monitoring.
- IoT-enabled systems for infrastructure monitoring and surveillance.
- Emerging work in battery technologies and CO_2 valorisation.

These initiatives reflect a broader shift towards translational research that can directly support operational efficiency, sustainability, and technological self-reliance across the energy sector.

CREATING SECTORAL IMPACT

CoEOGE's work is already contributing to measurable outcomes in industrial environments.

Field deployments and pilot-scale applications have helped industry partners improve operational performance, strengthen monitoring systems, and enhance cost efficiency. At the same time, the Centre is helping reduce dependence on imported technologies by building indigenous capabilities across critical energy domains.

Another important outcome has been the strengthening of the industry–academia collaboration model. By bringing researchers, engineers, policymakers, and industry practitioners into the same innovation ecosystem, the Centre is helping accelerate the movement of research from laboratory development to field application.

The Centre's training programmes also contribute to research and professional capability across evolving energy systems and technologies.

LOOKING AHEAD

CoEOGE is preparing to deepen its translational and clean energy efforts over the coming years.

The Centre plans to accelerate commercialisation pathways for technologies under development while expanding research into emerging areas such as hydrogen, energy storage, and carbon management. Another major focus area will be the deeper integration of AI and digital technologies into energy systems, particularly in areas linked to monitoring, optimisation, and operational intelligence.

Alongside technology development, the Centre will continue to strengthen industry partnerships, collaborative research, and professional training initiatives to support India's transition towards a more sustainable, resilient, and innovation-driven energy future.

SUSTAINABILITY IN ACTION

GREEN ENERGY AND SUSTAINABILITY RESEARCH HUB AT IIT BOMBAY (GESH-IITB)

VISION

Climate change, resource stress, urbanisation, and rising energy demand are reshaping how societies think about growth and sustainability. The challenge today is not only developing cleaner technologies, but ensuring that research translates into scalable, real-world implementation.

Established in 2023, the **Green Energy and Sustainability Research Hub at IIT Bombay (GESH-IITB)** was created as a multidisciplinary platform for advancing research, innovation, and implementation in green energy and sustainability. The Hub brings together academia, industry, government, and civil society to bridge academic research with practical solutions for environmental and climate challenges.

Its vision is to serve as a global platform for the discovery and translation of sustainability technologies while helping accelerate the transition towards green energy through scientific research, capacity building, and technology translation. GESH-IITB also aims to emerge as a world leader in sustainability research, education, innovation, and climate-oriented solutions aligned with the UN-SDGs (United Nations Sustainable Development Goals).

A distinctive feature of the Hub is its “living lab” approach, which uses the IIT Bombay campus itself as a testbed to pilot and scale sustainability solutions in operational environments.



EXPLORE IIT BOMBAY’S LIVING LAB WITH THE GREEN ENERGY AND SUSTAINABILITY HUB (GESH-IITB).

BUILDING A SUSTAINABILITY ECOSYSTEM

GESH-IITB works across multiple sustainability domains spanning science, engineering, infrastructure, policy, and systems thinking. Its focus areas include:

- Clean energy and energy systems.
- Circular economy, including waste, water, and food systems.
- Climate systems, risk, and resilience.
- Sustainable infrastructure, buildings, and mobility.
- Governance, economy, and social systems.
- Natural resources, pollution, and ecosystems.
- Sustainable manufacturing systems.

The Hub supports both seed and translational research projects while encouraging industry-academia-government collaboration. Alongside sustainability research, its core verticals include education and training, green entrepreneurship, and sustainability outreach.

RESEARCH, LIVING LABS, AND CAPACITY BUILDING

GESH-IITB's programmes combine research with implementation, training, and experiential learning. Key initiatives include:

- Seed and translational research projects across Technology Readiness Levels (TRL 1–3 and TRL 3+).
- IITB Living Lab Research Projects that pilot sustainability solutions on campus.
- Living Lab Fellowship programmes for student-led action-oriented learning.
- Industry-driven experiential learning programmes, including energy auditing activities with academic credits.
- Multidisciplinary sustainability training programmes for workforce upskilling.
- "Sustainability Reality Check" conferences, seminars, and roundtables to identify research priorities and share knowledge.



EXPANDING RESEARCH AND OUTREACH

During 2025–26, GESH-IITB expanded its activities across research, technology creation, outreach, and partnerships.

- 17 early-stage research projects.
- 4 translational projects.
- 6 IIT Bombay pilot Living Lab research projects.
- 5 technologies created.
- 11 publications.
- 5 patents filed.
- 4 start-ups emerging from research projects.
- 304 hours of industry training programmes delivered.
- 249 professionals trained.
- 6 action-oriented training programmes and hackathons conducted.
- 125 Living Lab fellows and volunteers engaged.
- 300 hours of outreach events and activities.
- Collaborations and events with 5 global universities.



REAL-WORLD APPLICATION

Several GESH-IITB projects demonstrate its focus on deployable sustainability solutions. One notable initiative is an affordable solar desalination technology using IIT Bombay-developed Nano Carbon Florets-based devices. The system demonstrated the ability to produce up to 18 litres of freshwater per square metre per day at nearly one-third the cost of conventional reverse osmosis systems. Using an ultra-thin Janus-faced floating film, the technology desalinated seawater up to 35,000 ppm while delivering potable water below 10 ppm. Published in Advanced Science and featured on the journal's back cover, the project has already seen pilot deployment in the Rann of Kutch, Gujarat.

Another initiative focuses on climate and weather-smart agricultural water management systems that help farmers make irrigation and crop decisions under changing climatic conditions. The project aims to improve water-use efficiency, reduce crop losses, strengthen food and water security, and improve resilience in drought-prone regions such as Kaledhon village. The initiative also supports vulnerable groups such as women and elderly people affected by migration-driven social changes.

Researchers have also developed the Aquasys real-time water quality monitoring system for continuous and remote monitoring of polluted water bodies. The platform measures multiple physicochemical parameters and contaminants, including arsenic, fluoride, chromium, and iron, while enabling early pollution detection and long-term environmental monitoring.

Another project developed a national-scale flood resilience mapping framework integrating hazard, exposure, and socio-economic vulnerability indicators. The technology enabled village-level flood risk assessment in Odisha's Jagatsinghpur district and has been transferred to the National Remote Sensing Centre for wider implementation.

GESH-IITB's Living Lab initiatives also include a biomass gasification system that converts fallen campus leaves into cooking fuel. Piloted at the IIT Bombay staff canteen, the system reduces LPG consumption by 40–50%, achieves nearly 60% efficiency, and cuts about 8 tonnes of CO_2 emissions annually. The technology has been licensed for scale-up.

LOOKING AHEAD

GESH-IITB plans to deepen interdisciplinary research, educational programmes, and external collaborations while strengthening shared research infrastructure and translational deployment. The next phase will focus on pilot implementation, entrepreneurship, policy engagement, and scaling solutions in areas of national importance.

By combining research, implementation, and experiential learning, GESH-IITB is building a sustainability ecosystem designed to deliver scalable and real-world climate solutions aligned with India's long-term development priorities.

GOGRI HUB FOR MEMBRANES RESEARCH, A UNIT OF "TRYST"

VISION

Many of the world's most pressing challenges—from clean water access and green hydrogen production to pharmaceutical manufacturing—depend on membranes: advanced filtration systems capable of separating useful molecules from contaminants at microscopic scales.



The absence of specialised industrial-scale testing infrastructure has often limited membrane research to laboratory settings, preventing promising technologies from progressing towards industrial deployment.

With the support of IIT Bombay alumni **Mr. Renil Gogri**, **Mr. Mirik Gogri**, and the **Gogri family**, the **Gogri Hub for Membranes Research** was established to address this. By creating a dedicated facility for membrane science and engineering, the Hub enables researchers to move beyond small-scale experimentation towards industrial validation and translational development.

Its broader vision is to help establish India as a global leader in membrane science by accelerating the transition from molecular research to scalable, industry-ready separation technologies.

BUILDING ADVANCED SEPARATION TECHNOLOGIES

The Hub's research agenda focuses on advanced membrane materials designed for high-impact industrial and environmental applications.

One major area is environmental sustainability, particularly high-flux membranes for water purification and desalination aimed at addressing water scarcity challenges.

The Hub will also be supporting work linked to energy storage and gas separation production, where specialised membranes play an important role in electrolysis and battery systems. Research will also be undertaken in industrial filtration, where precise molecular separation is essential for producing high-purity biopharmaceuticals and reducing industrial effluent.

Together, these efforts support the development of indigenous filtration and separation technologies tailored to India's environmental and industrial needs.

A TRANSLATIONAL RESEARCH FACILITY

The year 2025–26 marked a major milestone with the physical completion of the Gogri Hub facility within the IIT Bombay Research Park.

The infrastructure is now operationally ready, featuring specialised laboratories equipped with heavy-duty experimental modules designed for sustained technical validation and industrial-scale testing. The facility has also been integrated into IIT Bombay's broader innovation ecosystem, providing researchers with a dedicated environment to evaluate membrane durability and performance under industrial conditions.

This transition from infrastructure development to operational readiness gives the Institute a specialised facility for membrane science aligned with nationally significant priority areas in sustainability, energy, and advanced manufacturing.



LABORATORY RESEARCH TO INDUSTRIAL VALIDATION

A key project currently being developed through the Hub involves high-performance nanoparticle-embedded membranes.

These membranes are designed for enhanced alkaline water electrolysis, a critical process in green hydrogen production. By embedding nanoparticles within the membrane structure, the research team has achieved significant efficiency improvements compared to conventional industrial membranes, with the broader goal of reducing the cost of domestic hydrogen production.

The Hub is also supporting projects focused on:

- Low-pressure water desalination systems.
- Recovery systems for pharmaceutical solvents.
- Industrial filtration technologies designed for translational deployment and industry testing.

The emphasis across these initiatives remains on moving academic breakthroughs towards deployable prototypes and scalable industrial applications.

FROM DISCOVERY TO DEPLOYMENT

The Gogri Hub's larger impact lies in helping bridge the transition between laboratory discovery and commercially viable technology.

By locating the Hub within the IIT Bombay Research Park, Institute has created an environment where researchers and industry partners can work closely on complex separation challenges. This proximity accelerates the validation of new membrane chemistries while ensuring that the work can efficiently move towards industrial application.

The broader goal is to ensure that membrane research evolves beyond patents into practical technologies capable of supporting clean water access, renewable energy systems, and industrial sustainability.



SCALING INNOVATION FOR PUBLIC GOOD

HDFC ERGO–IIT BOMBAY INNOVATION LAB (HE-IITB)

VISION

As climate risks intensify, healthcare systems evolve, and financial ecosystems become increasingly data-driven, the need for technologies that can anticipate, assess, and respond to emerging risks is growing rapidly. Yet many promising academic innovations struggle to move beyond early-stage research into deployable tools capable of operating at scale.

The **HDFC ERGO–IIT Bombay Innovation Lab (HE–IITB)** was established to bridge this gap. The initiative creates a dedicated pathway that connects interdisciplinary research with real-world deployment through faculty-led projects and a start-up innovation fund.

Its broader vision is to build deep-tech solutions that strengthen societal resilience. The Lab brings together academic research and translational development across climate, health, and financial systems, with a focus on technologies that can be tested and deployed beyond the laboratory.



BUILDING TECHNOLOGIES FOR RISK AND RESILIENCE

The Lab's work spans multiple sectors where data, predictive systems, and applied technologies can improve resilience and decision-making. Its focus areas include:

- **AI for Risk and Climate-Tech:** Hyperlocal weather modelling and risk assessment systems.
- **Health-Tech and Wellbeing:** Non-invasive diagnostics, needle-free delivery systems, and holistic health analytics.
- **Fintech and Actuarial Innovation:** AI-driven underwriting, fraud detection, and next-generation risk modelling.
- **Societal Resilience:** Supporting the transition of research prototypes towards city-scale and national deployment.

AN INTERDISCIPLINARY INNOVATION ECOSYSTEM

Since its launch, the Lab has developed a growing portfolio of interdisciplinary projects and translational initiatives.

- Seven projects funded across diverse departments at IIT Bombay.
- Panchkosha wellbeing platform scaled to more than 1.3 lakh users, including students and corporate employees.
- A collaborative ecosystem established involving municipal bodies, clinicians, insurers, and regulators.



DEEP-TECH BRINGS PUBLIC IMPACT

The Lab's projects show different stages of translation from research to field deployment.

The Mumbai Urban Flood Forecasting System has helped strengthen urban resilience by providing hyperlocal rainfall forecasts and real-time alerts while integrating citizen-generated information into flood response systems.

The Panchkosha initiative has moved from a conceptual wellbeing framework to a large-scale deployed platform supporting proactive mental health assessment. The platform has already been rolled out across organisations including Larsen & Toubro, Hindalco Industries, Adani Group, Bajaj Electricals, NDMC Schools in Delhi, IIM Ahmedabad, IIT Roorkee, and FORE School of Management. User feedback has remained consistently positive, with an average rating of 4.4 out of 5 from more than 400 users.

In healthcare, the oral cancer screening initiative addresses a major public health challenge where late-stage diagnosis significantly lowers survival outcomes. By transforming laser illumination technology into a clinical diagnostic tool, the project is helping build pathways for wider translational applications in oncology and stroke care.

The Lab is also exploring telematics systems with applications across insurance, fleet management, and road-safety analytics, supporting behaviour-based premium pricing and data-driven driver coaching.

LOOKING AHEAD

The next phase of the HDFC ERGO–IIT Bombay Innovation Lab will focus on expanding both translational deployment and institutional capability.

Plans are underway to establish a National Hub for AI in Insurance, Risk, and Climate Analytics, aimed at strengthening Indian research and coordination in these domains. The Lab also plans to expand major projects such as flood forecasting systems and health diagnostics into additional Indian cities and clinical settings.

Other priorities include launching dedicated programmes in actuarial science and risk analytics to help address talent gaps in the insurance sector, while strengthening start-up incubation and commercialisation pathways to support the transition of more laboratory innovations into independent market-ready ventures.



CAPACITY BUILDING FOR SUSTAINABILITY

IIT BOMBAY-HONEYWELL CENTRE OF EXCELLENCE FOR FUTURE SKILLS AND INNOVATION

FUTURE CHANGEMAKERS

India's sustainability transition will ultimately depend on the people shaping how energy is used, cities are designed, waste is managed, and businesses grow. Yet, sustainability is rarely taught as a structured discipline at the undergraduate level. Students from non-urban areas lack access to mentorship, research ecosystems, or innovation platforms that can help transform ideas into scalable solutions.

Launched in December 2025 with support from **Honeywell Hometown Solutions India Foundation**, the **IIT Bombay-Honeywell Centre of Excellence for Future Skills and Innovation** was created to address this gap through an integrated national platform for sustainability education, applied research, innovation, and outreach.

Over 2025–2030, the Centre aims to train over 1 lakh undergraduate students in sustainability while supporting research, innovation, and enterprise-building aligned with India's long-term development priorities. Bringing together expertise from engineering, economics, behavioural science, public policy, and design, the initiative has been structured to ensure that learning, research, incubation, and outreach continuously reinforce one another.



LEARNING AT NATIONAL SCALE

The Centre's sustainability learning programme has been designed to expand access to interdisciplinary education across institutions that have traditionally had limited exposure to sustainability studies.

Fifteen expert-led courses are being developed across themes such as resources and their use, emissions, water and sanitation, waste management, decarbonisation, green finance, sustainable development, and forest resource management. Delivered through blended digital and live-learning formats, the programme is intended to reach undergraduate students across disciplines and geographies.

The curriculum, designed by IIT Bombay faculty, will combine academic grounding with practical understanding of sustainability challenges and implementation pathways.

KEY PROGRESS

- 15-course sustainability curriculum under development.
- 6 course modules currently in active development.
- 14 students directly enrolled on the Learning Management System.
- 590 positive responses received via interest registration.

SCIENCE IN PRACTICE

The Centre's translational research vertical focuses on sustainability challenges that combine scientific inquiry with field-level implementation and policy relevance.

Twelve to fifteen applied research projects are planned over the programme period, with pathways for policy integration, pedagogical refinement, and enterprise application.

Some of the projects underway are:

Research on sustainable cooling technologies using natural CO2 refrigerants (aligned with the India Cooling Action Plan); village-level pesticide contamination assessment; and water and sanitation assessment frameworks for small towns.

Each project incorporates stakeholder engagement and capacity-building components, helping extend research outcomes beyond academic publication into practice and community deployment.



PATHWAYS FOR YOUNG INNOVATORS



A defining feature of the Centre is its emphasis on creating opportunities for undergraduate students from beyond India's largest urban centres.

In March and April 2026, the Centre conducted sustainability workshops across Mumbai, Pandharpur, Kolhapur, Chhatrapati Sambhajinagar, Nanded, Nagpur, and Pune. A total of 1,033 colleges across Maharashtra were contacted as part of the outreach effort, while 1,829 students registered for the half-day workshops. Around 860 students participated across the seven locations.

The workshops also became the launchpad for the Sustainability Innovation Challenge, a multi-stage idea competition connecting students with mentors, researchers, and future incubation pathways.

Over 130 student teams submitted ideas spanning green energy, sustainable agriculture, water management, circular economy solutions, and environmental governance. Among concepts presented were CO_2- and methane-absorbing smart bus stops, AI-enabled carbon credit platforms for farmers, biodegradable footwear created from agricultural waste, and rubber geocell road technologies for rural infrastructure.

Winning teams from regional rounds will go to the All-India Hackathon at IIT Bombay.

INNOVATION & OUTREACH HIGHLIGHTS

- 1,033 colleges contacted across Maharashtra.
- Workshops conducted across 7 cities.
- 1,829 student registrations for sustainability workshops.
- 860 students participated in workshop sessions.
- Over 130 student teams entered the Sustainability Innovation Challenge.
- Winning teams advancing to the All-India Hackathon at IIT Bombay.

AN INTERDISCIPLINARY SUSTAINABILITY PIPELINE

The Centre has also launched a fellowship programme designed to build long-term interdisciplinary leadership in sustainability.

The programme plans to support 15 research fellows contributing to research, training, and outreach activities while building their own capacities across sustainability domains. The first cohort has already begun taking shape, with 3 research fellows shortlisted and fellowships commencing from January 2026.

Current fellowship themes include energy storage, climate policy, and sustainability research.

What distinguishes the Centre is the way its five verticals are intentionally connected. Research informs curriculum design, trained students move into innovation programmes, promising ideas enter incubation pathways, and outreach efforts expand participation across institutions and regions. This integrated structure marks a deliberate shift away from siloed education or standalone outreach initiatives toward a sustained ecosystem for sustainability capability-building.

LOOKING AHEAD

Over the coming year, the Centre plans to complete development of all 15 sustainability course modules.

The All-India Hackathon in 2026-27 at IIT Bombay will bring together winning student teams from the Maharashtra rounds into a national sustainability innovation platform. Additional applied research projects are also planned for FY2026-27, building on the projects already underway and deepening engagement with policy stakeholders and field partners.

The Centre plans to strengthen outreach beyond Maharashtra while refining programme schedules based on lessons from the first cycle.

BUILDING INDIA'S AI BACKBONE

IIT BOMBAY–HRTI CENTRE OF EXCELLENCE IN VISION, MULTIMODAL AI, AND GEO-INTELLIGENCE

Most artificial intelligence systems powering applications in healthcare, agriculture, education, autonomous systems, and remote sensing today are developed outside India and trained on datasets that do not adequately reflect Indian languages, landscapes, or operating conditions.

Established in 2025 with support from **HRTI Private Limited**, the **IIT Bombay–HRTI Centre of Excellence in Vision, Multimodal AI, and Geo-Intelligence (VIMAGE)** has been created to help build India's foundational AI capabilities through open, transparent, and India-ready models.

The Centre's objective is to develop open-source multimodal AI systems that integrate vision, language, and audio for Indian contexts, while advancing research in healthcare, robotics, remote sensing, and generative AI.



BUILDING INDIA-READY MULTIMODAL AI

The Centre's research programme spans multiple interconnected areas of AI capability-building.

Its work includes:

- Multimodal foundation models that jointly understand images, language, and audio in multilingual and visually diverse Indian environments;
- Remote sensing and geo-intelligence systems for climate monitoring, agriculture, disaster response, and urban planning;
- Safe and reliable AI that flags uncertainty instead of producing overconfident errors;
- Perception systems for robotics and autonomous navigation
- Generative AI techniques for image generation, simulation, and data augmentation.

CORE RESEARCH AREAS

- Multimodal foundation models combining vision, language, and audio.
- Remote sensing and geo-intelligence systems.
- Safe and reliability-aware AI models.
- Vision systems for robotics and autonomous applications.
- Generative AI for vision, simulation, and data augmentation.

INFRASTRUCTURE ESTABLISHED

- 5 NVIDIA RTX PRO 6000 Blackwell workstations with 96 GB GPUs each.
- 15 NVIDIA RTX 12 GB workstations.
- Cloud compute access with 4×L40s systems.

BUILDING RESEARCH INFRASTRUCTURE

Within its first year, the Centre has established both its governance structure and foundational research infrastructure.

Dedicated office and research laboratory spaces have been earmarked on campus. Significant computing infrastructure has also been procured to support large-scale AI research and model training.



GEOMELD: BUILDING OPEN GEOSPATIAL AI FOR INDIA

One of the Centre's major initiatives is GeoMeld, a large-scale multimodal remote-sensing dataset developed in India.

GeoMeld combines optical imagery from Sentinel-2, radar data from Sentinel-1, elevation, canopy height, and land-cover data into approximately 2.5 million spatially aligned samples. Each sample is paired with semantically grounded captions linked to measurable geographic features. The companion model, GeoMeld-FM, has been designed to generate AI representations that are both physically accurate and semantically meaningful.

The project has already gained global visibility, with a workshop accepted at CVPR 2026, while further submissions remain under review at ECCV, NeurIPS, and BMVC 2026. The datasets and models have also been released openly on GitHub and Hugging Face.

ADVANCING SAFE AND RELIABLE AI

The Centre is also addressing a growing challenge in AI deployment: systems that remain highly confident even when encountering unfamiliar inputs.

Its RA-TPT (Reliability-Aware Test-Time Prompt Tuning) research introduces techniques that help AI systems recognise uncertainty instead of generating confidently incorrect outputs. When AI models encounter unfamiliar data, standard adaptation techniques can drive calibration errors to 25–30%.

RA-TPT introduces a margin-based calibration objective and dynamic gradient projection that help maintain calibration error between 2–10% across 18 prompt templates.

The research has direct relevance for medical diagnostics, autonomous systems, and protection against algorithmic bias. Another active research stream focuses on generalised category discovery in satellite imagery, enabling AI systems to identify previously unseen categories from unlabelled geospatial data.

ACTIVE RESEARCH STREAMS

- Category discovery in satellite imagery.
- Safe and scalable foundation models.
- Reliability-aware AI for vision-language models.
- Research submissions under review at ECCV, NeurIPS, and BMVC 2026.



BUILDING INDIA'S AI TALENT PIPELINE

Beyond research, the Centre is positioning itself as a national platform for AI capability-building and knowledge exchange.

Its inaugural workshop, "Recent Trends and Advances in Computer Vision Research," held on 21 March 2026, drew over 160 registrations across academia, industry, and government. The programme featured 12 distinguished speakers discussing self-supervised learning, AI safety, machine unlearning, and emerging challenges in computer vision research.

The Centre plans to expand this ecosystem through Summer and Winter Schools, distinguished lecture series, internship programmes, and collaborative research initiatives designed to strengthen India's next generation of AI researchers.

LOOKING AHEAD

In 2026–27, the Centre plans to operationalise its central research and collaborative spaces while fully deploying and optimising the graphics processing unit (GPU) clusters and cloud infrastructure.

An open call for flagship research proposals will support expansion across key AI research verticals, alongside recruitment of researchers across focus areas. The Centre also plans to release a shared multimodal research repository featuring curated datasets, benchmark models, and open research tools for wider community use.

Industry and government partnerships will be a key focus, with planned engagement through co-funding models and research proposals to organisations, including Anusandhan National Research Foundation (ANRF), Department of Science and Technology (DST), Ministry of Electronics and Information Technology (MeitY), and the Indian Space Research Organisation (ISRO).

Over the longer term, VIMAGE seeks to establish IIT Bombay as a globally competitive hub for vision and multimodal AI research—building India-ready foundation models and contributing open, trustworthy AI systems to the wider research ecosystem.



SCALING INCLUSIVE MEDTECH

IITB–ICICI BETIC

For many patients in India, a medical emergency quickly becomes a financial crisis. Advanced medical technologies used in hospitals are often imported, expensive, and not always designed for Indian clinical realities or healthcare settings. This dependence on overseas devices increases costs and limits access, particularly for patients who cannot afford high-end treatment options.

The **Biomedical Engineering & Technology Innovation Centre (BETIC)** at IIT Bombay was established to address this gap by developing medical technologies within India. Through a partnership with **ICICI Foundation**, this effort has now expanded into the IITB-ICICI BETIC, a scaled-up platform designed to accelerate affordable and indigenous medical device innovation.

The Centre aims to ensure that the future of healthcare is not only technologically advanced, but also accessible and inclusive. By combining engineering, clinical collaboration, rapid prototyping, and entrepreneurship support, the initiative is building pathways for affordable bedside-ready solutions that directly address unmet healthcare needs.



BUILDING A MEDTECH INNOVATION ECOSYSTEM

The Centre has been designed as a long-term ecosystem for medical entrepreneurship and indigenous device development.

A central focus is the expansion of innovation infrastructure to support a five-fold increase in medical device prototyping capacity. Alongside this, the Centre is working to reduce India's dependence on imported medical technologies by enabling the development of high-quality, low-cost domestic alternatives.

The initiative also places strong emphasis on human capital and entrepreneurship. Through training programmes, start-up support, and interdisciplinary collaboration, the Centre aims to create a sustained pipeline of healthcare innovators capable of building a self-sustaining medical device ecosystem in India. Equally important is its patient-centric approach. The Centre prioritises technologies that directly improve clinical outcomes for underserved patient populations, ensuring that affordability and accessibility remain central to the innovation process.

EXPANDING INFRASTRUCTURE FOR RAPID INNOVATION

A major milestone has been the establishment of the expanded Centre on the sixth floor of IIT Bombay's new Aerospace Engineering building.

The Centre has been equipped with advanced CNC precision machines and multi-material 3D printers that enable rapid prototyping and faster product development cycles. Advanced signal analysers and surgical simulators have also been deployed, allowing researchers and innovators to test, refine, and iterate devices quickly within clinically relevant environments.

This infrastructure has been designed to support interdisciplinary teams working across engineering, healthcare, and design, helping move ideas from concept to prototype far more rapidly than conventional development cycles allow.

KEY FOCUS AREAS

- Scale-up of medical device innovation infrastructure.
- Indigenous development of affordable medical technologies.
- Healthcare entrepreneurship and start-up support.
- Patient-centric device innovation for underserved populations.



INFRASTRUCTURE & CAPACITY EXPANSION

- Expanded Centre established in the Aerospace Engineering building.
- Advanced CNC precision machining capability.
- Multi-material 3D printing for rapid prototyping.
- Surgical simulators and signal analysers integrated into testing workflows.
- Infrastructure designed to support a five-fold increase in prototype development.

MEETING HIGH-IMPACT CLINICAL NEEDS

One major initiative centres on developing low-cost bedside solutions targeted at priority clinical needs. The programme aims to create medical devices that are up to five times more affordable than existing market leaders while remaining practical for hospital deployment. Several prototypes are currently undergoing iterative testing and refinement.

The Centre is also creating a specialised "incubation-lite" environment that will support 100 medical device start-ups with technical, prototyping, and regulatory guidance. The objective is to help academic research move successfully from laboratory development into commercially viable healthcare products.

At the core of these efforts is the Rapid Prototyping Laboratory, where 3D bioprinting and precision CNC machining technologies allow innovators to build high-fidelity prototypes within weeks instead of months.

INNOVATION PIPELINE TARGETS

- 100 medical device prototypes planned over the next decade.
- Support for 100 medical technology start-ups.
- Devices targeted at costs up to five times lower than current market leaders.
- Rapid prototyping timelines reduced from months to weeks.



HUMAN CAPITAL FOR HEALTHCARE INNOVATION

The Centre's long-term plans extend beyond devices and infrastructure to workforce development and entrepreneurship.

Programmes have been initiated to train 1,500 healthcare innovators while facilitating 500 high-value jobs in medical entrepreneurship. By embedding innovation infrastructure within the Institute, the Centre aims to create sustained pathways for product-oriented healthcare engineering and translational research.

The initiative has set a future goal of reaching more than 10,000 patients through affordable healthcare technologies.

LOOKING AHEAD

Over the coming year, the Centre plans to complete full operationalisation of its Aerospace Engineering facility, including installation of specialised medical-grade signal analysers and surgical simulators by late 2026.

The initiative is also targeting delivery of its first 10 medical device prototypes under the expanded Centre structure during FY2026–27. This is also when the first major cohort of the 1,500-innovator training programme is expected to commence, alongside the onboarding of the initial start-up support cycle for medical technology ventures.

Another major priority will be establishing regulatory collaboration pathways with national agencies to streamline certification and translation of Centre-developed devices into real-world healthcare deployment.



OPTIMISING THE FUTURE OF LOGISTICS

IIT BOMBAY-FEDEX CENTER FOR ADVANCED LOGISTICS AND FOCUSED ANALYTICS (ALFA)



VISION

Global logistics networks are becoming more complex as e-commerce expands, supply chains fragment, and expectations around speed, reliability, and sustainability continue to rise. Traditional logistics systems often struggle to respond to rapidly changing demand conditions, particularly in areas such as forecasting, routing, operational planning, and real-time decision-making.

The **IIT Bombay-FedEx Center for Advanced Logistics and Focused Analytics (ALFA)**, a joint initiative of IIT Bombay and **FedEx**, was established to help address these challenges through a collaborative platform that connects academic research with real-world logistics operations. By combining advanced analytics, artificial intelligence, and operations research, the Center is working towards scalable and data-driven solutions for modern supply chains while also building specialised talent for the logistics sector.

Its broader vision is to establish a globally relevant hub for logistics innovation that enables more efficient, sustainable, and intelligent supply chain systems.

At a time when logistics is increasingly becoming a strategic pillar of manufacturing, e-commerce, and digital commerce ecosystems, the Center's work reflects the growing importance of data-driven infrastructure and operational intelligence in India's economic growth story.

BUILDING SMARTER LOGISTICS

IIT Bombay FedEx-ALFA's work spans several interconnected areas of logistics research and operational optimisation.

Its focus on analytics-driven operations planning includes the use of artificial intelligence, machine learning, and advanced analytics for demand forecasting, routing, multimodal logistics planning, and system-level optimisation.

The Center is also working on digitalisation and intelligent infrastructure through the integration of automation, sensing systems, and immersive digital technologies aimed at improving warehouse efficiency, material handling, data visibility, and real-time decision support.

Another important area of work involves wellness and safety within logistics environments. This includes studying worker health, fatigue, workload, and cognitive performance to help design safer and more productive operational systems.

STRENGTHENING RESEARCH AND TALENT DEVELOPMENT

The Center continues to expand its interdisciplinary research and academic ecosystem.

- 25 faculty members engaged across research areas.
- 25 fellowships awarded across PhD and M.Tech. programmes.
- 8 research projects launched during 2024, with 7 ongoing and 1 completed.
- 4 additional projects initiated in 2025 addressing emerging logistics challenges.
- Dedicated research and collaboration spaces established at IIT Bombay.
- Executive education initiatives launched in AI-driven supply chain analytics.
- Pre-incubation support extended to 7 student teams through mentorship, workshops, prototyping support, and micro-grants in logistics-focused domains.



RESEARCH WITH OPERATIONAL RELEVANCE

The Center's projects are designed around practical supply chain and logistics challenges faced by industry. Key initiatives include:

- **AI-Based Forecasting:** Machine learning models for demand prediction and capacity planning aimed at improving operational efficiency.
- **Autonomous Retrofits:** Low-cost automation solutions for existing warehouse systems such as forklifts.
- **Cold Chain Monitoring:** Sensor-based systems for real-time tracking of temperature-sensitive shipments.
- **Reverse Logistics Optimisation:** Models designed to reduce empty miles and improve fleet utilisation.
- **Human Factors Systems:** Tools for assessing fatigue, workload, and cognitive performance in logistics environments.
- **Research Dissemination:** 2 research papers presented at NeurIPS 2025 and COMSNETS 2026, with poster presentations at WCTR 2026, RITEEC 2025, and BAMS–ORSI 2024.



RESEARCH INTO OPERATIONAL REALITIES

IIT Bombay FedEx ALFA's approach is centred on sustained engagement with industry stakeholders to better understand operational realities across logistics and supply chains.

Through industry discussions, site exposure, and operational inputs, research projects are being shaped around practical applications in areas such as analytics-driven logistics planning, digitalisation, intelligent infrastructure, sustainability, and workforce wellness and safety.

The Center is helping strengthen the talent ecosystem by training students and professionals in advanced logistics analytics and supply chain systems, preparing them for a rapidly evolving sector increasingly shaped by AI, automation, and digital infrastructure.

LOOKING AHEAD

The Center plans to progressively strengthen the advanced logistics and analytics research ecosystem at IIT Bombay, while expanding fellowship-driven talent development efforts.

The next phase will also focus on deepening industry engagement, creating new collaborative opportunities with academic and sectoral partners, and further strengthening entrepreneurship and start-up engagement initiatives linked to logistics and supply chain innovation.



ADAPTIVE AI FOR FINANCE

IITB–OPTIVER AI INNOVATION LAB

Financial markets present difficult conditions for AI systems: behaviour changes over time, data can be sparse or uneven, and some applications require decisions at very low latency. These conditions create research challenges for models that need to learn and adapt as new data arrives.

Established during 2025–26, the **IITB–Optiver AI Innovation Lab** supports research in adaptive machine learning for financial applications. Its work spans online learning under changing conditions, sparse and irregular data, foundation models for financial datasets and ultra-low-latency inference. Over the longer term, the Lab aims to strengthen research capability and develop specialised talent in AI for finance.

Focus Areas: Adaptive Online Learning • Resilience Under Non-Stationarity • Sparse and Irregular Data • Foundation Models for Finance • Ultra-Low-Latency Inference



KEY HIGHLIGHTS

- Four research grants awarded:
  - Online Learning Under Non-Stationarity
  - Learning from Sparse / Skewed Data
  - Foundation Models for Tabular & Time-Series Data
  - Multi-Resolution Adaptive Online Learning
- Research-grade computing infrastructure established, including:
  - Two NVIDIA RTX PRO 6000 Max-Q GPUs (96 GB each)
  - Two RTX 5090 GPUs
  - AMD EPYC 9554 64-core CPU
  - Eight Dell Precision workstations
  - High-capacity NAS storage
- Hosted a national symposium on AI Innovation in BFSI Services on 28 March 2026, featuring keynote addresses, panel discussions, paper presentations and industry workshops on AI applications in insurance and banking.

LOOKING AHEAD

Over the coming year, the Lab will:

- Operationalise the GPU cluster to support large-scale model training for the Lab's research programmes.
- Expand the BFSI Symposium model to broaden industry participation and strengthen structured dialogue between research and practice.
- Identify pathways for translating first-year research into prototypes and evaluate opportunities for future industry application.
- Develop specialist talent in AI for finance through researcher training and student participation in sponsored projects.

CURRENT RESEARCH

- **Online Learning Under Non-Stationarity:** Developing theoretically grounded algorithms for heavy-tailed, non-stationary financial signals, with the aim of enabling continuous recalibration without repeated retraining.
- **Learning from Sparse / Skewed Data:** Developing sparse-data transformers and imbalance-aware learning methods for applications such as fraud detection, insurance risk assessment and credit scoring, where labelled data can be limited or highly imbalanced.
- **Foundation Models for Tabular & Time-Series Data:** Developing transformer architectures pre-trained on financial transaction logs and investigating transferable representations for multimodal and cross-industry applications.
- **Multi-Resolution Adaptive Online Learning:** Developing and evaluating ultra-low-latency online-learning methods across multiple temporal resolutions for potential applications in algorithmic trading and real-time portfolio risk management.



AN ECOSYSTEM FOR DIGITAL TRUST

IIT BOMBAY TRUST LAB

As financial systems become increasingly digital and AI-enabled, questions around privacy, cybersecurity, and the protection of sensitive information are becoming critical. Addressing them calls for advanced technologies, research, and sustained collaboration between academia and the institutions that eventually put these solutions to work.

The **IIT Bombay TRUST Lab** generously contributed by **Dr. Shridhar Shukla**, brings these strands together, creating an ecosystem for research and engagement around cybersecurity, privacy, and digital trust. Within this wider ecosystem, focused partnerships can take research into specific sectors and real-world applications.

The Lab brings together research, technology development, education, and industry engagement, creating opportunities to address emerging challenges in cybersecurity, privacy, and digital trust. Its activities span foundational research, applied technology development, capacity-building, and collaboration with academic, industry, and institutional partners.



FOCUS AREAS

The work being pursued through TRUST Lab spans a range of technologies and applications:

- Differential privacy.
- Federated learning.
- Secure multi-party computation.
- Homomorphic encryption.
- Privacy-preserving AI.
- AI-enabled cybersecurity.
- Applied cryptography and secure systems.
- Data protection and regulatory alignment.

Together, these areas address foundational research and applied needs in the BFSI sector. The work ranges from behavioural analysis, anomaly detection, and threat intelligence to secure communication, transaction integrity, and cryptographic resilience.

CONNECTING WITH THE SECTOR

TRUST Lab's engagement extends beyond technology development to capacity-building and interaction with industry, policymakers, regulators, and government institutions.

It has already taken shape through two major workshops: a BFSI Academic–Industry Training Workshop and a cybersecurity workshop in Delhi, involving industry professionals, policymakers, and regulators.

Institutional partnerships have also been initiated with RBL Bank, IFTAS from the RBI ecosystem, and C-DAC Pune. Multiple research projects are underway.

Through these efforts, the Lab has emerged as a credible convening platform for dialogue between academia, industry, and policy around cybersecurity and digital trust.

KEY HIGHLIGHTS

- Start of Mphasis AI and Cybersecurity Research Co-Lab
- **12 research papers** published at leading international conferences, including USENIX Security, MICRO, ASPLOS and ISCA.
- **14 colloquium talks** delivered by national and international experts.
- **7 advanced PULSE cybersecurity laboratories** established.
- **2,500+ internship applications**
- **480 teams** participated in the National CTF
- **70 participants** attended the ACM Summer School.

SECURING THE DIGITAL FINANCIAL FUTURE

MPHASIS AI AND CYBERSECURITY RESEARCH CO-LAB

As financial systems become more digital, data-driven and AI-enabled, they are delivering efficiencies at scale, but also raising risks around data privacy, cybersecurity and regulatory compliance. For financial institutions, the challenge is increasingly to safeguard sensitive information without constraining innovation.

IIT Bombay, in partnership with the **Mphasis F1 Foundation**, has established the **Mphasis AI and Cybersecurity Research Co-Lab** within the IIT Bombay TRUST Lab ecosystem. The Lab aims to bridge foundational research and real-world implementation by developing scalable, privacy-preserving solutions for the BFSI sector.

Its vision is to build nationally-significant and globally-relevant capabilities in privacy-centric cybersecurity, contributing to financial ecosystems that are resilient, secure, and trustworthy.



RESEARCH FOCUS

The Lab combines research with capacity-building and engagement across industry and policy. Its broader work also spans differential privacy and privacy-preserving AI.

- **Privacy-Enhancing Technologies:** Federated learning, homomorphic encryption and secure computation for real-world deployment.
- **AI-enabled cybersecurity:** Machine learning for behavioural analysis, anomaly detection, and threat intelligence.
- **Data protection:** Solutions aligned with emerging data-protection frameworks and compliance requirements.
- **Applied cryptography:** Strengthening secure communication, transaction integrity, and cryptographic resilience.
- **Capacity-building:** Structured training programmes, workshops, and academic engagement.
- **Industry & policy engagement:** Collaboration with BFSI stakeholders, regulators and government institutions to support relevance and adoption.

EYEING DEPLOYMENT

A major initiative is the development of a privacy-enabled security framework for the BFSI sector, aimed at translating the Lab's research into solutions that financial institutions can adopt at scale. The proposed applications range from collaborative fraud detection and joint analytics without compromising underlying data or data ownership, to regulatory monitoring, and stronger security operations.

The groundwork is already underway. Dedicated space has been identified at IIT Bombay, the layout finalised, and infrastructure planning and procurement are in progress.

The Lab has conducted two major workshops--a BFSI Academic–Industry Training Workshop and a cybersecurity workshop in Delhi-engaging industry professionals, policymakers, and regulators. Multiple sector-focused research proposals have been evaluated and refined, creating a structured pathway for future research projects.

LOOKING AHEAD

The next phase will complete the Lab setup and operationalise advanced research facilities. It plans to launch and fund focused research projects and develop industry-ready prototypes and proof-of-concepts with BFSI partners.

Targeted training, high-quality research, participation in leading international forums and sustained engagement across academia, industry, and policy form the other pieces of the roadmap.

REIMAGINING HEALTHCARE THROUGH DIGITAL HEALTH INNOVATION

KOITA CENTRE FOR DIGITAL HEALTH (KCDH)

India's healthcare has an increasing challenge of information management. While medical science and diagnostics have advanced rapidly, the systems that deliver care, hospitals, laboratories, diagnostic centres and public health networks, often continue to operate in silos. Patient information remains fragmented, workflows remain inefficient, and clinical expertise is difficult to scale across a large population.

With the generous contribution of IIT Bombay alumni **Mr. Rizwan Koita** and **Ms. Rekha Koita**, the **Koita Centre for Digital Health** at IIT Bombay was established to address this gap by bringing together engineering, data science, and clinical medicine within a shared digital health ecosystem. The Centre focuses on embedding artificial intelligence, interoperable data systems, and digital integration into healthcare delivery, so that medical data can move beyond passive record-keeping towards real-time clinical insight and decision support.

The Centre has a faculty strength of over 48, comprising Core Faculty and Associated Faculty drawn from across the Institute.



By building the computational, regulatory, and collaborative foundations for healthcare AI, the Centre aims to make diagnostics more predictive, precise, and accessible across clinical settings.

BUILDING A DIGITAL HEALTH ECOSYSTEM

The Centre's academic and research framework is structured around seven broad verticals that combine engineering mathematics, computational systems, and clinical expertise.

Its work spans clinical artificial intelligence, healthcare data systems, regulatory-grade diagnostics, and interoperable digital architectures that enable secure and seamless medical data exchange across healthcare networks. The focus is not only on advancing AI models, but on ensuring that these systems can function reliably within real-world clinical environments.

The Centre also places strong emphasis on education and talent development through specialised MS and PhD programmes designed to train clinician-engineers capable of working across medicine, computation, and healthcare systems.

CORE FOCUS AREAS

- Clinical artificial intelligence and diagnostics.
- Healthcare data systems and interoperability.
- Regulatory-grade digital health tools.
- Secure medical data architectures.
- MS and PhD programmes in digital health.



BUILDING RESEARCH AND CLINICAL PARTNERSHIPS

Since its establishment in 2021, the Koita Centre for Digital Health has rapidly expanded its institutional and research footprint.

The Centre is moving towards full occupancy of its integrated facility within the Wadhwani Hub by early 2027 and has already built a research community comprising over 50 PhD students.

It has also established strategic partnerships with organisations, including the World Health Organization, the Indian Council of Medical Research, and its National Institute for Research in Digital Health (ICMR-NIRDH). Additional collaborations with Tata Memorial Hospital and Narayana Health are helping enable large-scale healthcare data sharing and translational research.

Among its major milestones is the securing of a Titanium programme grant focused on high-stakes AI radiology diagnostics.

INSTITUTIONAL MILESTONES

- Research ecosystem comprising over 50 PhD students.
- Partnerships with the World Health Organization and ICMR National Institute for Research in Digital Health.
- Clinical collaborations with Tata Memorial Hospital and Narayana Health.
- Titanium programme grant for AI radiology diagnostics.

FROM DIGITAL RECORDS TO CLINICAL INTELLIGENCE

A central focus of the Centre is translating digital health research into clinically deployable systems.

One of its major initiatives is the **National Disease Modelling Consortium,** which works on estimating disease burden and evaluating the impact of policy interventions across India. The initiative aims to strengthen population-scale health intelligence and support evidence-based public health decision-making.

Another major programme is the AGR-C Radiology AI initiative, which uses deep learning models to support precision diagnostics within hospital environments. These systems are designed to function as a “second pair of eyes” for clinicians, helping reduce diagnostic errors and improve consistency in radiology workflows.

The Digital Health Interoperability Lab forms another critical component of the ecosystem, working to standardise healthcare data protocols so that digital tools developed at the Institute can integrate across different hospital management systems and healthcare settings.

FLAGSHIP INITIATIVES

- National Disease Modelling Consortium.
- AGR-C Radiology AI initiative.
- Digital Health Interoperability Lab.
- AI-assisted precision diagnostics for hospital systems.
- Standardised healthcare data protocols and interoperability frameworks.

CREATING A TRANSLATIONAL HEALTH ECOSYSTEM

The Centre is building the research, data and clinical partnerships needed to move digital-health tools from research towards deployment.

Its broader goal is to support more proactive, data-driven care through AI-assisted diagnostics and interoperable digital systems. Wider access for smaller hospitals and rural healthcare settings remains an intended outcome as these systems progress through validation, approvals and deployment.

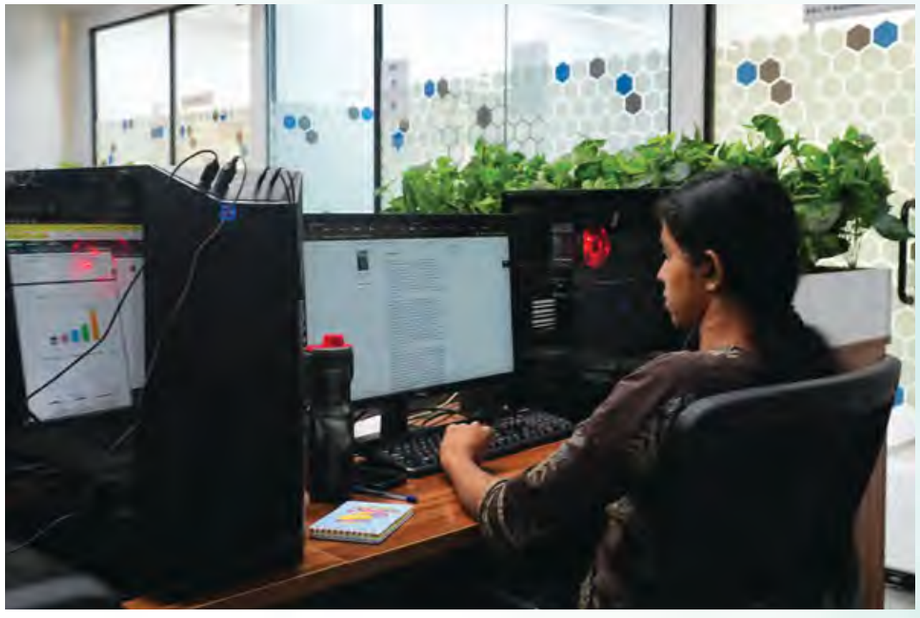
LOOKING AHEAD

The Centre's roadmap focuses on full operationalisation of the KCDH facility in Wadhwani Hub and pursuit of formal clinical approvals for its AI-based diagnostic portfolio.

The National Disease Modelling Consortium is expected to expand into real-time community-level health monitoring and digital health pilots in rural sectors. The Centre also plans to integrate low-power analogue AI computing chips into wearable diagnostic hardware to support more accessible and continuous healthcare monitoring.

At the same time, collaborations with state and national stakeholders are expected to deepen, helping embed digital health approaches more directly into public health systems, clinical workflows, and long-term healthcare policy.

Over the longer term, the Koita Centre aims to help build a healthcare ecosystem where data, AI, and clinical expertise work together seamlessly to improve access, accuracy, and responsiveness across India's healthcare system.



WHERE MARKETS MEET RESEARCH

MOTILAL OSWAL CENTRE FOR CAPITAL MARKETS (MOCCM)



As India's financial markets expand in scale, sophistication, and global relevance, the need for rigorous, independent research in capital markets has become increasingly urgent. A dedicated centre can help advance financial market thinking through research, policy engagement, and structured talent development.

This is at the core of the **Motilal Oswal Centre for Capital Markets (MOCCM)** at IIT Bombay.

The Centre brings together academic research, market expertise, regulatory engagement, and specialised education under one umbrella. Alongside it, the **Motilal Oswal Knowledge Centre** is creating a permanent physical home for financial markets scholarship on campus.

BUILDING ACADEMIC DEPTH

At the heart of the effort is its aim to create a structured academic pipeline in the financial markets, an area historically underrepresented in Indian academia relative to the scale and complexity of the sector.

Three IIT Bombay Senate-approved programmes are being developed under this effort:

- PhD in Financial Markets
- Executive Postgraduate Diploma (ePGD) in Financial Markets
- Undergraduate Minor in Financial Markets, beginning January 2027.

Together, these programmes form the first integrated academic pathway in financial markets at IIT Bombay, spanning undergraduate, postgraduate, and doctoral education. The PhD programme is expected to help develop a new generation of India-based researchers focused on financial systems, regulation, and market innovation.

RESEARCH FOR EVOLVING MARKETS

MOCCM's research agenda focuses on areas shaping the future of finance globally, while remaining closely connected to India's evolving market realities. Current focus areas include:

- Quantitative finance and market microstructure.
- Systemic risk and financial stability.
- Digital assets and blockchain.
- FinTech and RegTech.
- AI and machine learning applications in finance.
- Quantitative asset pricing.

The Centre launched its first research cycle, receiving eight proposals from IIT Bombay faculty across six thematic areas. Two research grants are set to be awarded in the current cycle, laying the foundation for a sustained research ecosystem within the Institute.

The Centre is also engaging with institutions including SEBI, RBI, BSE, and the MCX, with the aim of strengthening dialogue between academic research, regulation, and market practice.



CONVENING THE ECOSYSTEM

The Centre's first year has focused equally on creating platforms that bring together academia, regulators, practitioners, and industry leaders.

In February 2026, Prof. Viral Acharya of New York University Stern School of Business delivered a masterclass titled "The Lifecycle of Money: Is the Dollar Empire Ending?", the session drew more than 200 participants from academia, industry, and Motilal Oswal Financial Services, reflecting strong interest in deeper public conversations around financial systems and policy.

This momentum continued with FinNext 2026, the Centre's inaugural symposium held in April 2026 under the theme Digital, Green, Intelligent, and Inclusive. The event brought together CxO-level representatives from SEBI, RBI, BSE, MCX, Kotak Mahindra, Citadel Securities, and KPMG.

The symposium has since opened pathways for follow-up collaborations, culminating in the MOCCM Hackathon 2026 – Black-Box Signal Hunt. The 48-hour challenge brought together 144 IIT Bombay student teams to develop data-driven quantitative investment strategies, with the top teams presenting their solutions to an industry jury, further strengthening industry–academia engagement.

BUILDING FOR THE LONG TERM

Construction of the Motilal Oswal Knowledge Centre is progressing steadily on campus. Structural work has reached terrace level, internal finishing has advanced to the fifth floor, and mechanical, electrical, and plumbing work is underway up to the third floor. The facility is scheduled for completion in March 2027.

Once completed, the building will house the Centre's laboratories, faculty spaces, and research operations, creating dedicated institutional infrastructure for financial markets research and education at IIT Bombay.





LOOKING AHEAD

Over the coming year, the Centre will focus on launching its first doctoral cohort, recruiting core faculty, initiating formal research outputs, and expanding collaborations with regulators and market institutions.

The next phase will also include the rollout of the ePGD and Undergraduate Minor programmes, continued progress on the Knowledge Centre building, and formalising collaborations with regulatory and market institutions engaged through FinNext 2026.

As India's financial markets continue to evolve, MOCCM is positioning IIT Bombay to contribute not only technical expertise, but also the research depth, talent pipeline, and institutional capability needed to support the sector's long-term development.

LEARNING WITHOUT PAUSE

PRAMOD CHAUDHARI ALUMNI CONTINUING EDUCATION CENTRE (PCACEC)



EXPLORE NEW APPROACHES TO TEACHING AND LEARNING AT IIT BOMBAY WITH THE PARIMAL AND PRAMOD CHAUDHRI CENTRE FOR LEARNING AND TEACHING.

In a rapidly evolving professional landscape, continuous learning has become essential for staying relevant across industries shaped by technological disruption, data-driven decision-making, and changing workplace expectations.

The Pramod Chaudhari Alumni Continuing Education Centre (PCACEC) at IIT Bombay was established to create a structured learning platform exclusively for the alumni. Through curated executive programmes across technology, management, finance, sustainability, and science, the Centre enables IIT Bombay alumni to reconnect with the Institute while continuing to build new skills throughout their professional journeys.

Designed for working professionals, the Centre combines flexible learning formats with faculty-led academic engagement, helping create a long-term ecosystem for lifelong learning within the IIT Bombay alumni community.

A LIFELONG LEARNING PLATFORM

PCACEC's programmes are designed around:

- Lifelong learning and continuous skill development.
- Industry-aligned courses linked to emerging professional needs.
- Flexible weekend and semester-long formats for working alumni.
- Sustained engagement between alumni and IIT Bombay faculty.
- Data-driven programme design informed by alumni feedback and participation trends

The emphasis goes beyond technical upskilling. It helps alumni navigate broader shifts across leadership, innovation, sustainability, analytics, and professional effectiveness.

EXECUTIVE LEARNING

The Centre conducted multiple executive education programmes spanning behavioural science, analytics, sustainability, and emerging technologies. Courses conducted during the period included:

- Behavioural Economics.
- Financial Analytics.
- Data Visualisation.
- E-Mobility Technologies & Systems.
- Innovation Management in the AI Era.
- Statistics for Decision Making.
- Advanced Statistical Thinking for Data-driven Decisions.

The Centre also introduced programmes extending beyond technical capability-building. Beyond Success: The Science of Inner Excellence, explored personal effectiveness and well-being, reflecting interest in holistic professional development alongside technical learning.



REAL-WORLD RELEVANCE

The Centre's programme portfolio reflects a conscious effort to align academic learning with evolving industry priorities and alumni demand.

Programmes such as E-Mobility Technologies & Systems highlighted interest in sustainability-linked engineering domains, while Innovation Management in the AI Era reflected growing demand for AI-linked management frameworks.

Participant feedback also indicated impact beyond classroom engagement. Alumni reported improved understanding of emerging domains, stronger application of concepts in professional contexts, and behavioural changes linked to work-life balance and personal effectiveness.

LOOKING AHEAD

The next phase of growth will focus on expanding programme offerings, strengthening governance systems, and building deeper engagement across the alumni ecosystem. The Centre's priorities include:

- Expanding beyond the current portfolio of seven programmes.
- Launching courses in AI/ML for Weather & Climate, Environmental Sustainability, and FinTech-related domains.
- Exploring PAN-IIT expansion opportunities while maintaining institutional alignment.
- Incorporating emerging themes such as AI governance, quantum computing, and data-driven leadership.



BUILDING AI FOR THE FUTURE OF BANKING

SBI FOUNDATION HUB FOR DATA SCIENCE & ANALYTICS

Artificial Intelligence (AI) is reshaping banking by improving customer experience, strengthening risk management, enhancing fraud detection, and making financial services more efficient. Unlocking this potential, however, requires more than technology. It demands rigorous research, quality data, strong academia-industry collaboration, and a skilled workforce.

The SBI Foundation Hub for Data Science & Analytics at IIT Bombay hosted under CMInDS-Centre for Machine Learning and Data Science was established to bring these elements together. The interdisciplinary Hub is advancing AI, Machine Learning (ML), and Data Science for the Banking, Financial Services and Insurance (BFSI) sector, while building industry-ready talent and translating research into real-world banking applications.



RESEARCH AND APPLICATION

The Hub is bringing together researchers, students, and banking professionals to address practical challenges facing the BFSI sector. Its research spans trustworthy and verifiable AI for safety-critical systems, optimisation of bank branches and Customer Service Points (CSPs), AI-based advisory systems to support model-driven credit decisions, and the use of Generative AI for database querying in banking.

A key initiative is the 'Grand Challenge' to develop a Large Language Model (LLM) for Indian banking. The project aims to pre-train a model using Indian banking datasets, fine-tune it for banking-specific tasks, develop datasets and benchmarks for evaluating question-answering systems, and investigate efficient and accurate methods for answering queries using internal banking data.

Research activity has expanded steadily. Seven projects were launched in the first round, with four already completed and released in the public domain as open source. A further 15 projects are currently underway. Together, these efforts have resulted in 13 research papers and one journal publication.

The Hub's research has gained visibility at leading international forums, including the 33rd EURO Conference on Operations Research, the International Conference on Learning Representations (ICLR) 2025, the AAAI Conference on Artificial Intelligence 2025, the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2025, and the ACM SIGKDD Conference on Knowledge Discovery and Data Mining 2025. Prof. Ashutosh Gupta also received the Runner-Up Best Paper Award at ACM SIGKDD 2025.

The Hub is nurturing future talent through active student participation, with more than 10 B.Tech students, 13 M.Tech. students, nine PhD scholars and six Research Associates engaged in ongoing research projects.

The initiative has created platforms for knowledge exchange through conferences and workshops, including an AI for BFSI and Finance workshop in September 2025.

The Hub's research was also showcased at the Global Fintech Fest 2026 and the India AI Impact Summit 2026, highlighting IIT Bombay's AI innovations for the financial sector.





NEXT PHASE

Looking ahead, the Hub will continue to expand its research portfolio while accelerating the translation of AI research into practical banking solutions.

Work on the Indian banking LLM will remain a key priority, alongside ongoing projects in trustworthy AI, branch optimisation, AI-enabled credit advisory, and Generative AI for banking. IIT Bombay is also preparing the next phase of its executive training programme, covering advanced topics such as Causal AI and LLMs that are aligned with the evolving needs of the BFSI sector.

THE SCIENCE OF HEALTHY AGING

THE SCIENCE OF HEALTHY AGING — SUNITA SANGHI CENTRE OF AGING AND NEURODEGENERATIVE DISEASES (SCAN) — ENABLING EARLY DETECTION

As life expectancy rises, neurodegenerative disorders such as Parkinson's Disease (PD), Alzheimer's Disease (AD), and Frontotemporal Dementia (FTD) are emerging as major public health challenges. These conditions are among the leading causes of disability in aging populations, yet diagnosis often happens late, when intervention options are limited, and disease progression is already advanced.

One of the biggest barriers remains the absence of robust early detection tools, scalable biomarkers, and effective disease-monitoring systems. Existing therapies are largely symptomatic, with no definitive cure currently available.

DISCOVER THE SCIENCE AND SOLUTIONS DRIVING NEURODEGENERATION RESEARCH AT IIT BOMBAY.

Established in 2022 at IIT Bombay, with the generous contribution of **Mr. Sharad Sanghi**, the **Sunita Sanghi Centre of Aging and Neurodegenerative Diseases (SCAN)** seeks to address this challenge through an interdisciplinary approach that combines biology, diagnostics, artificial intelligence, assistive technologies, and translational research.

The Centre's work spans blood-based biomarker discovery, biological age profiling, adaptive movement-support systems, and the study of molecular disease mechanisms with the broader goal of enabling earlier diagnosis, improved therapeutics, and better patient support systems.



EARLY DETECTION CAPABILITIES

SCAN's research focuses on improving the understanding, detection, and management of neurodegenerative disorders through integrated scientific and technological approaches. Its focus areas include:

- Early detection and diagnosis of Parkinson's Disease, Alzheimer's Disease, and Frontotemporal Dementia.
- Development of biological age profiles using blood samples to distinguish normal aging from disease-associated aging.
- Creation of adaptive equipment and assistive technologies for movement support.
- Research into molecular, cellular, and biochemical pathways linked to disease progression and therapeutic interventions.

RESEARCH COLLABORATIONS

Alongside its scientific programmes, SCAN has also focused on creating platforms for interdisciplinary collaboration and knowledge exchange.

The Centre organised its Annual Symposium 2026 on Neurodegenerative Disorders in India: Current Practices and Challenges, bringing together clinicians and researchers from across disciplines. SCAN also showcased its innovations at TechConnect 2025 and conducted workshops and international lecture series to strengthen research engagement and outreach.

The Centre is additionally initiating a Longitudinal Aging Study in collaboration with IIT Bombay Hospital. The study aims to identify novel biomarkers of aging and establish biological age assessment models through proteomic, metabolomic, genomic, and epigenetic profiling.

INTEGRATING AI AND NEURODIAGNOSTICS

A major component of SCAN's translational work is NeuroScan360, the Centre's flagship AI-driven multimodal screening and monitoring platform for neurodegenerative disorders.
NeuroScan360 integrates multiple specialised assessment modules, including:

- Tremor analysis.
- Bradykinesia tapping assessments.
- Posture profiling.
- Facial expression tracking.
- Visual attention testing.

By combining motor assessments, cognitive evaluation, and AI-based analytics, the platform is designed to support scalable screening and monitoring for disorders such as Parkinson's Disease.

The broader objective is to create integrated systems that can support earlier intervention and improve long-term disease management.



LOOKING AHEAD

Over the coming years, SCAN plans to expand deployment of NeuroScan360 while advancing its blood-based diagnostics toward higher TRLs and broader hospital adoption.

Key priorities include:

- Strengthening AI-enabled data infrastructure and biorepository systems.
- Expanding longitudinal aging studies.
- Advancing high-throughput multi-omic research approaches.
- Developing automated tracking platforms for aging-related disorders.
- Supporting AI/ML-driven predictive modelling and big-data approaches in neurodegeneration research.
- Developing next-generation diagnostics and assistive devices.

TECHNOLOGY FOR INCLUSIVE IMPACT

TATA CENTRE FOR TECHNOLOGY AND DESIGN (TCTD)

The Tata Centre for Technology and Design (TCTD) was established to develop technology solutions for resource-constrained communities in India and around the world.

Guided by the Sustainable Development Goals (SDGs), the Centre identifies social issues, assesses their root causes and impacts, develops potential technology solutions, and monitors and evaluates progress by collecting data and measuring outcomes against defined goals.

The Centre plays a crucial role in nation-building through education, healthcare, innovation, and water projects. Together, these initiatives empower individuals, promote a healthier population, foster critical thinking, and improve living conditions.



RESEARCH PORTFOLIO

Domains	Funded Projects	Intellectual property	Collaborations	Commercialised initiatives
Agriculture & Food	15	8	2	2
Education	9	7	5	5
Energy	25	11	2	1
Healthcare	37	17	22	4
Water	11	3	3	0
Waste Management	12	5	2	2
Housing	7	0	1	0
Multi-Domain	3	0	0	0

RESEARCH SNAPSHOT

119
funded projects.

51
intellectual property outputs.

44
collaborations.

15
commercialised.





MAKING A DIFFERENCE

The Centre's research is translating into practical technologies and industry partnerships across healthcare, manufacturing, and sustainability. Some of the notable initiatives include:

- Gynaecam – Technology for cervical cancer screening.
- Impulse Oscillometry Screening – Technology for on-the-spot lung screening.
- Jaggery manufacturing plants and by-products – Commercialised through Revotech Industries Pvt. Ltd.
- Reclamation of waste sand – Commercialised through Deccan Crust Pvt. Ltd.
- Smartphone-based portable digital microscope – Commercialised through MedPrime Technologies Pvt. Ltd.
- CAR-T cell immunotherapy technology platform for cancer treatment – Developed by IIT Bombay, Tata Memorial Centre, and ImmunoACT, leading to the indigenous CAR-T therapy NexCAR19.

TURNING AI INTO REAL-WORLD SYSTEMS

TECHNOCRAFT CENTRE FOR APPLIED ARTIFICIAL INTELLIGENCE (TCA2I)



Artificial intelligence is increasingly shaping sectors including healthcare, defence, cybersecurity, telecommunications, and urban governance. However, laboratory research does not automatically lead to real-world deployment. AI systems often struggle with scalability, domain adaptability, and field-level validation, limiting their effectiveness in complex operational environments.

Established in 2021 at IIT Bombay with the support of **Dr. Sharad Saraf** and **Mr. Sudarshan Saraf**, the **Technocraft Centre for Applied Artificial Intelligence (TCA2I)** was set up to address this issue through translational research and deployment-focused innovation.

The Centre develops AI and machine learning systems across cybersecurity, digital health, defence technologies, telecom security, digital twins, ESG systems, and intelligent decision-support platforms, combining algorithmic research with scalable system design and field validation.

AI FOR CRITICAL SECTORS

The Centre combines foundational AI research with deployment requirements across public-sector and industrial environments. TCA2I's focus areas include:

- Medical AI and clinical intelligence.
- Industrial AI and predictive maintenance.
- AI-enabled cybersecurity and Security Operations Centres (SOCs).
- Defence technologies and operational decision support.
- Digital twins and extended reality (XR) systems.
- 5G/6G telecom security.
- Urban AI and governance systems.

TCA2I also conducted a Faculty Development Programme for officers from MILIT, Pune, covering radar-based remote sensing, SAR processing, AI-enabled weather forecasting, cybersecurity, and advanced machine learning applications.

In parallel, the Centre launched a Certificate Course in Generative AI with Great Learning. The first cohort began in February 2026, with two batches planned annually.

Its webinar series across cybersecurity, medical AI, digital twins, XR, and climate modelling attracted more than 950 registrations during the year. TCA2I's AI-driven cybersecurity contributions were also acknowledged by the Maharashtra Anti-Terrorism Squad (ATS).

The Centre was featured in the 2026 Tech Outlook Report and showcased work at the India Impact AI Summit.

PARTNERSHIPS AND OUTREACH

TCA2I signed MoUs with the Brihanmumbai Municipal Corporation (BMC) and Mazagon Dock Shipbuilders Limited. Strategic engagements were initiated with the Nuclear Power Corporation of India for enterprise-grade AI applications.

The BMC partnership focuses on AI-enabled urban governance, including digitisation of health records and AI-assisted data collection and analytics for ASHA workers. The MDL engagement focuses on predictive maintenance and operational health monitoring in naval shipbuilding.



RESEARCH AND DEPLOYMENT

During 2025–26, TCA2I expanded both its research visibility and translational project portfolio.

Research from the Centre was presented at British Machine Vision Conference (BMVC) 2025 in Sheffield and MICCAI 2025 in Daejeon. Its SLaM-DiMM framework for brain MRI synthesis was selected for oral presentation at Medical Image Computing And Computer Assisted Intervention (MICCAI), while Centre teams ranked among top performers at the BraTS Lighthouse Challenge 2025.

Some of the key projects of the Centre include:

- MCDDPM, an unsupervised brain anomaly detection framework using multi-channel diffusion architectures.
- RASALoRE, a weekly supervised anomaly detection system for brain MRI with fewer than 8 million parameters.
- SLaM-DiMM, a framework for missing-modality generation in brain MRI synthesis.
- An automated pharmaceutical inspection pipeline using SAM, U-Net, and YOLOv8 with a processing latency of ~0.23 seconds per unit.

The Centre is also developing indigenous Endpoint Detection and Response (EDR) platforms and AI-driven SOC frameworks integrating telemetry, threat intelligence, and automated incident response.

Within the Smart XR Lab, TCA2I developed a Digital Twin Decision Support System combining Unity and AnyLogic-based co-simulation with real-time bidirectional data exchange. The system is being applied to logistics, smart warehouses, and healthcare operations in collaboration with FedEx and FedEx ALFA at IIT Bombay.

The Centre is also working with Tata Memorial Centre on mixed reality neurosurgical simulation systems using GPU-accelerated intraoperative ultrasound simulation and volumetric MRI interaction technologies.

Projects in defence and governance include:

- AI-driven optimisation models for maritime logistics and replenishment planning.
- Predictive analysis systems for Indian Coast Guard ships.
- Lexlegis.AI, focused on fine-tuning AI models on legal and judiciary datasets.



LOOKING AHEAD

Over the coming year, TCA2I plans to deepen deployments across healthcare, cybersecurity, telecom, governance, and strategic sectors. The Centre's priorities include:

- Formalising co-development initiatives with NPCIL across digital twins, predictive maintenance, AI-assisted design, and knowledge management systems.
- Expanding AI-enabled SOC deployments with telecom and industry partners.
- Scaling the Generative AI Certificate Programme nationally.
- Deepening collaborations with Tata Memorial Centre and FedEx.
- Expanding AI applications in urban governance through BMC partnerships.
- Sustaining participation in leading international research forums and AI challenges.

TCA2I's next phase will focus on extending deployment-oriented AI research across healthcare, cybersecurity, telecom, governance and strategic sectors, while continuing field validation with partner organisations.

FROM DISCOVERY TO HEALTHCARE IMPACT

WADHWANI RESEARCH CENTRE FOR BIOENGINEERING (WRCB) AND WADHWANI INNOVATION CENTRE (WIC)

There is a persistent challenge in India's healthcare system: while institutions generate high-quality scientific research, only a small proportion reaches patients, hospitals, or markets as deployable healthcare solutions. The country also continues to depend heavily on imported medical technologies across diagnostics, therapeutics, and advanced healthcare systems.

With the support of **Dr. Romesh Wadhwani**, the **Wadhwani Innovation Centre (WIC)** at IIT Bombay is working to bridge this gap by building structured pathways for translational healthcare innovation.

The initiative builds on the proven translational model established through WRCB, which has demonstrated how targeted funding, mentorship, industry linkage, and commercialisation support can help move research from laboratories towards real-world healthcare applications. WIC now seeks to scale this approach into a larger ecosystem spanning research, infrastructure, start-up creation, and commercialisation.

DEPLOYABLE SOLUTIONS

The Centre focuses on creating systems that can consistently move scientific discoveries towards deployable healthcare solutions. The broader goal is not only to support individual projects but also to institutionalise translational systems that can scale. The Centre's core priorities include:

- Supporting structured pathways for research translation and scale-up production.
- Expanding the WRCB model of funding, mentoring, and industry engagement.
- Strengthening indigenous capability across diagnostics, therapeutics, and medical technologies.
- Integrating biosciences, engineering, and AI for end-to-end healthcare innovation.
- Building a hub-and-spoke ecosystem to expand translational capability across institutions.



SCALING A PROVEN MODEL

Over the years, WRCB has emerged as a translational platform connecting academic research with industry, investors, and commercialisation pathways. Key outcomes include:

- Support for approximately 100 translational projects across diagnostics, therapeutics, med-tech, and synthetic biology.
- Enabling more than 18 start-ups emerging from supported research.
- Generation of multiple patents and technology translation outcomes across healthcare domains.
- Creation of structured industry and commercialisation linkages for faculty-led research.

EXPANDING HEALTHCARE INNOVATION

WIC is designed to scale this model through expanded infrastructure, translational support systems, and institutional partnerships.

The Centre will support projects progressing from Technology Readiness Level (TRL) 4+ to TRL 7+, enabling movement from laboratory validation towards commercialisation and deployment. Its major verticals include:

- Biosciences and Bioengineering, focused on biologics, diagnostics, synthetic biology, and biomanufacturing.
- Health and Medicine, focused on affordable medical devices, diagnostics, and digital health solutions through clinical and hospital collaborations.

A planned 1.2 Lakh sq. ft. facility will provide advanced translational and research infrastructure for healthcare innovation and scale-up activities.

The long-term objective is to increase translational output to more than 100 projects annually through WIC and partner hubs.

LOOKING AHEAD

The next phase for WIC is focused on expanding the infrastructure, partnerships and translational systems needed to move selected healthcare research towards deployment. Planned priorities include:

- Scaling the WRCB model through WIC's hub-and-spoke network.
- Expanding to more than 10 partner institutions nationwide.
- Increasing commercialisation outcomes, including start-ups and licensed technologies.
- Building advanced GLP, biomanufacturing, and pre-clinical infrastructure.
- Expanding the ecosystem to support 45 faculty members, 400 PhD scholars, and 100 postdoctoral researchers.







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BUILDING INDIA'S NEXT VENTURE BUILDERS

DESAI SETHI SCHOOL OF ENTREPRENEURSHIP (DSSE)



VISION

India's innovation ecosystem is expanding rapidly, but the journey from idea to enterprise remains difficult for many early-stage founders. Institutions produce strong technical talent and promising research, yet structured pathways that help students and researchers test, refine, and launch ventures are still limited.

Established with the support of IIT Bombay alumnus **Mr. Bharat Desai** and his wife **Ms. Neerja Sethi**, the **Desai Sethi School of Entrepreneurship (DSSE)** builds a practice-based academic ecosystem for entrepreneurship. It combines coursework, mentoring, proof-of-concept support, research and pre-incubation pathways to help students and researchers test ideas, build prototypes and progress towards venture creation.



EXPANDING THE VENTURE ECOSYSTEM

During 2025–26, DSSE expanded its academic and venture-development activity, with the below outcomes:

1,411 students trained in entrepreneurship programmes.

199 venture teams mentored across initiatives.

16 startups enabled across multiple domains.

The **IDEAS Programme** received 292 applications, with 139 teams progressing to Level 1.

60 teams advanced to Level 2.

14 ventures channelled to SINE for incubation support.

New DSSE building inaugurated in January 2025, spanning nearly 1.2 Lakh sq. ft.

Entrepreneurship Day Symposium hosted with over 350 participants.

More than 10,000 learners engaged through online and executive education programmes.

FROM IDEAS TO ENTERPRISES

A central pillar of DSSE's work is supporting early-stage founders through structured pathways that reduce the barriers between ideation and venture formation.

DSSE's flagship IDEAS Programme supports early-stage venture teams through mentoring, milestone-based progression, and grant support, enabling teams to move from idea validation towards venture creation and eventual incubation.

In 2025–26, 292 applications entered this pathway, 139 teams progressed to Level 1, 60 advanced to Level 2 and 14 ventures were channelled to the Society for Innovation and Entrepreneurship (SINE) for incubation support.

Other major initiatives include:

- **BharatInnovates 2026:**
  A platform aimed at showcasing Indian deep-tech ventures globally with institutional and policy support.
- **IITB–Groww INV.ENT Program:**
  The programme supports innovation through Proof-of-Concept (PoC) grants, the Innovation Grand Challenge, mentorship, and structured pathways that enable student and faculty teams to progress from ideas to prototypes and venture creation.
- **Gen AI for Entrepreneurship:**
  A collaborative initiative exploring AI-driven venture creation and business innovation.
- **Entrepreneurship Education Programmes:**
  Including courses, workshops, and immersion initiatives for students, faculty, and global participants.

LOOKING AHEAD

Future priorities include expanding entrepreneurship scholarship and venture-creation capacity.

DSSE plans to strengthen doctoral research in entrepreneurship, expand translational research and commercialisation pathways, and use its new building to support a larger range of entrepreneurship activity.

It also aims to deepen collaborations with global academic institutions, industry partners, and ecosystem stakeholders while strengthening venture creation pipelines across student and faculty cohorts.

Alongside this, DSSE plans to expand its engagement with policy and broader innovation ecosystem development initiatives.





THE INNOVATION LAUNCHPAD

GROWW INNOVATION SPACE AND IITB – GROWW INV.ENT PROGRAM

Every year, students at IIT Bombay generate ideas with the potential to solve real-world problems. But turning those ideas into products, technologies, or ventures often requires more than creativity and technical ability. It needs access to infrastructure, mentorship, early-stage funding, and opportunities to experiment.

The **IITB-Groww INV.ENT Program**, established in collaboration with Groww Invest Tech Private Limited, was created to bridge this gap.

Anchored by the **Groww Innovation Space** at the Desai Sethi School of Entrepreneurship (DSSE), it combines dedicated infrastructure, Proof-of-Concept (PoC) support, and structured mentorship to help students move from ideation to prototype development, incubation, and entrepreneurship.

The Program aims to build a sustainable and scalable innovation ecosystem that encourages experimentation, interdisciplinary collaboration, and outcome-oriented thinking. By strengthening the link between academia and industry, it seeks to equip students to identify problems, build solutions, and translate promising ideas into impactful technologies and ventures.



FOCUS AREAS

The programme supports innovation across artificial intelligence and machine learning, climate and sustainability, healthcare and biomedical innovation, energy systems and financial inclusion. The first cohort announced also included projects in agri-tech, robotics, defence, assistive technology, retail, and education.

Its two tracks support different stages of development. The Proof-of-Concept Support Track provides small grants for teams to validate ideas and develop early prototypes, while the Grand Challenge provides milestone-based support for selected projects with greater development requirements.

The Program helps students develop entrepreneurial capabilities such as problem framing, user validation, resource planning, and execution. Through its integration with Desai Sethi School of Entrepreneurship (DSSE) and the Society for Innovation and Entrepreneurship (SINE), it creates a cohesive ecosystem that supports both academic inquiry and venture creation.

CREATING IMPACT

Following the 2025–26 reporting year, Groww Foundation announced the first INV.ENT cohort in July 2026: 19 projects involving 35 IIT Bombay students, selected from nearly 400 submissions. Three teams were named inaugural Grand Challenge Fellows, eligible for milestone-based funding of up to ₹25 lakh annually, while 16 teams entered the Proof-of-Concept Support Track.

The selected projects span areas including climate technology, healthcare, agri-tech, robotics, defence, assistive technology, retail, education, and artificial intelligence.

THE ROAD AHEAD

The IITB-Groww INV.ENT Program will continue to expand its reach by engaging a larger cohort of students while maintaining a strong focus on quality and outcomes. It also aims to strengthen the innovation-to-incubation pipeline, enabling more high-potential projects to progress into formal ventures or advanced research initiatives.

The Groww Innovation Space will remain the focal point for workshops, showcases, and collaborative engagements, supported by governance and monitoring frameworks that enable data-driven decision-making and continuous improvement.

PROJECT TITANIUM:

TRANSFORMING DEEP-TECH RESEARCH INTO SCALABLE SOLUTIONS

IIT Bombay's laboratories generate cutting-edge research and intellectual property with potential for application beyond the laboratory. Moving deep-tech research towards commercial use, however, also requires business leadership, early-stage capital, industry partnerships, and sustained mentoring.

Project Titanium addresses this translation gap in areas including semiconductors, clean energy, healthcare, and advanced manufacturing.

Project Titanium, hosted at the Society for Innovation and Entrepreneurship (SINE), provides a structured, milestone-driven pathway for faculty innovators seeking to commercialise research.

The programme is supported by **Mr. Rajesh Jain**, **Mr. Ramesh Mangaleswaran**, **and Mr. Sharad Sanghi**.

It combines non-dilutive, milestone-based grant support with entrepreneur matchmaking, commercial mentoring, and technology and market readiness guidance.



VISION

To build a globally competitive ecosystem for academic entrepreneurship, positioning IIT Bombay as a key driver of India's deep-tech industrial growth.

KEY AREAS OF SUPPORT

Project Titanium supports deep-tech commercialisation through:

- Accelerating commercialisation of high-potential intellectual property.
- Matching faculty innovators with experienced entrepreneurs and business leaders.
- Providing structured funding and technology and market readiness support.
- Fostering a culture where commercialisation is a natural extension of research.



KEY ACHIEVEMENTS (2025–26)

- Engaged 42 research teams from 17 departments across IIT Bombay.
- Awarded 11 Project Titanium grants of up to ₹50 lakh per team, with ₹1.7 crore disbursed through milestone-based funding.
- Scouted more than 100 prospective business co-founders, resulting in seven successful entrepreneur matchings.
- Supported participating ventures in completing 25 cumulative milestones across the five-stage Deep-Tech Readiness Matrix (DRM), enabling disciplined progress from prototype to pilot.
- Helped a faculty-led electric vehicle charging venture (T8 team) secure a ₹2 crore investment term sheet.
- Advanced healthcare technologies, including AI-based radiology diagnostics, into the regulatory validation phase.

INNOVATION IN ACTION

Project Titanium supports technologies across sectors of national importance. The projects supported span defence, clean energy, solar technology, and analogue AI computing.

- **Spherical Reconnaissance Robotics:** A spherical robotic platform for defence and reconnaissance applications, designed for omnidirectional mobility on challenging terrain. The venture is progressing through company incorporation and defence-sector engagement.

- **High-Performance Green Hydrogen Membranes:** Nanoparticle-embedded membranes are being developed for alkaline water electrolysis. The technology is currently undergoing grant-supported scale-up; claims on eventual efficiency or cost improvement remain development objectives until validated at scale.

- **Perovskite Solar Tandems:** Next-generation solar technology aimed at pushing photovoltaic efficiency beyond current limits. The team is working with industry and government partners to advance the technology towards commercial demonstration.

- **Analogue AI Computing:** The project is developing an analogue-based floating-point computing chip for low-power, high-speed AI applications and is currently engaging with Y-Point VC for early-stage investment.

LOOKING AHEAD

Project Titanium will continue expanding IIT Bombay's deep-tech entrepreneurship ecosystem through:

- Launch of Project Titanium II, supporting a new cohort of 25–30 faculty-led startups.

- Supporting the first cohort to complete DRM Gate 5 and achieve Paying Early Adopter status by late 2026.

- Expanding access to the 10X GMP and other Institute technical facilities to accelerate process validation.

- Building the next generation of research-led companies by leveraging SINE's track record with ventures such as ideaForge.



CATALYSING DEEP-TECH IMPACT

TRA 70 FUND: ADVANCING RESEARCH TO APPLICATION

The **TRA 70 Fund**, an initiative of the Class of 1970, is helping IIT Bombay turn promising research into technologies with the potential to address real-world challenges. By supporting high-impact, commercially relevant projects at the critical stage between research and deployment, the Fund is enabling faculty and student innovators to move from proof-of-concept towards products, pilots and societal impact.

The progress of projects supported through the Fund demonstrates this journey from **vision to validation**.

Agriyan, is developing an autonomous, AI-based modular farm robot designed for smallholder farmers. Over the past 18 months, the IIT Bombay-originated venture has progressed through four hardware generations, with the robot now tested in real field conditions in Karjat. Its AI systems can identify crops and weeds in real time, while autonomous navigation has been validated across cotton, soybean and tomato fields. A companion app provides field mapping, weed-density heatmaps and plant-health monitoring.

The project is now moving towards field pilots and market entry. Krishiboot has received interest from organisations including BAIF and CottonGuru/AICFA, and plans to deploy commercial pilots with FPO partners in Maharashtra. Its next phase includes manufacturing the first 10 commercial robots and launching a Robot-as-a-Service model, demonstrating how research supported by TRA 70 can progress towards scalable deployment.

Another TRA 70-supported effort, **NCF Green Energy**, is translating solar-thermal research into applications spanning defence, water heating and industry. Its **Ushma 6 solar shelter heating system** successfully completed winter field trials for the Army in 2026. During testing, the system raised shelter temperatures from around 3°C to 20°C within 60 minutes and maintained temperatures from approximately -3°C to 15°C for up to 5.5 hours at night using stored solar heat. The Army is now evaluating deployment locations and procurement quantities.

The team's **NCF Solar Water Heater** has also reached an advanced stage, with manufacturing processes and system design largely finalised and certification underway. Beyond these products, the technology is being explored for industrial applications including algae and food drying, and salt recovery from industrial effluents.

Together, these journeys capture the purpose of the **TRA 70 Fund:** to provide the bridge that deep-tech innovation needs—from laboratory research and engineering development to field validation, industry engagement and eventual commercialisation. As these technologies move closer to deployment, the Class of 1970's enduring commitment is helping create solutions with the potential to serve both society and the nation.







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ACCELERATING AFFORDABLE BIOMEDICAL MANUFACTURING

10X GMP FACILITY

One of the biggest challenges in achieving healthcare self-reliance is translating a laboratory breakthrough into a regulated, market-ready product. Researchers may develop promising biomaterials, medical devices and therapies, but turning these innovations into clinical-grade products requires highly specialised manufacturing environments that meet Good Manufacturing Practice (GMP) standards.

The **10X GMP Facility** at IIT Bombay has been established with support from IITB alumnus **Mr. Raj Nair** to bridge this gap. Located within the Department of Biosciences and Bioengineering, it is one-of-a-kind academic manufacturing hub designed to help researchers translate laboratory discoveries into clinical-grade healthcare products.

The facility has ISO-classified cleanrooms and enables the development of healthcare solutions that aspire to be 10 times cheaper, better or faster than current market alternatives.

Discover the 10X GMP facility supporting research-to-clinical translation.



FOCUS AREAS:

- Medical Devices and Drugs.
- Biopharmaceutical Platforms.
- Nanotechnology.
- 3D Bioprinting.

KEY HIGHLIGHTS

- Operationalised ISO 6 and ISO 7 zones for sterile manufacturing.
- Transitioned core research into active process validation.
- Supports conversion of laboratory protocols into validated manufacturing processes for medical devices and drugs that meet rigorous safety standards.
- Leverages high-precision nanotechnology and 3D bioprinting to develop functional tissue scaffolds.
- Supports indigenous biopharmaceutical platforms for investigational new drugs.
- Deployed advanced instrumentation, including the Nano Spider system for electrospinning medical nanofibres.
- Achieved environmental stability through refined building management protocols.
- Established a sustainable unit-cost pricing model to support the facility's long-term financial sustainability and accessibility.
- Provides a structured framework that enables industry partners and start-ups to access academic manufacturing infrastructure, supporting the progression from process development towards clinical-scale production.

TRANSLATIONAL RESEARCH

- **InCARTis Programme:** Developing implantable scaffolds for cancer immunotherapy delivery, currently classified as an investigational new drug.
- **NanoDerma Heal:** Producing wound dressings using electrospun nanofibres to promote tissue regeneration.
- **Bio-resorbable Meshes:** Validating indigenous meshes for pelvic repair.
- **Orthopaedic Bio-fixation:** Developing high-strength bio-fixation products for orthopaedic surgery that are designed to meet the mechanical and safety standards required to replace expensive imported alternatives.
- **Injectable Treatments for Rheumatoid Arthritis:** Supporting the transition of research towards clinical-grade production within the same facility where the underlying science was developed.

LOOKING AHEAD

The roadmap includes planned clinical-grade trials for the first cohort of indigenous medical devices and wound dressings.

The facility also aims to secure the statutory test licence required for full-scale production for clinical pilot studies, launch a digital portal for structured external access, and coordinate with the upcoming animal facility in Wadhwani Hub to create a seamless pre-clinical pipeline. Further ahead, the product portfolio is expected to expand to include new gene therapy and nanomedicine products.

DRIVING INDIA'S ELECTRIC VEHICLE (EV) FUTURE

C1973 EV POWERTRAIN LAB



India's electric mobility transition depends on more than EV adoption. It also depends on building indigenous capability in the technologies that make EVs work: motor controllers, battery systems, and power converters.

The **C1973 EV Powertrain Lab** at IIT Bombay has been created to address this critical gap. The Lab combines research, education and industry engagement around indigenous EV powertrain technologies.

Funded by the Class of 1973, with CSR support from **Dana India and Forvia Hella**, the Lab brings research, education, and industry partnership into one shared ecosystem. During 2025–26, the Lab combined curriculum, research projects, industry engagement and shared infrastructure around EV powertrain development.

INDUSTRY, ACADEMIA, & NATIONAL SCALE

The Lab has built a structured bridge with industry through I-APP that gives companies access to lab facilities, research insights, and trained talent across four partnership tiers.

The Lab delivered three EVolution webinars, covering SiC gate-driver design with SanRex, integrated EV chargers with Varroc, and simulation-driven digital engineering with Ansys.

At the national level, IIT Bombay was selected as the e-Node in the ANRF E-RIDES proposal under the MAHA-EV Mission, in the Power Electronics, Machines & Drives theme. The consortium brings together six partner institutes and 22 industry partners for indigenous EV subsystem development.

FROM LAB TO FIELD

The Lab brings research, graduate education and industry partnership into one facility. Its infrastructure, including CNC milling, wire EDM, a grid simulator, battery cycler, and dynamometer, supports IIT Bombay faculty projects, the IITB Racing Team, and companies such as Voltraz Tech and Selec Controls.

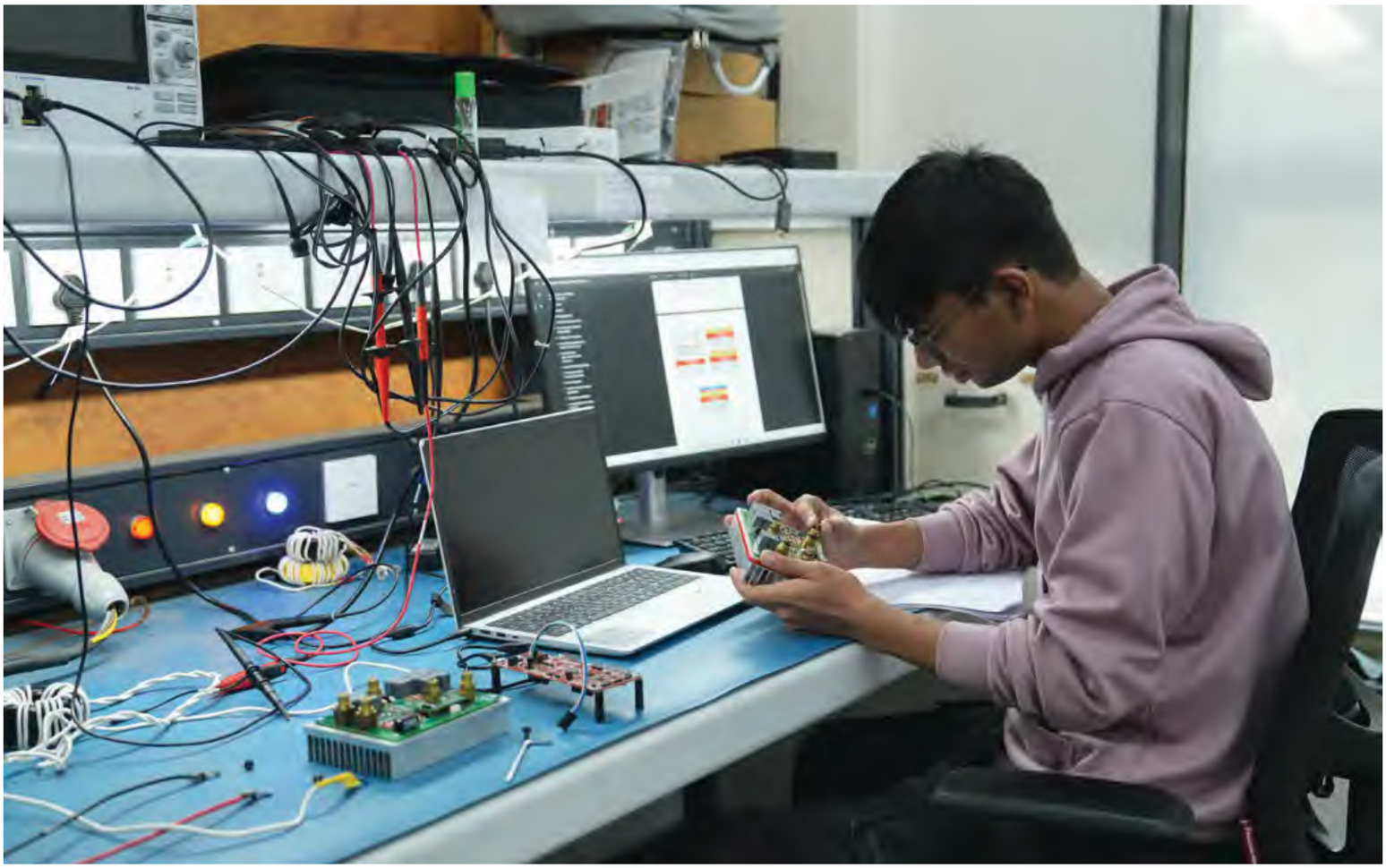
Several projects show this translation in action:

- **GaN-Based Motor Controller:** The project developed an indigenous motor controller using GaN wide-bandgap devices for higher efficiency. It reached laboratory-level testing and was formally closed.
- **Battery Fast-Charging Optimisation:** The project aims to minimise capacity fade in lithium-ion cells through protocol optimisation. The Arbin cycler and temperature chamber are operational; procurement for the Gamry potentiostat is complete; and cycling is underway.
- **20 kW SiC On-board EV Charger:** Developed for Cummins, the liquid-cooled prototype was completed.
- **e-Rickshaw Sustenance Project:** A fully indigenous motor and controller designed at IIT Bombay completed in-campus trials and was deployed operationally in Jharkhand, providing a documented field deployment of an IIT Bombay-designed EV system.

BUILDING INDIGENOUS EV CAPABILITY

The Lab's work is anchored in areas central to India's EV transition. It focuses on the design and testing of gallium nitride (GaN)- and silicon carbide (SiC)-based motor controllers, on-board chargers, and battery management systems. It also studies battery cell behaviour, capacity fade, and fast-charging protocols to improve safety and longevity.

Education is a core part of this mission. The Lab launched the Senate-approved ePGD in E-Mobility, a 36-credit, six-course programme offered across seven departments. The programme spans battery systems, power converters, electric drives, grid integration, and vehicle design. Cohort 1 was onboarded in early 2025, and Cohort 2 in February 2026.



LOOKING AHEAD

The next phase will focus on activating IIT Bombay's role as the ANRF E-RIDES e-Node and beginning coordinated research and development across six institutes, and 22 industry partners under the MAHA-EV Mission.

The Lab will also complete ePGD Cohort 1 and assess outcomes to refine the programme for future cohorts. Battery research will move towards completing cycling experiments, developing cell models, and validating optimised fast-charging protocols using the Arbin cycler and Gamry potentiostat.

Alongside this, the Lab will deepen I-APP partnerships, expand engagement with existing partners, and onboard additional members across the four tiers.

It will continue the EVolution and Distinguished Lecture Series on SiC wide-bandgap devices, and EV powertrain design, while scaling facility use across IIT Bombay departments, student teams, and industry, and completing committed capital investments.

TAKING RURAL INNOVATION TO THE FIELD

CENTRE FOR TECHNOLOGY ALTERNATIVES FOR RURAL AREAS (C-TARA)



Moving rural technologies beyond pilots requires field testing, refinement, deployment support and routes to wider adoption.

Backed by **Coal India Limited (CIL)**, IIT Bombay's **Centre for Technology Alternatives for Rural Areas (C-TARA)** and the **Rural Technology Action Group (RuTAG)** initiative are helping bridge this gap. The programme identifies, refines, and deploys rural technologies, connecting innovation with field application and creating pathways for solutions to be tested, adopted and scaled.

Its larger goal is to enable field-tested technologies that improve livelihoods, sustainability, and quality of life in underserved communities.

REACHING THE LAST MILE

The initiative works across livelihood enhancement, sustainable energy, agricultural productivity, healthcare access, and digital inclusion. So far, 17 rural technologies have been disseminated, impacting over 50,000 people.

Key deployments and outcomes include:

- **MarketMirchi:** A digital platform connecting rural producers to markets, reaching around 40,000 users through 58 training sessions.
- **Subjee Cooler:** A low-cost solution that preserves produce for three to five days without electricity, with more than 2,500 units scaled beyond the project.
- **Solar Hydro Distiller:** A fuel-free system for producing natural extracts, with 15 deployments under the programme and 12 additional installations.
- **Multi-purpose processors:** 14 installations across four states, supporting more efficient rural processing.
- **Hydraulic Isolation system:** Expanded to two independent installations.
- **Digital Stethoscope:** A portable healthcare device with amplification and remote-sharing capabilities.
- **Solar Food Cart:** A clean-cooking solution for street vendors designed to reduce fuel costs.

IMPACT – A TECH BOOST TO LIVELIHOODS

In Hingna taluka, Nagpur, Maharashtra, a 10-member women's Self-Help Group (SHG) used a modern solar hydro-distiller to start a micro-enterprise producing premium rose water and Shikakai-based herbal shampoo. At the SARAS Exhibition in January 2026, the group generated a profit of ₹60,000 in a single week.

The story captures what successful translation can look like. The wider scaling of some solutions beyond their original deployments similarly points to the potential for rural technologies to find sustained use on the ground.

TAKING RURAL INNOVATION FURTHER

The next phase will focus on scaling high-potential technologies across states, strengthening partnerships with government bodies and non-governmental organisations (NGOs), and creating commercialisation pathways for innovators.

Digital and healthcare solutions will be expanded, alongside continued pilot testing and refinement of emerging technologies.

ADVANCING CONTINUOUS CHEMICAL MANUFACTURING

COHIZON-SUPPORTED INITIATIVE

Chemical manufacturing is changing rapidly. Across the world, manufacturers are moving from conventional batch production towards continuous processing methods that can improve efficiency, reduce waste, and make production more sustainable.

For India, adopting these next-generation technologies is important not only for strengthening global competitiveness, but also for building indigenous capabilities in advanced manufacturing.

Generously contributed by **Cohizon Life Sciences Ltd.**, IIT Bombay has launched an initiative to develop research, infrastructure, and skilled human capital in continuous electrochemical and mechanochemical processes. The programme brings together experimental infrastructure, research, training, and industry engagement to support the development of scalable and sustainable manufacturing technologies, with later-stage industry application dependent on validation and scale-up.

FOCUS AREAS:

- Continuous Flow Electrochemical Systems.
- Mechanochemical Process Development.
- Experimental Infrastructure.
- Capacity Building.
- Knowledge Dissemination.
- Industry-Relevant Research.

KEY HIGHLIGHTS

- Completed the design of a continuous flow electrochemical reactor
- Developed the first reactor prototype, which is currently under trial, with scale-up planned following successful validation.
- Organised a national-level training workshop on process intensification, bringing together participants from academia and industry.

FLAGSHIP INITIATIVE

A key outcome is the design of a continuous-flow electrochemical reactor and development of the first prototype, which is under trial. These reactor systems are designed to serve both as research platforms and as hands-on training tools, demonstrating the advantages of continuous processing through improved efficiency, better process control, and scalability.

The planned expansion into mechanochemical process development will further extend the initiative's contribution to sustainable and intensified chemical manufacturing.

LOOKING AHEAD

The next phase will focus on scaling the reactor prototype, expanding into mechanochemical process platforms, deepening industry engagement, and developing structured training modules, online learning resources, and wider knowledge dissemination.

ADVANCING INCLUSIVE FINANCIAL SYSTEMS

DEPARTMENT OF ECONOMICS INNOVATION LAB (DOEIL)



India's financial system is changing rapidly. Digital finance is expanding access, data and AI are reshaping decision-making, and climate and sustainability considerations are becoming more important for financial institutions. Yet, important gaps remain. Micro, Small and Medium Enterprises (MSMEs) continue to face constraints in accessing timely and adequate finance. Many individuals and enterprises remain at the margins of formal financial systems. Digitalisation has also brought new risks, including cybersecurity vulnerabilities and concerns around data use and trust.

The **Department of Economics Innovation Lab (DoEIL)** at IIT Bombay has been established as a dedicated platform for applied research and innovation in financial systems.

With generous contribution by **Bank of America Continuum India Private Limited**, the Lab is developing applied research across financial inclusion, MSME finance, digital transformation, climate finance and data and AI in financial systems.

It brings together academia, industry, and policymakers to develop actionable insights, analytical models, and practical frameworks that can support evidence-based policy and industry decision-making. It also seeks to build advanced research capabilities and develop skilled research talent equipped to address emerging challenges in financial systems.

FOCUS AREAS:

- Financial Inclusion.
- MSME Finance.
- Digital Transformation.
- Climate Finance.
- Data & AI in Financial Systems.
- Employability Skills.

KEY HIGHLIGHTS

- Focused on developing data-driven frameworks, analytical tools and research outputs for policymakers, financial institutions and other stakeholders.
- Organised a roundtable and symposium, bringing together stakeholders from industry, policy, and academia.
- Implemented the Primary Stakeholder Engagement Series, including focus group discussions and semi-structured interviews with underserved populations to understand financial access constraints and awareness gaps.
- Conducted a seminar-cum-workshop on Advanced Econometric Modelling to strengthen research capacity and methodological rigour.

LOOKING AHEAD

Over time, DoEIL aims to develop analytical frameworks and evidence-based insights that may be relevant across institutions and contexts. The platform is designed to support multiple research projects over its lifecycle, with the potential to contribute to ongoing policy discussions and industry practices.

Future work is intended to test and develop frameworks relevant to financial access, MSME finance, risk assessment and policy design, while building applied-research capability.



REIMAGINING RURAL HOUSING

HEARTS'74

Rural housing performance depends not only on construction cost, but also on thermal comfort, sanitation, energy and water systems. While programmes such as the Pradhan Mantri Awas Yojana (PMAY) have significantly expanded access to housing.

Many rural families still live in homes that are difficult to keep cool during extreme heat, expensive to maintain, and disconnected from reliable sanitation, clean energy, and water systems.

The next challenge is beyond building more homes; it is about building homes that are affordable, climate-resilient, environmentally sustainable, and suited to the diverse conditions found across India.

HEARTS'74–Habitat for Everyone: Affordable, Resilient, Transformative, and Sustainable–is an alumni-led legacy initiative of the IIT Bombay **Class of 1974** that seeks to address this challenge.

The initiative is developing integrated rural housing solutions that bring housing, sanitation, clean energy, and water systems together within a single, scalable design. The homes are being designed to remain within government affordability benchmarks while being adaptable to different geographies and climate conditions.

Following the successful completion of the first phase, the project has now entered the second one that focuses on pilot implementation and standardisation of modular housing designs.



FOCUS AREAS:

- Affordable Housing Design.
- Climate Resilience & Thermal Comfort.
- Integrated Sanitation, Clean Energy and Water Systems.
- Modular Plug-and-Play Housing.
- Field Validation through Live Pilots.

KEY HIGHLIGHTS

- Phase 1 was completed with the construction and unveiling of a full-scale prototype home during the IIT Bombay Class of 1974 Golden Jubilee Reunion in January 2025.
- The prototype serves as a live testbed where design choices, building materials, thermal comfort, and cost efficiency are being evaluated under real-world conditions, creating an evidence base for future deployment.
- Pilot site identification is underway to support the construction of about 10 pilot homes in diverse geographies, representing different climates, terrain, and community contexts.
- Development of three to four modular, adaptable housing designs is in progress to enable standardised, plug-and-play deployment at scale.

LOOKING AHEAD

The next phase will focus on completing pilot site selection and beneficiary identification, preparing sites, building pilot homes and refining the modular designs through field learnings. The initiative will also document thermal performance, cost efficiency, construction timelines, and beneficiary feedback to build a robust evidence base for future deployment.

Looking further ahead, HEARTS'74 aims to partner with government programmes, including the Pradhan Mantri Awas Yojana (PMAY), while engaging CSR and philanthropic partners to support large-scale implementation.

The long-term vision is to enable the construction of 100,000+ standardised, plug-and-play homes over the next decade homes that are affordable, climate-resilient and integrated with sanitation, clean energy, and water systems.



ACCELERATING BIOMEDICAL INNOVATION

HiMEDIA LABORATORIES-WIC

Through its corporate social responsibility (CSR) partnership with IIT Bombay, **HiMedia Laboratories Pvt. Ltd.** supports shared biomedical infrastructure, translational research and entrepreneurship at the **Wadhwani Innovation Centre (WIC)**.

Its support at the Wadhwani Innovation Centre (WIC) spans laboratory infrastructure, translational research and entrepreneurship, addressing critical steps between early-stage discovery and commercialisation.





SUPPORTING TRANSLATION

HiMedia's support is enabling researchers and projects to take the next step:

- **Entrepreneur-in-Residence**: Onboarding of the first WRCB-HiMedia EiR fellow who is developing a cost-effective device for rapidly purifying extracellular vesicles from small quantities of clinical samples.

- Research projects selected through WIC's 12th call for proposals—one on precision diagnosis of triple-negative breast cancer and another on synthetic antibiotics to combat bacterial resistance.

    - **Precision cancer diagnostics:** which is to develop an ultrasensitive biochip to detect and monitor triple-negative breast cancer through exosomes in serum, using advanced signal-amplification technologies.

    - **Tackling antibiotic resistance:** which is to develop dual-action synthetic antibiotics against resistant bacteria, with potential topical and systemic applications. The work has progressed to an in-vivo murine skin-infection model, and a patent application has been filed.

BIOINNOVATION AT WORK

The laboratory supports work across MedTech, synthetic biology, diagnostics and therapeutics, helping researchers move ideas towards proof-of-concept and commercialisation.

THE NEXT PHASE

Future plans include establishing advanced bioassay systems for drug discovery, toxicity testing and molecular research, alongside training programmes and opportunities for early-career researchers.

BUILDING QUANTITATIVE FINANCE FOR INDIAN MARKETS

IIT BOMBAY-CITADEL SECURITIES QUANTITATIVE RESEARCH LAB

Established with support from **Citadel Securities**, the **IIT Bombay-Citadel Securities Quantitative Research Lab** develops models grounded in Indian market structures and data.

Hosted at the Shailesh J. Mehta School of Management, the Lab brings together 12 associated faculty members across disciplines.

RESEARCH FOR INDIAN MARKETS

The Lab works across derivatives pricing, market microstructure, machine learning for volatility and risk, competitive market dynamics, and retail behaviour and information flows.

Six projects are underway, including neural solvers for multi-asset derivatives, NSE-specific tools for order-flow toxicity, Nifty volatility forecasting, and research into social media and Indian IPO markets. Findings are disseminated through publications and open-source code, alongside an active fellowship programme.

Crucially, the research is built around Indian market data rather than adapted from foreign benchmarks. It draws on features such as NSE's AlgoIndicator, Nifty's monthly expiry cycle, and India-specific volatility regimes.



MODELS TO MILESTONES

The Lab has set up computing infrastructure that includes a high-performance server with four NVIDIA H200 GPUs.

A prototype Physics-Informed Neural Network solver for the European Black–Scholes equation has been tested, laying the foundation for work on multi-asset American options.

The Lab has also created an NSE100 limit-order-book reconstruction pipeline, covering 44.6 million order records, and 2.5 million trade records across 100 symbols, providing a shared data backbone for future research.

Five GNO-Transformer models have also been trained on 20 years of Nifty data from 2005-2025. The results are preliminary, with primary submissions in preparation.

THE NEXT PHASE

In 2026–27, priorities include:

- **Derivatives & markets:** Extend the American-options solver and NSE order-flow research, including historical market replay.
- **Volatility & forecasting:** Extend forecasting to BankNifty, explore multi-index models and work towards real-time inference.
- **Indian market datasets:** Build an IPO-social media data pipeline and benchmark change-point detection on Indian high-frequency data.
- **Research & talent:** Recruit more PhD scholars and postdoctoral fellows, expand the Research Symposium, and explore an international conference and IIT Bombay Hackathon activities.

FROM RESEARCH TO APPLICATION

Some flagship projects are:

- Using deep learning to forecast implied volatility across Nifty options and developing India-specific measures of order-flow toxicity.
- Using deep learning to price multi-asset American options, where conventional methods become difficult as the number of assets increases.

The Lab is also strengthening the talent pipeline through its PhD and postdoctoral programme, Research Symposium, and a direct channel between IIT Bombay faculty and Citadel Securities' quantitative research team, giving researchers exposure to industry problems alongside academic research.



BUILDING INDIA'S HYDROGEN ECOSYSTEM

PAN-INDIA GREEN HYDROGEN INITIATIVE

India's National Green Hydrogen Mission targets annual green-hydrogen production capacity of 5 million tonnes by 2030. Achieving this ambition, however, will require far more than hydrogen production alone. It will depend on technologies that can produce, store, transport, and use hydrogen safely, efficiently, and at scale. Many of these are imported, expensive or are yet to be developed for Indian conditions.

Launched in 2023 with support from **HSBC India**, the **IIT Bombay Pan-India Green Hydrogen Initiative** brings together six coordinated research projects spanning hydrogen production, storage, utilisation, and transport safety.

Implemented across seven Indian institutions and guided by a steering committee comprising senior academic and industry leaders, the initiative is building indigenous technologies across the entire hydrogen value chain while strengthening India's long-term capability in hydrogen research and innovation.

Its vision is to support a self-reliant India that can produce, store, use, and transport green hydrogen using technologies designed and developed within the country, reducing import dependence and lowering costs for Indian industry.



FOCUS AREAS:

- Hydrogen Production.
- Hydrogen Storage.
- Hydrogen Utilisation.
- Hydrogen Transport Safety.
- Continuous Technology Development.
- Research Translation.



KEY HIGHLIGHTS

- Developed and demonstrated three laboratory-scale hydrogen production prototypes, each pursuing a distinct technological pathway. Demonstrated indigenous AEM electrolyser continuously using freshwater, seawater and preliminary industrial wastewater—an achievement with direct relevance for water-stressed regions.
- Achieved near-industrial performance in alkaline electrolyser cell, with stable operation for more than 100 hours using catalysts based on common iron and steel.
- Achieved approximately 75% efficiency and an estimated hydrogen production cost of around US$1.6 per kg through the magneto-electrolytic hydrogen generation system, supported by a novel one-step catalyst deposition technique.
- Developed metal hydride storage module, capable of filling to 80% capacity in 33 minutes at 35 bar, powering a 2 kW fuel cell, and successfully operating through more than 440 charge–discharge cycles.
- Developed three hydrogen burner platforms achieving 79–84% efficiency with near-zero NOx emissions, compared with 60–70% for conventional industrial burners.
- Established India's only laboratory capable of detecting hydrogen seepage in pipeline steel in real time, while identifying steel impurities associated with hydrogen-induced cracking. The research is under revision at the International Journal of Hydrogen Energy.



The next phase will focus on:

- Completing the multi-stack electrolyser.
- Scaling alkaline and magneto-electrolytic systems towards industry-relevant sizes.
- Undertaking campus vehicle trials for the metal hydride storage system.
- Beginning pilot-scale burner trials with SAIL India.
- Upgrading the hydrogen embrittlement facility to operate with real hydrogen gas.
- Advancing the most mature technologies towards Technology Readiness Level (TRL) 7 through industry partnerships and continued national funding.

FROM SOLAR CELLS TO SUSTAINABLE BATTERIES

With support from **Indus Towers Ltd.**, two IIT Bombay projects are working on different pieces of the clean-energy challenge. One is taking perovskite solar cells beyond laboratory scale; the other is turning waste biomass into hard carbon for sodium-ion batteries. Both projects are developing technology and infrastructure for later-stage energy applications.

Together, these two projects span two ends of the clean-energy equation: generating energy more efficiently and finding more sustainable ways to store it.



TAKING PEROVSKITE SOLAR CELLS BEYOND THE LAB

Perovskite solar cells can deliver strong performance in the laboratory. Scaling them into larger, stable, and reliable photovoltaic devices is the harder part. The project is addressing this gap through large-area fabrication, encapsulation, stability, and characterisation, with the goal of developing scalable and reliable perovskite solar cells and mini-modules for next-generation high-efficiency photovoltaics.

The work covers large-area cells and mini-modules, wide-bandgap perovskites for tandem applications, laser-scribing and scalable coating, encapsulation and stability, and advanced electrical and optical characterisation.

The team has developed devices with a 9 cm^2 substrate area and more than 5 cm^2 active area, and demonstrated ~20% power conversion efficiency (PCE) in wide-bandgap cells for tandem applications. It has also achieved 700-hour damp-heat stability while maintaining T70 lifetime and established a scalable 5 × 5 cm^2 fabrication workflow.

The infrastructure for further scale-up is taking shape too. A 5,000 sq. ft. cleanroom and 1,500 sq. ft. utility facility have been established, alongside a 100 cm^2-capable slot-die coater. An operational laser scriber has been installed, with P1/P2/P3 optimisation initiated.

The work on scalable perovskite mini-modules and tandem photovoltaics is intended to move from high-performing laboratory cells towards larger-area devices. The project also provides a platform for researcher training.

Next steps include optimising laser-scribing, mini-module fabrication, encapsulation, and stability, while strengthening characterisation and scalable coating capabilities.



FROM RICE HUSK TO BATTERY MATERIAL

A second project starts with an abundant waste material: biomass. The team is developing sustainable hard-carbon anodes for sodium-ion batteries, converting waste biomass into functional battery materials through controlled synthesis and processing.

Its flagship use case is rice-husk-derived hard carbon, with the longer-term goal of developing scalable biomass-derived materials, and advancing them towards practical sodium-ion battery systems.

Key advances:

- A fully functional laboratory ecosystem has been established for synthesis, characterisation and electrochemical testing, with reproducible biomass-to-carbon synthesis.
- Optimised rice-husk pre-treatment has improved initial coulombic efficiency (ICE) to ~78%, while processing optimisation reduced surface area from ~117 m^2/g to ~41 m^2/g.
- Planetary ball milling has been introduced for better particle-size uniformity, a dedicated BET surface-area analyser installed, and a dedicated postdoctoral research resource onboarded.

The next stage will optimise carbon structure, porosity, ICE and reversible capacity, and undertake electrolyte and long-term cycling studies. Full-cell validation is planned using NFM111, NVP and NVPF cathodes, followed by progress towards prototype sodium-ion battery systems.



DESIGNING SILICON FROM SCRATCH

JM-SS INTEGRATED CIRCUIT DESIGN & TEST LAB

Students may learn chip design using Electronic Design Automation (EDA) tools, but often have limited exposure to silicon fabrication, testing and validation—making the transition to semiconductor product development challenging.

With generous contribution of IIT Bombay alumnus **Mr. Jitendra Mohan** and **Ms. Swapna Samant**, the **Integrated Circuit (IC) Design & Test Lab** at IIT Bombay brings the chip development lifecycle into the academic curriculum. Students move from transistor-level design and system architecture through physical design and verification, with fabrication and bench-level characterisation forming the later stages of the programme.



It gives students experience in commercial foundry design rules, process design kits, sign-off methodologies, physical design, verification, firmware development and hardware bring-up. It is also building a repository of silicon-validated digital IP blocks for future projects.

The Lab seeks to strengthen India's semiconductor ecosystem through three priorities:

- Building a collaborative ecosystem through shared chip design projects and a repository of reusable intellectual property (IP) blocks.
- Delivering experiential learning through commercial EDA tools, high-performance computing, fabrication workflows, and end-to-end tapeouts.
- Developing industry-ready talent with experience in commercial design rules, verification, and chip implementation.

A SILICON DESIGN ECOSYSTEM

During its inaugural pilot phase, the Lab:

- Trained approximately 270 B.Tech., Dual Degree, M.Tech. and PhD students through the revamped digital integrated circuit design curriculum.
- Enabled approximately 130 students to progress to intensive hands-on laboratories focused on complete system implementation.
- Built a fully student-driven hardware-software development stack.
- Established a collaborative cloud-based platform for multi-user chip layout, physical verification, and management of reusable IP blocks under commercial foundry sign-off protocols.

DESIGNING A RISC-V CHIP

The flagship project challenged students to design and validate a complete embedded RISC-V System-on-Chip (SoC) rather than use pre-verified reference designs.

Student teams developed custom hardware architectures integrating memory controllers and communication buses for off-chip DRAM, flash memory, SD storage, and peripheral interfaces. They also developed firmware, linker scripts, and bare-metal boot code, ultimately compiling and running a functional micro-Linux kernel on their hardware.

The system underwent hardware-in-the-loop validation on FPGA platforms. The highest-performing architectures were then integrated into a production layout, with the student-designed SoC completing final Design Rule Check (DRC) and Layout Versus Schematic (LVS) verification ahead of the planned physical tapeout through the TSMC 65 nm process.

BEYOND THE FIRST TAPEOUT

The Lab's next priorities include:

- Receiving and characterising, the first 65 nm silicon in December 2026, with students leading chip bring-up, electrical characterisation and performance validation using custom measurement boards.
- Expanding into analogue mixed-signal (AMS) and radio frequency (RF) circuits for future System-on-Chip platforms.



BUILDING LEADERSHIP FOR SCALE

LEADERSHIP CAPACITY BUILDING INITIATIVE

As institutions grow in scale and complexity, academic leadership increasingly depends on strong operational and administrative systems. Universities increasingly require professional leadership systems that can strengthen execution, improve operational efficiency, deepen external engagement, and support strategic growth across academic and administrative functions.

At IIT Bombay, the **Leadership Capacity Building Initiative** seeks to address this need by creating a structured framework for institutional leadership development. Generously contributed by IIT Bombay alumnus **Mr. Rajesh Mashruwala**, the initiative is aligned with the Institute's 'Strategy Plan 2026-2030 & Beyond' and focuses on leadership development across academic and administrative functions.

INSTITUTIONAL TRANSFORMATION

The programme's objective is to strengthen the professional management capacity supporting IIT Bombay's long-term priorities. The initiative's focus areas include:

- Streamline governance and execution of the Institute's strategic roadmap.
- Strengthen industry partnerships and research collaborations.
- Enhance outreach and revenue generation capabilities.
- Improve faculty and student services through more efficient HR, legal, IT, and administrative systems.
- Build institutional systems that can support scale, agility, and long-term sustainability.

LOW COST AND ENERGY EFFICIENT

WATER DISTRIBUTION SYSTEMS FOR RURAL AND URBAN AREAS

Urban water supply systems often face a complex challenge: improving infrastructure and extending connections does not necessarily ensure that water reaches all consumers reliably, predictably and equitably. With support from **STEM Water Infrastructure and Distribution Pvt. Ltd.**, IIT Bombay's SRISTHI Lab undertook a study across Mumbai, Nashik and Solapur to better understand the factors driving these gaps and identify approaches for improving water service delivery.

The project combined household surveys, field investigations and engineering analysis to examine both the consumer experience and the functioning of water supply systems.

The household-level assessment showed that water security is influenced not only by the availability of a connection, but also by supply reliability, pressure, household storage, housing conditions, economic capacity, access to information and availability of alternative water sources. The differences observed across Mumbai, Nashik and Solapur demonstrate why solutions need to be tailored to the local conditions of each water supply system and the communities it serves.

The engineering research further examined the behaviour of intermittent water supply systems, helping identify how pipeline filling and emptying, flow-starved conditions and leakage can affect the quantity and pressure of water reaching consumers. The resulting hydraulic modelling approach provides a more realistic basis for assessing system performance and understanding where and why inequities in supply occur.

The project's value lies in converting these insights into better water-management decisions. By identifying the socio-economic and technical factors that influence water availability, the research can help water utilities and urban authorities diagnose inequities, improve supply operations, strengthen pressure management, plan system improvements and design interventions for vulnerable communities. Its recommendations, aligned with SDG 6, support a shift from measuring water access simply through connections to ensuring reliable, predictable and equitable water services.

Through STEM's support, the project therefore contributes not only to a deeper understanding of urban water challenges, but also to the development of evidence-based approaches for improving how water is delivered to communities.



WHERE IIT BOMBAY WOMEN CONNECT AND GROW

LUMINA



For IIT Bombay's women students and alumnae, the connection with the Institute stretches across generations, careers, and geographies. Lumina, launched in 2025, is bringing that community closer together.

Generously contributed by the **IIT Bombay Heritage Foundation (IITBHF)** and the **IIT Bombay Alumni Association (IITBAA)**, **Lumina** is a platform for mentorship, engagement, and connection among women students and alumnae of the Institute. Its programmes focus on professional development, career journeys, and community-building.

The initiative was spearheaded and generously contributed by alumnus **Mr. Anil Kshirsagar** (B.Tech., Mechanical Engineering, 1975), Founding President of the IIT Bombay Heritage Foundation.

A COMMUNITY ACROSS GENERATIONS

Lumina is guided by a founding leadership team comprising Ms. Shivani Govil, Ms. Vinaya Kapoor, Ms. Veena Srinivasan, Ms. Swati Vora, Ms. Dipti Datye, Ms. Jalpa Vyas, Ms. Diksha Sekhri and Ms. Aparna Gupta, alongside Mr. Anil Kshirsagar. The team has shaped Lumina around mentorship, community-building, and institutional support.

Its work is anchored in three core pillars:

- **Events and Workshops**, led by Ms. Swapna Samant.
- **Mentorship Programme**, led by Ms. Anjali Anagol-Subbarao and Ms. Sujesha Sudevalayam.
- **Inspiring Narratives**, led by Ms. Nirupama Kenkare.

CONVERSATIONS THAT CONNECT

Since its launch, Lumina has hosted a series of engagements featuring accomplished alumnae and thought leaders from academia, entrepreneurship, technology, finance, social impact, and industry.

In FY26 alone, five engagements brought together the IIT Bombay women's community across themes including AI and workplace transformation, career relaunch, professional development, and community-building, with participation spanning geographies and generations.

These engagements gave students and alumnae opportunities to hear different career journeys, interact with speakers, and build professional connections.

GROWING THE CIRCLE

Lumina is building a continuing channel for connection, mentorship, and visibility across IIT Bombay's women student and alumnae community.

As the number of women students and alumnae at IIT Bombay continues to grow, Lumina has the potential to evolve into a transformative institutional platform, amplifying women's leadership and creating sustained societal impact through connection, collaboration, and shared growth.



WHERE IDEAS LEARN TO TAKE SHAPE

MAKERSPACES & MICROFACTORIES



At IIT Bombay, learning to create increasingly means learning to make: to take an idea, build it, test it, and see how far it can go.

Across the Institute's **MakerSpaces** and **Microfactories**, students, researchers, and innovators are turning ideas into reality—moving from concept and design to prototyping, testing, and ultimately, product development.

The spaces differ in what they offer: from open-access fabrication and first-year learning to specialised facilities for biology, electronics, robotics, and drones. They are part of a growing ecosystem built around learning by doing.

THE STARTING LINE

For nearly 1,400 undergraduate students each year, hands-on engineering now begins in the first semester through MS 101, a joint initiative of the Departments of Mechanical Engineering and Electrical Engineering that replaces the earlier Engineering Drawing and Workshop courses.

Inside the **Deepak and Maya Satwalekar Design and Making Lab** and **Class of 1980 Design and Making Lab**, more than 250 workstations, along with 3D printers, laser cutters, soldering stations, and freely available materials, allow students to design, fabricate, and demonstrate functional engineering systems. The aim is to equip every IIT Bombay undergraduate with practical design and fabrication skills before the end of the first year.

This year, that learning quite literally took flight. First-year teams designed and fabricated a quadcopter, including its frame, arms, landing gear, and a custom PCB-based joystick controller. The semester culminated in live flight demonstrations of a functional quadcopter capable of lifting a payload weighing about 4 kg under Earth's gravity.

MICROFACTORIES: LEARNING THE TOOLS TO BUILD

Advanced fabrication is another part of this ecosystem. The **Kadayam S. Srinivasan Electrical Microfactory**—generously contributed by **Mr. Balaji Srinivasan**—and the **Harivallabh Nagar Mechanical Microfactory**—generously contributed by **Mr. Sumeet Nagar**—give students access to sophisticated fabrication capabilities.

Students progress through a three-tier protocol: trainee, supervised first user, and independent user.

Since 2024, over 517 students were trained hands-on, with 1,307 user entries across 15 departments and 889 fabrication jobs. Around 76% of supervised first-time users returned as independent users.

The work ranges widely. Adyant, the Rocket Team, fabricated high-power solid-propellant rockets fully in-house using multi-machine workflows, while the Mars Rover Team used 3D printing and laser cutting to build its rover, which was presented at the International Space Robotics Week 2025.

A further facility is planned in the new DSSE Building. The proposed **Agivant Technologies Microfactory**, generously contributed by alumnus **Mr. Sandeep Kishore and family**, will support early design thinking and prototyping, while the Prototyping Lab will provide hands-on fabrication and design refinement.







MAKERSPACES: GETTING MORE SPECIALISED

The wider MakerSpace ecosystem is adding specialised capabilities:

- **Making in biology:** The **Dr. Lionel J. D'Luna Bio MakerSpace Lab**, being established within the new DSSE, is described as India's first dedicated bio-focused maker facility. Its areas span synthetic biology, biomedical devices, therapeutics, bio-based materials, manufacturing, tissue engineering, and regenerative medicine.

- **Closing the prototype-product gap**: Generously contributed by **Mr. Hem Agrawal** and **Ms. Lynette Agrawal**, the **Agrawal Product Integration & Assembly MakerSpace** brings together three integrated components: the Product Integration & Assembly Thematic Lab, Clean Room for Electronics Assembly and Electronics Testing Section. They are intended to support prototyping, assembly, testing, and validation. The labs are recently inaugurated and fully functional now.

- **Robots and drones get room:** Generously contributed by the **Class of 1998, the Robotics and Drones Lab** is among six thematic laboratories in the MakerSpace initiative on the third floor of the DSSE Building. Its capabilities include motion capture, wind generation, computing, and robotic systems for work spanning robotics, drones, autonomous systems, and AI-enabled applications.

STRENGTHENING COMMUNITY-LED GROUNDWATER MANAGEMENT

MAHA-MARVI

Groundwater is central to rural livelihoods in Maharashtra, but decisions on cropping and irrigation are often made with limited local aquifer information. In drought-prone regions such as Dharashiv, farmers frequently make cropping and irrigation decisions without reliable information on the aquifers beneath them. Better groundwater management, therefore, is not only a technical challenge. It is also about placing usable knowledge in the hands of the communities that depend on it every day.

MAHA–MARVI is a partnership between the **ICICI Foundation for Inclusive Growth, IIT Bombay, and Western Sydney University (WSU), Australia.** The initiative combines scientific methods with community participation to support groundwater management and livelihood planning. Through local measurement, shared mapping, and village-level interpretation of groundwater data, the project helps make an invisible resource visible, understood, and manageable.

Its long-term vision is to strengthen community-led, science-backed groundwater stewardship that supports sustainable rural livelihoods across Maharashtra.



FOCUS AREAS:

- Participatory Groundwater Management.
- Citizen Science Development.
- Sustainable Livelihood Improvement.
- Scalable Living Labs.

KEY HIGHLIGHTS

- Established the project's first implementation site in the Sina sub-catchment of the Upper Bhima basin in Dharashiv.
- Trained a cohort of Bhujal Jankaars as "groundwater-informed" village-level citizen scientists.
- Enabled participatory mapping of local aquifers, turning groundwater data into shared community knowledge.
- Implemented the Managing Aquifer Recharge and Village-level Intervention (MARVI) approach in a localised context.
- Established a multi-partner framework, with the Development Support Centre (DSC) serving as the implementation lead.
- Developed and deployed simplified scientific instruments that allow non-experts to monitor groundwater levels and aquifer behaviour.

COMMUNITY-LED INNOVATION

- ***Bhujal Jankaar* Training Programme:** Local residents are trained to become "groundwater-informed" volunteers who use simple tools to track water table fluctuations. Their work helps villages make more informed choices about crop selection and irrigation.
- **Sina Sub-Catchment Living Labs:** Field-based demonstration sites where researchers and farmers co-create water management solutions suited to Maharashtra's geography.
- **Community Water Budgets:** Villages are supported in preparing annual water budgets based on monitored aquifer levels, helping ensure that extraction does not exceed natural recharge capacity.

LOOKING AHEAD

The next phase will focus on expanding the community-driven model from the Sina sub-catchment to broader regions of Maharashtra. It will deepen the link between groundwater data and crop-marketing strategies, explore digital systems for records maintained by *Bhujal Jankaars*, work with state stakeholders to integrate the MARVI approach into formal rural development policies, and develop a framework for recognising Water-Secure Villages that practise sustained community stewardship.



MAKING EARLY SIGNALS EASIER TO DETECT

MICROFLUIDIC PLATFORM FOR EXTRACELLULAR VESICLE ISOLATION

The body continuously sheds billions of tiny particles, known as extracellular vesicles, into fluids such as saliva and urine. These vesicles carry molecular signals from cells and can reflect early changes linked to disease. If isolated reliably, they could help doctors detect conditions such as cancer from a simple, non-invasive sample, without the need for a needle biopsy.

The challenge lies in the isolation process. Current methods require large, expensive laboratory equipment and hours of processing. Through a collaboration with **Blockchain for Impact (BFI)**, the IIT Bombay team has developed two compact microfluidic chips—LoAR-Exo and HiAR-Exo—that isolate extracellular vesicles in a single, fast step. A saliva or urine sample enters the chip at one end; purified, analysis-ready vesicles are collected at the other.

The longer-term research objective is to determine whether this approach can support simpler, non-invasive detection workflows.



FOCUS AREAS:

- Microfluidic Chip Design.
- Saliva and Urine-Based Diagnostics.
- Extracellular Vesicle Isolation.
- Disease Marker Confirmation.
- Benchmarking Against Standard Laboratory Methods.
- Patenting and Commercialisation.

KEY HIGHLIGHTS

- Successfully isolated extracellular vesicles from saliva and urine samples collected from 10 healthy donors each.
- Demonstrated that the chip collects 17 times more particles from saliva and 12 times more particles from urine than the current standard laboratory method.
- Confirmed that disease-marker proteins expected on genuine extracellular vesicles were present in all collected samples.
- Published an international patent and Indian patent
- Received the Best Oral Presentation award at the inaugural conference of the Indian Society of Extracellular Vesicles, AIIMS New Delhi, in 2025.

POTENTIAL APPLICATIONS

A possible future clinical workflow, subject to further validation, would be as follows.

A patient would provide a saliva or urine sample at a clinic, which would be processed through a compact microfluidic chip to concentrate extracellular vesicles for downstream analysis. Whether this approach can reliably support early-stage disease detection requires further clinical validation.

LOOKING AHEAD

The next research question is whether the higher particle recovery demonstrated in early testing can translate into reliable diagnostic performance and a portable workflow outside specialised laboratories.





POWERING INDIA'S SEMICONDUCTOR TALENT PIPELINE

OPPO SUPPORT FOR SEMIX INITIATIVE

A globally competitive semiconductor ecosystem needs talent at several levels: from students learning emerging technologies to faculty building new capabilities, alongside stronger links between academia and industry.

Generously contributed by the **OPPO India CSR Fund**, the **SemiX** initiative at IIT Bombay ran programmes between January and June 2026. Through four flagship programmes, it brought together students, faculty, industry leaders, and other stakeholders, combining hands-on technical training with faculty development, ecosystem conversations, and direct mentorship.

THE TALENT-TECHNOLOGY-INDUSTRY CONNECT

These efforts reinforced SemiX's three-pronged mandate: cultivating a multi-tiered talent pipeline, accelerating industry-aligned skill adoption, and fostering ecosystem collaborations.

There is a deliberate mix to the effort. Frontier technical training in neuromorphic computing and advanced packaging sits alongside policy and startup-ecosystem convening and direct student mentorship.

In this way, SemiX translated OPPO India's CSR support into concrete progress on India's semiconductor self-reliance agenda, while strengthening the interface between academia, industry, and government.

POINTS IN THE PIPELINE

Together, the four programmes reached around 180 participants across industry leaders, faculty and students, with each addressing a different part of the semiconductor ecosystem:

- **India Fabless Semiconductor Design Acceleration Workshop | 27 February:** Conducted with ICEA, the workshop convened around 70 stakeholders from government, industry, academia, and investors to align on product opportunities, IP creation, capital access, and design infrastructure.
- **Neuromorphic Edge AI & RISC-V Workshop | 28 February:** Conducted with Innatera, the workshop gave approximately 50 students hands-on training in Spiking Neural Networks and energy-efficient edge computing via the Talamo SDK.
- **Train-the-Trainer Semiconductor Packaging Workshop | 14 March:** Held at COEP Pune under the University Affiliate Program, the programme built the capacity of around 20 faculty across advanced packaging, heterogeneous integration, and chiplet architectures.
- **Fireside Session with Prof. Juzer Vasi | 25 March:** Conducted via the Semiconductor Student Alliance, the session with Padma Shri awardee Prof. Juzer Vasi engaged around 40 students on careers in microelectronics and photovoltaics.

MATHEMATICS FOR PROBLEMS THAT MATTER

The **Prof. G.K. Hebalkar Advanced Applied Mathematics Program** at IIT Bombay, **Dr. Prakash Hebalkar**, supports the application of advanced mathematics to problems across technology, society, defence and other areas of national relevance.

The Program is built around an interdisciplinary and interinstitutional approach. The programme connects mathematical research with applied questions and creates opportunities for collaboration with national laboratories and other partners.

It has supported a dedicated mathematics laboratory. Postdoctoral fellowships, computing infrastructure, and research collaborations are planned components of the programme. Together, these aim to give researchers the infrastructure and collaborative environment needed to develop new mathematical models and approaches.

The Program seeks to support high-potential doctoral researchers and foster collaborations that can open the door to research grants and new opportunities.

BUILDING RESEARCH CAPACITY

The Prof. G.K. Hebalkar Advanced Applied Mathematics Program aims to:

- Strengthen research in Advanced Applied Mathematics.
- Develop new mathematical models and approaches to real and relevant problems.
- Support high-potential doctoral researchers and build research capacity.
- Enable interdisciplinary research through dedicated infrastructure.
- Build collaborations that can lead to matching research grants and further research opportunities.



GREENER ROADS FOR A SUSTAINABLE FUTURE

ROADSTAR

Concrete pavements are widely used for their durability. But they depend heavily on cement, whose production is energy-intensive and a major source of carbon emissions. The project, generously contributed by **Roadstar Infra Investment Trust**, explores sustainable pavement solutions through two complementary studies: geopolymer concrete as a sustainable alternative to conventional cement, and microsurfacing as a preventive maintenance technique for flexible pavements. The geopolymer concrete study uses industrial by-products such as fly ash and ground-granulated blast furnace slag (GGBFS).

The study developed and evaluated geopolymer concrete mixes under ambient curing conditions, eliminating the need for heat curing. By optimising mix compositions and chemical activator parameters, the project identified formulations capable of meeting the performance requirements for rigid concrete pavements.

KEY RESEARCH ACTIVITIES

- Procurement of raw materials and chemical activators.
- Material characterisation and testing.
- Development of geopolymer concrete mix designs.
- Optimisation of activator parameters.
- Assessment of workability and setting behaviour.
- Evaluation of compressive and flexural strength.
- Microstructural analysis of geopolymer concrete.
- Characterisation and comparative evaluation of four commercially available polymer-modified emulsions for microsurfacing.

RETHINKING CONCRETE PAVEMENTS

The study generated performance data on geopolymer concrete under ambient curing conditions. Key outcomes include:

- Successfully procuring and characterising all the required raw materials.
- Developing and evaluating 22 geopolymer concrete mix designs.

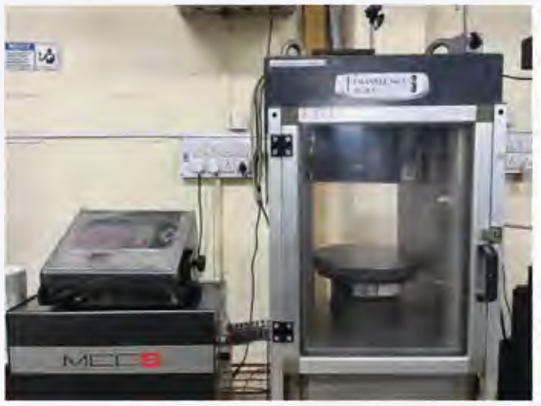
- Demonstrating that replacing 30% of fly ash with ground granulated blast furnace slag (GGBFS) enabled proper setting and strength development under ambient curing conditions.
- Achieving compressive strengths exceeding 40 MPa after 28 days for most mixes with a Na_2O content of 7% or higher, meeting the IRC:44 requirements for rigid concrete pavements.
- Identifying the highest compressive strength for the mix containing 8% Na_2O and a silicate modulus (Ms) of 1.5.
- Achieving the IRC:44 flexural strength requirement for rigid concrete pavements in selected mixes with Na_2O content of 6% or higher and Ms between 1.0 and 1.5.
- Identifying the optimum activator range as Na_2O content between 7% and 8% and Ms between 1.0 and 1.5.
- Successfully characterised and evaluated four commercially available polymer-modified emulsions for microsurfacing.
- Identified E1 as the best-performing emulsion overall, followed by E2, E3 and E4.
- Established the overall field performance ranking as E1 > E2 > E3 > E4.

TOWARDS GREENER INFRASTRUCTURE

The project demonstrated that pavement-grade geopolymer concrete can be produced successfully under ambient curing conditions, eliminating the need for energy-intensive heat curing.

The material achieved approximately 80% of its 28-day compressive strength within the first seven days, indicating its potential for the early opening of rigid pavements to traffic. By combining industrial by-products with optimised geopolymer chemistry, the study highlights a promising pathway towards more sustainable, lower-carbon concrete pavements without compromising engineering performance.

The microsurfacing study demonstrated that selecting an appropriate polymer-modified emulsion can contribute to improved pavement performance and durability.
Together, the studies provide engineering evidence on geopolymer concrete for pavement construction and polymer-modified emulsions for preventive maintenance.





ADVANCING THE FUTURE OF DIGITAL INFRASTRUCTURE

ROTATING CONTACTING DISK BASED ADIABATIC AIR COOLERS FOR DATA CENTRE APPLICATIONS.

The rapid adoption of artificial intelligence and high-performance computing is transforming industries and accelerating India's digital ambitions. As computing workloads grow in scale and intensity, the demand for data centre infrastructure that is reliable, energy-efficient and sustainable has never been greater.

Recognising this critical need, IIT Bombay and **Vertiv Energy Pvt. Ltd.** have established a strategic collaboration to advance innovative cooling solutions for AI-driven computing and next-generation data centres.

The partnership brings together IIT Bombay's strengths in advanced research and engineering with Vertiv's global expertise in critical digital infrastructure. Together, the collaboration is focused on addressing emerging challenges in data centre cooling while creating solutions that can contribute to the efficiency, resilience and sustainability of India's rapidly expanding digital infrastructure.



A key area of the collaboration is the application and further development of IIT Bombay's patented Rotating Contacting Disk (RCD) technology. The technology offers substantially lower air-side pressure drops than conventional pad-type precoolers, with the potential to reduce fan power and noise while improving water utilisation efficiency.

Its ability to support higher cycles of concentration also creates opportunities for greater water conservation, including the potential use of recycled water and seawater. Demonstrated across diverse applications, the RCD technology has shown significant potential for energy-efficient cooling, including substantial reductions in fan power, while maintaining improved cooling performance. Its applications extend beyond cooling to areas such as wastewater vapourisation and CO_2 scrubbing.

The collaboration also reflects a broader commitment to building the talent and capabilities required for India's digital future.

By providing students and researchers with exposure to industry-relevant challenges, emerging technologies and practical engineering applications, the partnership strengthens the connection between academic learning and real-world innovation. It creates a platform for the next generation of engineers and researchers to engage with the technologies that will underpin the country's growing data centre and digital ecosystem.

ENABLING THE NEXT GENERATION OF SPACE ENGINEERS

SPACE TECHNOLOGY INNOVATION LAB

India's space sector is expanding rapidly, creating new opportunities in satellite technologies, launch systems and space exploration. As the ecosystem grows, so does the need for engineers who are as comfortable building and testing hardware as they are understanding the science behind it. Creating those capabilities requires strong academic programmes as well as access to advanced laboratories where students can learn by designing, building, and validating real space systems.

Generously contributed by IIT Bombay alumnus **Mr. Deepak Satwalekar**, IIT Bombay has initiated the development of the **Space Technology Innovation Lab** to create a student-centred ecosystem for research, testing, and experiential learning in space technologies. Alongside strengthening the Institute's capabilities in satellite technologies, the initiative is designed to prepare the next generation of engineers for India's growing space and aerospace sectors.

A major highlight of the initiative is SITARE-1, a compact payload being developed through the SITARE Lab at IIT Bombay to demonstrate pulsar-based navigation for future deep-space missions. The project gives students hands-on experience in payload engineering, detector systems, electronics integration, testing and mission-oriented problem solving under faculty mentorship, while contributing to applications related to Gamma Ray Burst detection and space instrumentation.

A key component of the initiative is the creation of advanced testing capabilities, including a Thermovac chamber, enabling students and researchers to validate space-grade hardware under simulated environmental conditions.



FOCUS AREAS:

- CubeSat Technologies.
- Payload Engineering.
- Satellite Subsystem Development.
- Environmental Testing.
- Structural and Thermal Design.
- Electronics Integration.

KEY HIGHLIGHTS

- Initiated development of the Space Technology Innovation Lab during 2025–26.
- Established the foundation for a student-centred platform integrating research, testing and experiential learning in satellite systems and space technologies.
- Undertook planning and procurement of critical infrastructure for the laboratory.
- Developed a structured multi-semester training framework for undergraduate students covering the complete lifecycle of space hardware development: from conceptual design and simulation to fabrication, integration, testing, and validation.
- Advanced the student-led development of SITARE-1, a compact payload designed to demonstrate pulsar-based navigation for future deep-space missions.
- Students are actively involved in the design, fabrication and validation of the payload, while contributing to applications related to Gamma Ray Burst detection and space instrumentation.
- Completed laboratory validation of detector systems and electronics.

Over time, the Lab is intended to expand its research, testing and hands-on training capability in satellite and space technologies.



AI AS A TEACHING PARTNER

In today's digital economy, Computer Science skills are vital, but delivering high-quality education at scale remains a challenge. Large classes, limited personalised guidance, and time-intensive assessment can make consistent, hands-on learning difficult.

With support from **Tower Research Capital**, IIT Bombay is addressing this issue through an artificial intelligence (AI)-enabled education ecosystem built around the **Bodhitree** learning platform. It combines intelligent learning tools, AI-assisted evaluation, and scalable digital infrastructure to provide hands-on, personalised learning. AI supports, not replaces, teachers, giving students timely guidance while allowing faculty to focus more on teaching, mentoring, and curriculum innovation.

The goal is to make high-quality Computer Science learning more accessible, inclusive, and scalable through the responsible use of AI.



LEARNING AT SCALE

The project combines AI-enabled learning and evaluation, virtual teaching assistants, and practical laboratories with Massive Open Online Courses (MOOCs), certification programmes, and multilingual tools. Its digital infrastructure is designed to support large and diverse learner communities. Key achievements include:

- More than 1,171 students engaged across IIT Bombay courses using AI-enabled learning platforms.
- Over 6,800 users supported through the SAFE digital platform in 100+ courses.
- 2,162 learners enrolled in a national C++ programming course, with participants from every Indian state and overseas.
- More than 570 hours of hands-on laboratory content developed across cloud computing, cybersecurity, and web development.
- Over 2,283 student interactions supported through AI-based learning assistants in live courses.
- 75% response accuracy achieved by AI learning tools during controlled trials.
- Over 1,200 participants engaged through national competitions in 15+ cities.
- Virtual teaching assistants, multilingual coding support, and AI-assisted grading systems successfully deployed.

AI IN ACTION

Bodhitree integrates video lectures, quizzes and practical laboratories, with AI assistants providing contextual hints and guidance without revealing answers. AI-assisted grading supports efficient, consistent assessment, while multilingual and voice-based interfaces let learners ask questions in their preferred language.



EXPANDING AI-ENABLED EDUCATION

Building on this foundation, the project plans to:

- Introduce AI-generated quizzes and improved subjective evaluation systems.
- Deepen integration between coding assistants, conversational learning support and virtual laboratories.
- Expand MOOCs and certification programmes across multiple domains through recurring national programmes.
- Develop adaptive learning pathways based on student performance and engagement.
- Further develop Bodhitree for possible wider institutional adoption.
- Extend access to learners and institutions in under-resourced regions.

SCALING HANDS-ON ELECTRONICS EDUCATION

WADHWANI ELECTRONICS LAB (WEL)

Electronics and embedded systems are transforming industries ranging from healthcare to mobility, making practical engineering education more important than ever. As technologies evolve, laboratory infrastructure, hardware platforms, and teaching approaches must evolve with them, giving students opportunities to design, build, and test real systems alongside classroom learning.

The **Wadhwani Electronics Lab (WEL)**, generously contributed by **Wadhwani Charitable Foundation**, at IIT Bombay was established to strengthen hands-on electronics education through curriculum modernisation, replicable hardware platforms, translational student projects, laboratory upgradation, and partner institute engagement.

During 2025–26, WEL expanded student training, upgraded laboratory systems, and advanced new teaching hardware for deployment across IIT Bombay and partner institutes.



FOCUS AREAS:

- Curriculum Modernisation.
- Scalable Hardware Development.
- Student Skill Development.
- Partner Institute Outreach.
- Emerging Technology Training.

KEY HIGHLIGHTS

- Approximately 1,500 IIT Bombay students trained across Semester 1 and Semester 2.
- Around 550 students from previously supported institutes engaged through WEL-linked activities.
- Engagement initiated with eight new partner institutes during the reporting period.
- The RhoPi Pico microcontroller development platform was integrated into the undergraduate Electronics Design Lab (EDL) course to support project-based embedded systems learning.
- Prototype of the upgraded IQ Modulator board successfully tested and made ready for further development.
- A new FPGA hardware board prototype successfully tested and made operational.
- Contributed to the Introduction to Quantum Engineering course through a module aligned with developments under the National Quantum Mission.

FLAGSHIP INITIATIVES

- **RhoPi Pico Development Platform:** The RPi Pico-based hardware platform has been integrated into the undergraduate Electronics Design Lab course to support hands-on embedded systems learning. Additional exercises and advanced coursework are planned for postgraduate Embedded Systems Laboratory deployment and future summer workshops.
- **Upgraded IQ Modulator Board:** WEL redesigned the IQ Modulator board to eliminate dependence on external Arbitrary Function Generators and GHz-frequency clock generation hardware. Following successful prototype testing, additional boards and laboratory experiments are planned for future deployment.
- **FPGA Hardware Development:** A new FPGA hardware board prototype has been developed and tested for future deployment in Digital Systems, and VLSI Design and Communication Systems laboratory courses.

LOOKING AHEAD

In the coming year, WEL will:

- Develop an advanced microcontroller course based on RhoPi development board.
- Fabricate and deploy more upgraded IQ Modulator boards after validation tests.
- Introduce upgraded IQ Modulator boards into the Autumn semester courses.
- Expand FPGA hardware board deployment across Digital Systems, and VLSI Design, and Communication Systems laboratories.
- Design more embedded systems experiments for postgraduate students, and outreach programmes.





FACULTY AND RESEARCH DEVELOPMENT

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CHAIR PROFESSORSHIPS AT IIT BOMBAY

RECOGNISING ACADEMIC EXCELLENCE AND ENABLING RESEARCH

At IIT Bombay, Chair Professorships recognise faculty members whose contributions to teaching, research, and academic leadership have distinguished them in their fields. Supported by dedicated endowments, these positions provide faculty with the resources and academic freedom to deepen their research and pursue work with significant real-world relevance.

The areas represented by Chair Endowments have expanded considerably over time. Alongside established fields such as computer science and energy systems, Chairs now support research in areas including artificial intelligence, climate technologies, biomedical innovation, and sustainable infrastructure. The breadth of these areas reflects the changing priorities of research and the growing need to connect academic inquiry with challenges facing society.

Chair Professorships are established through the support of alumni, well-wishers, corporates, government agencies, and foundations. Their support strengthens the academic environment at IIT Bombay by helping the Institute attract and retain outstanding faculty, while creating greater scope for researchers to pursue sustained and in-depth work in their areas of expertise.

ENABLING RESEARCH ACROSS CAREER STAGES

The Chair Professorships at IIT Bombay span different stages of the academic journey. They recognise experienced faculty for their contributions to their fields, while Chair Faculty positions provide support to Associate and Assistant Professors as they develop their research. Visiting Chairs further bring distinguished academic expertise to the Institute.

AS OF FY 2025–26, IIT BOMBAY HAS:

62 Chair Professorships (for full Professors)

10 Chair Faculty positions (for Associate and Assistant Professors)

14 Visiting Chairs



AI THAT WORKS IN THE REAL WORLD

ASHA AND KESHAV BHIDE CHAIR

Artificial intelligence (AI) holds enormous promise in healthcare. But medical data in the real world is rarely perfect. It can be limited, degraded or incomplete, making accurate diagnosis, and clinical decision-making more difficult.

Prof. Suyash P. Awate, who holds the Asha and Keshav Bhide Chair, is working to address this fundamental challenge in healthcare AI.

His research advances artificial intelligence and statistical machine learning for medical image computing across MRI, CT, PET, X-ray, ultrasound, and microscopy. The focus is on enabling accurate diagnosis and clinical decision-making even when medical data is limited or imperfect.



DRIVING REAL-WORLD IMPACT

Research supported through the Chair is translating into technologies with significant societal and industrial value, spanning healthcare, security, and insurance.

- **Building India's first indigenous 3D X-ray security scanning system:** Through an industry-funded project, the prototype successfully demonstrates high-quality 3D volume reconstruction, paving the way for next-generation airport and security screening systems that are designed, engineered, and integrated in India.

- **Advancing AI for healthcare:** Projects funded by the Department of Biotechnology are applying AI to two important areas:

  - ***Brain Tumour Analysis*:** Improving understanding of the relationship between tumour location and cognitive outcomes, in collaboration with Tata Memorial Hospital.

  - ***Paediatric Tuberculosis Diagnostics*:** Supporting AI-assisted chest X-ray analysis for early diagnosis through collaborations with hospitals across India.

- **Expanding AI into insurance technology:** A new industry collaboration is exploring foundation AI models to automate image analysis for vehicular insurance claims.

RESEARCH EXCELLENCE

The research has received international recognition, including:

- **Francois Erbsmann Prize at IPMI 2025:** Marking the first time this prestigious global award has been won by work conducted outside North America and Europe.
- **Best Paper Award at IEEE ISBI 2022:** Representing the first such recognition for research conducted in India.
- The Chair has also supported a strong pipeline of high-impact research through multiple publications in leading international journals and conferences, while mentoring the next generation of researchers.

A COLLABORATIVE ECOSYSTEM

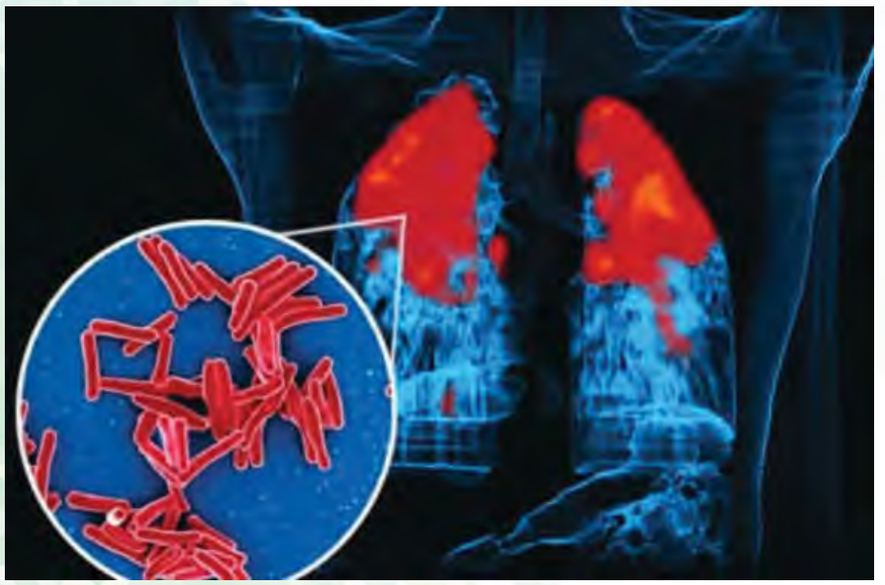
Research under the Chair is strengthened through collaborations with leading clinical and research institutions, including Tata Memorial Hospital and the ICMR National Institute for Research on Women's Health.

These collaborations help ensure that innovations are guided by real clinical needs, and have a clear pathway to deployment.

TRUST FOR THE FUTURE

The Chair continues to advance trustworthy AI solutions for healthcare by developing machine-learning methods that perform reliably even with scarce or imperfect data.

Future efforts will focus on accelerating translation, expanding partnerships with hospitals and industry, and delivering AI technologies that improve diagnosis, healthcare accessibility, and public safety. Continued support through the Chair is helping build a sustainable ecosystem of researchers, clinicians, and industry partners dedicated to solving real-world challenges through AI.



ENGINEERING SOLUTIONS FOR A CHANGING WORLD

TATA FRUGAL CHAIR PROFESSORSHIP

From cleaner propulsion systems to technology that could protect crops from hailstorms, **Prof. Sudarshan Kumar's** research applies combustion science to challenges across energy, aerospace, transportation, and agriculture.



A Professor in IIT Bombay's Department of Aerospace Engineering and holder of the **Tata Frugal Chair Professorship,** Prof. Kumar works across advanced combustion science, sustainable propulsion, and clean energy. His research spans flameless (MILD) combustion, hydrogen and ammonia combustion, laminar flame dynamics, pulse detonation engines, gas turbine combustion, and supersonic propulsion, with a focus on improving efficiency and reducing harmful emissions.

COMBUSTION SCIENCE AT WORK

Research enabled by the Chair is translating fundamental combustion science into a range of applications:

- **Protecting crops:** An indigenous anti-hail gun, designed and developed entirely at IIT Bombay under the Make in India initiative, is expected to cost around ₹15 lakh, compared with approximately ₹80 lakh for imported technology. It replaces acetylene with safer, more economical LPG. Successful field trials have been conducted in Himachal Pradesh, with plans for wider deployment and future collaboration with the India Meteorological Department (IMD) and Indian Institute of Tropical Meteorology (IITM) Pune on predictive, weather-based operation.
- **Cutting emissions:** Work on flameless (MILD) combustion for gas turbines has demonstrated significant reductions in carbon monoxide (CO) and nitrogen oxide (NOx) emissions, while also lowering combustion noise, with potential for cleaner and quieter aviation and power generation.
- **Exploring carbon-free fuels:** Research on hydrogen and ammonia combustion addresses ignition, flame stability, combustion efficiency, and NOx emissions, with potential applications in gas turbines, aviation, automotive systems, and industrial energy.
- **Improving combustion models:** High-fidelity data generated under engine-relevant conditions is helping improve models used in internal combustion engines, gas turbines, and rocket propulsion systems.

BUILDING RESEARCH STRENGTH

Prof. Kumar's laboratory has advanced facilities for laser diagnostics and high-speed combustion imaging, including laser-based spray diagnostics and high-speed chemiluminescence, supporting both academic and industrial research.

Prof. Kumar has published over 170 journal papers and more than 220 conference publications, with an h-index of 49 and over 7,000 citations. He has been recognised among the world's top 2% scientists over the past five years, with highly cited work in journals including Progress in Energy and Combustion Science, Energy, and Fuel.

His honours include Fellowships of the Indian National Academy of Engineering (INAE), The Combustion Institute (USA), and the Indian Society of Energy and Environmental Studies (ISEES); Associate Fellowship of the American Institute of Aeronautics and Astronautics (AIAA); the INAE Young Engineer Award; and the IRCC Best Publication Award.

The Chair's research is strengthened by collaborations with national laboratories, government agencies and industry partners across clean energy, aerospace propulsion, combustion systems and weather-mitigation technologies. These partnerships connect advanced laboratory experimentation with field deployment, including validation and further development of the anti-hail technology.

TOWARDS CLEANER, MORE RESILIENT SYSTEMS

Future work will focus on advancing hydrogen and ammonia as carbon-free fuels, developing next-generation ultra-low-emission combustion systems, and expanding indigenous technologies for agricultural resilience, including automated anti-hail systems integrated with real-time weather forecasting. Together, these efforts are strengthening an ecosystem of researchers and partners working on engineering solutions relevant to energy security, environmental sustainability and the vision of Viksit Bharat 2047.

A LASTING IMPACT

Each of the faculty members holding a Chair has their own unique story of innovation. Together, their work is a powerful testament to the Institute's belief in the transformative power of knowledge, proving that when excellence is supported at every level, its impact extends far beyond the classroom or lab to influence policy, industry, and society at large.



LIST OF ACTIVE NAMED CHAIRS AT IIT BOMBAY

#	Name of the Chair	Name of Prof. & Dept	Chair Type
01	Inani Chair in Semiconductor Technology	Prof. Bhaskaran Muralidharan, EE	Chair Professorship
02	Kinetic Chair Professorship	Prof. Vivek Agarwal, EE	Chair Professorship
03	Shailesh J. Mehta Chair Professorship	Prof. Pankaj Dutta, SoM	Chair Professorship
04	India Value Fund Chair Professor for Humanities & Social Sciences	Prof. Azizuddin Khan, HSS	Chair Professorship
05	Google Cloud Chair Professorship	Prof. RB Sunoj, Chemistry	Chair Professorship
06	DT Manwani Chair in Electric Vehicles	Prof. Kishore Chatterjee, EE	Chair Professorship
07	Jindal Stainless Chair Professorship	Prof. MJNV Prasad, MEMS	Chair Professorship
08	Dr. P. R. Shardamani Chair Professorship for Women Faculty	Prof. Nandita Madhavan, Chemistry	Chair Professorship
09	Dr. P. V. Sukhatme Chair Professorship	Prof. Ranjith Padinhateeri, BSBE	Chair Professorship
10	Asha Navani Chair Professorship	Prof. Maryam Baghini, EE	Chair Professorship
11	Cummins Chair Professorship	Prof. Pratibha Sharma, ESED	Chair Professorship
12	Shobha Dixit Chair Professorship	Prof. Krishna Narayanan, CSE	Chair Professorship
13	Bank of Baroda Chair Professorship in Digital Entrepreneurship	Prof. Ganesh Ramakrishnan, CSE	Chair Professorship
14	Dr. K. V. Ramachandran Chair For Statistics And Mathematics	Prof. Sudhir Ghorpade, Mathematics	Chair Professorship
15	Prof. TRR Mohan Chair In Material Sciences And Microelectronis	Prof. Indradev Samajdar, MEMS	Chair Professorship
16	Hindustan Aeronautics Chair Professorship	Prof. Karunakaran Poopathi, ME	Chair Professorship
17	Bank of Baroda Chair for Circular Economy	Prof. Anil K, EE	Chair Professorship
18	Madhuri Sinha Chair Professorship In Biomedical Engineering	Prof. Shamik Sen, BSBE	Chair Professorship

#	Name of the Chair	Name of Prof. & Dept	Chair Type
19	Sajjan Jindal Steel Chair Professorship	Prof. Vishwanathan Nurni, MEMS	Chair Professorship
20	Himanshu Patel Chair For Applied Biosciences	Prof. Rohit Srivastava, BSBE	Chair Professorship
21	Sumati And Atmaram Kotwal Sanskrit Acharya Chair	Prof. Malhar Kulkarni, HSS	Chair Professorship
22	Class Of 1998 Chair in Quantum Computing	Prof. Souvik Mahapatra, EE	Chair Professorship
23	Prof. Tarun Kant Endowed Chair In Computational Mechanics In Civil Engineering	Prof. Deepankar Choudhary, EE	Chair Professorship
24	Erach And Meheroo Mehta Advanced Education Technology	Prof. Sridhar Iyer, CET	Chair Professorship
25	Rasiklal Hemani Fragrance And Flavour Chair	Prof. Santosh Gharpure, Chemistry	Chair Professorship
26	Maharashtra Pollution Control Board Chair Professorship	Prof. Suparana Mukherjee, EDED	Chair Professorship
27	Jitendra K. & Meena J. Mehta Chair Professor of Structural Engineering	Prof. Siddhartha Ghosh, Civil Eng.	Chair Professorship
28	Artificial Intelligence And Machine Learning Chair Professorship	Prof. Ravindra Gudi, Chemical Eng.	Chair Professorship
29	Desai Sethi Centre Chair Professorship	Prof. Sankalp Pratap, DSSE	Chair Professorship
30	Tata Centre Chair Professorship for Frugal Technology Chair 1	Prof. Sudarshan Kumar, Aerospace	Chair Professorship
31	Tata Centre Chair Professorship for Frugal Technology Chair 2	Prof. Gopalan Rajaraman, Chemistry	Chair Professorship
32	DL Shah Chair For Innovation	Prof. D. N. Singh, Civil Eng.	Chair Professorship
33	Praj Industries Chair Professorship	Prof. Santanu Bandyopadhyay, ESED	Chair Professorship
34	Pramod Chaudhari Chair Professorship for Green Chemistry and Industrial Biotechnology	Prof. Pramod Wangikar, BSBE	Chair Professorship

#	Name of the Chair	Name of Prof. & Dept	Chair Type
35	Forbes Marshall Chair Professorship for Energy Sciences & Engineering	Prof. Dinesh Kabra, Physics	Chair Professorship
36	Biswas-Palepu Chair In The Department Of Chemistry	Prof. Suvarn Kulkarni, Chemistry	Chair Professorship
37	Larsen & Toubro Chair Professorship	Prof. Mahesh T, Chemical	Chair Professorship
38	Class Of 1985 Chair In Technology & Sustainable Development	Prof. Bakul Rao, C-TARA	Chair Professorship
39	Dr. P.K. Kelkar (Class of 1962) Chair for Excellence In Nanotechnology	Prof. Saurabh Lodha, EE	Chair Professorship
40	Rahul Bajaj Chair Professorship In Mechanical Engineering Department	Prof. Atul Sharma, ME	Chair Professorship
41	Kamalnayan Bajaj Chair Professorship In Electrical Engineering Department	Prof. Subashish Chaudhari, EE	Chair Professorship
42	Bajaj Group Chair Professorship In Computer Science & Engineering	Prof. Supratik Chakravathy, CSE	Chair Professorship
43	Ramkrishna Bajaj Chair Professorship for IDC	Prof. Nishant Sharma, IDC	Chair Professorship
44	G K Devarajulu Chair Professorship	Prof. Ramesh Singh, ME	Chair Professorship
45	Subrao M. Nilekani Chair Professorship	Prof. S. Sudarshan, CSE	Chair Professorship
46	Vijay And Sita Vashee Chair Professor/ Assistant Professor	Prof. Manoj Prabhakaran, CSE	Chair Professorship
47	Shridhar Shukla Chair in Digital Trust- Second Chair	Prof. S. Akshay, CSE	Chair Professorship
48	Shridhar Shukla Chair in Digital Trust- Third Chair	Prof. Biswabandan Panda, CSE	Chair Professorship
49	Vijay Vashee Chair for Climate Studies	Prof. Pradip Kalbar, ESED	Chair Professorship
50	Bhide Family Chair	Prof. Abir De, CSE	Chair Professorship

#	Name of the Chair	Name of Prof. & Dept	Chair Type
51	Thakur Family Chair Professorship	Prof. Parthe Pandit, C-MInDS faculty	Chair Faculty
52	Vidya Sharma Chair	Prof. Pradip Kalbar, ESED	Chair Professorship
53	Anantrao Jagtap Chair for Construction Management	Prof. Albert Thomas, Civil Eng.	Chair Faculty
54	Yogen Dalal Chair	Prof. G. V. Sreekumar, IDC	Chair Professorship
55	Halepete Family Chair Of Artificial Intelligence Research	Prof. Soumen Chakraborty, CSE	Chair Professorship
56	Bureau Of Indian Standards Chair Professorship	Vacant	Chair Professorship
57	Major Bhagat Singh Chair	Vacant	Chair Professorship
58	Jane Street Chair Professorship	Vacant	Chair Faculty
59	Uma Parasuraman Chair Faculty	Vacant	Chair Faculty
60	Vinaya and Samir Kapoor Chair Faculty for Artificial Intelligence (AI) in Climate and Sustainability Studies	Vacant	Chair Faculty
61	NPTEL Chair Faculty	Vacant	Chair Faculty
62	Ayyar Family Chair	Vacant	Chair Faculty
63	Samir and Vinaya Kapoor Chair In Climate	Prof. Subhankar Karmakar, ESED	Chair Professorship
64	Asha And Keshav Bhide Chair Professorship	Prof. Suyash Awate, CSE	Chair Professorship
65	Shridhar Shukla Chair In Digital Trust	Prof. Vinay Ribeiro, CSE	Chair Professorship
66	Inox Chair In Cryogenics	Prof. Milind Atrey, Mechanical	Chair Professorship
67	The Kelkar Family Chair In Quantitative Finance	Prof. Ankur Kulkarni, SysCon	Chair Faculty
68	Prof. D. M. Dhamdhere Chair Professorship For Excellence In Teaching Methods	Prof. Kameshwari Chebrolu, CSE	Chair Faculty

#	Name of the Chair	Name of Prof. & Dept	Chair Type
69	HRT Chair Professorship for Visual Intelligence	Vacant	Chair Professorship
70	Prof. Pushpak Chair	Vacant	Chair Professorship
71	Jaynarayan Lala Chair in Aerospace Engineering	Vacant	Chair Professorship
72	Prof. James R. Isaac Chair	Prof. Akash Kumar, CSE	Chair Faculty

VISITING CHAIR

#	Name of the Visiting Chair	Name of Prof.	Chair Type
01	D.J. Gandhi Distinguished Visiting Professorship	Dr. Rajeewa Arya	Visiting Prof.
02	Nisha And Rajesh Visiting Chair Professorship	Prof. Sanat Kumar	Visiting Prof.
03	Dr. Rinti Banerjee Visiting Chair Professor	Prof. Monica Lakhanpaul	Visiting Prof.
04	Prof. N. R. Kamath Distinguished Institute Chair Professorship	Prof. Bruce Hajek, Prof. Herbert Huppert, Prof. Manjul Bhargava, Prof. Michael Lawrence Klein, Prof. Pramod Khargonekar, Dr. Rakesh Agarwal, Dr. Jochen Schneider	Visiting Prof.
	Jamsetji Tata Trust Corpus Grant (N R K)		Visiting Prof.
05	4 Visiting Chair Professorships in CoEOGE	Prof. Jayant Joshi	Visiting Prof.

CELEBRATING EXCELLENCE

FACULTY AWARDS 2025-26

IIT Bombay's faculty continue to advance knowledge, shape future engineers and scientists, and develop technologies with societal impact. During 2025-26, the Institute recognised these contributions through its annual faculty awards, honouring excellence in research, teaching, technology development, and lifetime achievement.

EXCELLENCE IN RESEARCH

Established through the generous support of IIT Bombay alumnus **Mr. Rakesh Mathur**, the **Prof. S. C. Bhattacharyya Award for Excellence in Pure Sciences** and the **Prof. H. H. Mathur Award for Excellence in Applied Sciences** recognise outstanding research by IIT Bombay faculty. For 2025–26:

- **Prof. K. G. Suresh**, Department of Physics, received the Prof. S. C. Bhattacharyya Award for Excellence in Research in Pure Sciences for his outstanding contributions to soft, hard, and smart magnetic materials from the intermetallics family.
- **Prof. R. S. Jangid**, Department of Civil Engineering, received the Prof. H. H. Mathur Award for Excellence in Research in Applied Sciences for his exceptional research on earthquake-resistant design of structures.





HONOURING A LIFETIME OF SERVICE

The **Prof. S. C. Sahasrabudhe Lifetime Achievement Award** is presented annually to a distinguished faculty member in recognition of an exceptional career and enduring contributions to IIT Bombay.

The 2025–26 recipient was **Prof. Rajiv O. Dusane**, Institute Chair Professor in the Department of Metallurgical Engineering and Materials Science, in recognition of his outstanding contributions as a teacher, researcher, and administrator.

Over a distinguished academic career spanning several decades, Prof. Dusane has made significant contributions to advanced materials and sustainable energy technologies. His research spans thin-film semiconductors, solar photovoltaics, lithium-ion batteries, and hydrogen energy systems, with a strong emphasis on translating scientific innovation into practical applications. Through his excellence in teaching, research, mentorship, and institutional leadership, he has played a pivotal role in strengthening IIT Bombay's research ecosystem and fostering impactful industry–academia collaborations.



TECHNOLOGY FOR NATIONAL IMPACT

The **Dr. P. K. Patwardhan Technology Development Award** 2025 was conferred on **Prof. Rajesh Zele** and **Dr. Vijay Kanchetla** for their pioneering work on DhruvaPro—a worldwide navigation receiver chip compatible with NavIC, GPS, Galileo and BeiDou, underscoring IIT Bombay's continued contribution to indigenous technologies with global relevance.



EXCELLENCE IN TEACHING

IIT Bombay celebrated Teachers' Day on 4 September 2025, commemorating the birth anniversary of Dr. S. Radhakrishnan, former President of India and eminent educationist and philosopher. The celebration was graced by Mr. Shashi Shekhar Vempati, Co-founder of the DeepTech for Bharat Foundation (AI4India.Org), former Chief Executive Officer of Prasar Bharati, and an IIT Bombay alumnus (B.Tech., Chemical Engineering, 1995).

During the celebration, 15 faculty members were honoured with the Prof. S. P. Sukhatme Excellence in Teaching Award.

Faculty	Department
Prof. Ashish Singh	Shailesh J. Mehta School of Management
Prof. Anindya Dutta	Department of Chemistry
Prof. Anirban Banerjee	Department of Biosciences and Bioengineering
Prof. Ananthnarayanan Hariharan	Department of Mathematics
Prof. Aniruddha Sinha	Department of Aerospace Engineering
Prof. Arindam Chowdhury	Department of Chemistry
Prof. Girish Dalvi	IDC School of Design
Prof. Jayakrishnan Nair	Department of Electrical Engineering
Prof. Prabhakar Naraga	Department of Earth Sciences
Prof. Venkatesh Rajamanickam	IDC School of Design
Prof. Ambarish Kunwar	Department of Biosciences and Bioengineering
Prof. Titas Dasgupta	Department of Metallurgical Engineering and Materials Science
Prof. Harish Phuleria	Environmental Science and Engineering Department
Prof. Prasenjit Bhaumik	Department of Biosciences and Bioengineering
Prof. Arghadeep Laskar	Department of Civil Engineering



BACKING FACULTY WITH A RESEARCH EDGE

In 2025, the **C1973 Faculty Award for Research Excellence (C1973 FARE)** entered its second year, continuing the Class of 1973's effort to recognise and encourage promising early-career researchers at IIT Bombay. Presented as part of the Institute's Teacher's Day celebrations, the award honours faculty members whose research shows exceptional promise and achievement.

At its heart, C1973 FARE reflects the Class of 1973's commitment to strengthening a culture of curiosity, innovation, and research at IIT Bombay. By recognising emerging faculty and their work, the award carries this legacy forward, encouraging impactful research across a diverse range of academic disciplines at the Institute.



RECIPIENTS OF THE C1973 FARE 2025:

Sr. No	Names	Department
01	Prof. Pennan Chinnasamy	Centre for Technology Alternatives for Rural Areas
02	Prof. Ratul Dasgupta	Department of Chemical Engineering
03	Prof. Arpita Mondal	Department of Civil Engineering
04	Prof. Biswabandan Panda	Department of Computer Science and Engineering
05	Prof. Siddharth Tallur	Department of Electrical Engineering
06	Prof. Narendra Shiradkar	Department of Electrical Engineering
07	Prof. Swatantra P. Singh	Department of Environmental Science and Engineering
08	Prof. Manoranjan Sahu	Department of Environmental Science and Engineering
09	Prof. Pradip P. Kalbar	Department of Environmental Science and Engineering
10	Prof. Deepak Marla	Department of Mechanical Engineering
11	Prof. Achintya Kumar Dutta	Department of Chemistry
12	Prof. Rahul Maitra	Department of Chemistry
13	Prof. Prabhakar Naraga	Department of Earth Sciences and Engineering
14	Prof. Sourav Pal	Department of Mathematics
15	Prof. Pintu Parui	Department of Economics
16	Prof. Sudeep Bapat	Shailesh J. Mehta School of Management

CATCHING COSMIC EXPLOSIONS IN REAL TIME

THE DHANANJAY JOSHI FUNDAMENTAL RESEARCH AWARD

Some of the universe's most dramatic events are also among its most fleeting. Gamma Ray Bursts (GRBs)--intense, short-lived cosmic explosions--can evolve so quickly that studying them requires telescopes capable of responding almost immediately.

The **Dhananjay Joshi Fundamental Research Award (DJFRA)** is supporting IIT Bombay researchers in doing just that. Established through an endowment by **Dr. Veena Joshi** in memory of her late husband, **Mr. Dhananjay Joshi,** the award supports curiosity-driven research in foundational science and engineering. Through the award, 'Exploring Cosmic Explosions with the GROWTH-India Telescope' was selected for a two-year grant to study GRBs and other transient cosmic phenomena.

At the heart of the project is the **GROWTH-India Telescope (GIT)**, India's first fully robotic telescope. The project combines rapid observations with theoretical and computational modelling to advance research in time-domain astrophysics.





THE GROWTH-INDIA ADVANTAGE

Gamma ray bursts evolve on extremely short timescales, making rapid and coordinated observations critical. GIT has a particular geographical advantage: its longitude allows observations during periods when major international facilities are unavailable, creating opportunities to capture events and datasets that might otherwise be missed.

The project is improving telescope automation, software integration and observational workflows to reduce response times for GRB detection and follow-up. These observations are complemented by theoretical and computational models for studying relativistic astrophysical phenomena.

LEARNING BY DOING

Students gain exposure to different stages of contemporary astrophysics. The initiative provides:

- **Hands-**on research in telescope operations, observational campaigns, theoretical modelling and data analysis.
- **Support for students-**undergraduate, master's and doctoral-through research scholarships and travel opportunities.
- **Collaborations with experts** in India and abroad.
- **Exposure to high-impact research,** with several IIT Bombay students associated with the wider GROWTH initiative already contributing to publications in internationally reputed journals.

The work also draws on collaborations with the Himalayan Chandra Telescope and national and international research groups working in transient astronomy and multi-messenger astrophysics.

CONNECTING TO A GLOBAL EFFORT

The project is part of the growing field of transient and multi-messenger astronomy, which brings together observations of different cosmic signals to understand short-lived astronomical events.

GROWTH-India complements major international efforts including the Vera C. Rubin Observatory, Zwicky Transient Facility, and Square Kilometre Array, as well as upcoming Indian initiatives such as Daksha and LIGO-India.

GIT serves as an important national capability for rapid-response astrophysical observations and scientific collaboration.

EYEING THE NEXT DISCOVERY PHASE

The next phase will focus on building a statistically significant sample of GRB afterglow observations, improving automated detection systems and theoretical modelling, and further optimising telescope software and operational workflows. Collaborations with leading international astrophysics groups will also be strengthened.

These advances could also benefit future Indian astronomical facilities. Along the way, the initiative is building both the research capabilities and the trained scientific talent needed to explore some of the universe's most fleeting phenomena.

INTERNATIONAL AWARD

IIT BOMBAY INTERNATIONAL AWARD FOR EXCELLENCE IN RESEARCH IN ENGINEERING

The **IIT Bombay International Award for Excellence in Research in Engineering and Technology** honours global academicians and researchers whose work in engineering and technology has delivered significant real-world impact over the past decade. Instituted with the support of **Mr. Sandeep Naik** and **Mr. Shantanu Rastogi**, the award reflects IIT Bombay's commitment to recognising research excellence and innovation on a global stage.

On National Engineers' Day 2025, the award was jointly conferred upon **Prof. Madhavi Srinivasan** and **Prof. Chen Change Loy**, President's Chair Professors at Nanyang Technological University (NTU), Singapore.

Prof. Srinivasan is President's Chair Professor in Sustainability at NTU Singapore, Executive Director of the Energy Research Institute @NTU (ERI@N), Executive Director of the NTU Sustainability Office, and Co-Director of SCARCE (Singapore–CEA Alliance for Research in Circular Economy), a joint laboratory established in collaboration with CEA-France. She was recognised for her pioneering research in sustainable battery technologies and circular economy solutions.

Prof. Chen Change Loy is President's Chair Professor at the College of Computing and Data Science at NTU Singapore, Deputy Director of the Centre for AI-for-X, Co-Associate Director of S-Lab for Advanced Intelligence, and Director of MMLab@NTU. He was recognised for his contributions to deep learning and computer vision.

As part of the award ceremony, Prof. Srinivasan delivered a talk titled 'Sustainable Battery Technologies: Research and Development', while Prof. Loy delivered a lecture titled 'From Segment Anything Efficiently to Matting Anyone Precisely'. The talks offered insights into their research and the development of technologies addressing emerging challenges in sustainability and artificial intelligence.

The award underscores IIT Bombay's commitment to advancing global research partnerships and recognising research that connects academic excellence with technological innovation and societal impact.





CARING FOR THOSE WHO SHAPED GENERATIONS

RETIRED FACULTY WELLNESS FUND (RFWF)

The Retired Faculty Wellness Fund (RFWF) is an alumni-led initiative conceived as "Gurudakshina" for IIT Bombay's retired teachers. It began as the legacy project of the Class of 1984 and was subsequently supported by the Classes of 1985, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, and 1999.

The Fund was created to address an important gap. Faculty members who retired before 2003 had no medical coverage offered by the Institute. Many were already well into their 70s and lacked adequate health cover at a stage of life when they needed it the most.

A corpus was therefore created for the Retired Faculty Wellness Fund. The initiative provides supplementary medical insurance to retired faculty members and their spouses who retired prior to 2003.

Currently, 112 members from retired faculty families are covered under the programme. The beneficiaries include 36 retired professors, 23 spouses, and 53 spouses of deceased professors.



What began as one batch's gurudakshina has grown into a sustained alumni effort to care for the teachers who helped shape generations of IIT Bombay students.

At a Glance

₹5 lakh
Annual medical cover per family

112 lives currently covered
36 retired professors | **23** spouses
53 spouses of deceased professors

Over 150 faculty members
Beneficiaries when the Fund corpus was created



IGNITING BRIGHT MINDS

YOUNG FACULTY FELLOWSHIP (YFF)

The Young Faculty Fellowship (YFF), originating as a Class of 1982 Legacy Project, reflects IIT Bombay's commitment to attracting exceptional young faculty and sustaining excellence in teaching and research. First instituted in 2007 as the Young Faculty Award and subsequently renamed the Young Faculty Fellowship, the programme has awarded fellowships since 2010. We are thankful to the Alumni batches from '78, '79, '81, '83–'85, '88–'90, '92, '94–'99 who have supported this program.

By providing early-career support, the YFF helps promising academics establish their research, pursue emerging areas of inquiry, and contribute to the Institute's academic community. Fellows work across diverse fields, addressing challenges through research in areas such as AI in materials, healthcare in tribal communities, sustainable transportation technologies, nanotechnology for energy, and quantum imaging.

With the generous support of IIT Bombay alumnus **Mr. Arjun Raghavan**, the Young Faculty Fellowship supports nine faculty members across disciplines. The **Madan R. Avadhani Young Faculty Fellowship** supports two faculty members, while the **Camille Pahwa Young Faculty Fellowship** and the **Kalpana and Kishore Trivedi Young Faculty Fellowship** support six and three faculty members, respectively.

Through the continued support of alumni and other donors, the YFF strengthens IIT Bombay's ability to attract and nurture academic talent, advance knowledge, and develop future leaders in science and technology.

A FOUNDATION FOR INDEPENDENT RESEARCH



"I received the Young Faculty Award when I joined IIT Bombay in 2022, as I was beginning to establish my independent research group in construction materials, durability, and heritage conservation.

The award provided initial support for proof-of-concept experiments, helping me generate preliminary results, establish my research direction, and subsequently seek larger funding to scale up my work. For a new faculty member, this early support can make a significant difference in setting up facilities, developing ideas, and building an independent research programme."

PROF. SWATHY MANOHAR
Assistant Professor,
Construction Technology and Management
Department of Civil Engineering,
IIT Bombay

Scan to explore how the Young Faculty Fellowship enables **Prof. Kasturi Saha** to advance quantum sensing, engineering, and India's National Quantum Mission.

Scan to discover how the Young Faculty Fellowship supports **Prof. Parthe Pandit**'s research, teaching, and innovation in AI.





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STUDENT DEVELOPMENT

SCHOLARSHIPS

Talent should never be limited by financial circumstances. Through its Scholarships programme, IIT Bombay helps ensure that deserving students can pursue their education with confidence, removing financial barriers that might otherwise stand in the way of their academic journey.

Awarded on the basis of merit and means, the scholarships do far more than ease financial pressures—they enable students to focus on learning, pursue their aspirations, and make the most of the opportunities that IIT Bombay offers. Every contribution is an investment in future innovators, researchers, and leaders, while reinforcing the Institute's commitment to making quality education accessible.

NAMED SCHOLARSHIPS AT A GLANCE

Support Provided
Annual Tuition And Mess Fees For One Year.

Scholarships awarded
₹ 14.34 crores.

Students supported
517 undergraduate students.

Women Students beneficiaries
157 students.

Donors
155 alumni, corporates and well-wishers.



Scan to learn how IIT Bombay's Scholarship Programme is creating opportunities for Soumik to pursue his aspirations.

The reflections below describe the role this support played in two students' education and plans for the future.

"This scholarship has given me the confidence to dream bigger and work harder."

— Sajal Sharma



I reside in Hostel No. 18. I am originally from a small town in Fatehabad, located in the Agra district of Uttar Pradesh. My family primarily depends on agriculture, and I have grown up witnessing the values of hard work and perseverance in everyday life. Over the last three years here at IIT Bombay, my academic journey has been both challenging and deeply rewarding. It has given me the opportunity to learn and grow alongside some of the brightest minds in the country.

In the initial years after graduation, I aspire to take up a job so that I can support my family financially and give back for the sacrifices they have made for my education. In the longer run, I am deeply interested in the field of Artificial Intelligence and Machine Learning, and I hope to pursue higher studies and research in this area to contribute meaningfully to the growing technological landscape. Receiving this scholarship has had a significant impact on my life. Coming from a family that depends primarily on agriculture, financial constraints have always been a concern for me and my parents. This support has eased a major part of that burden, allowing me to focus fully on my studies and personal growth without constantly worrying about finances. Thank you for awarding me this inspiring scholarship.



We never had to think twice about how we would pay the fees

— Avani Jangir

I stay in Hostel No. 10. I am from Rajasthan. My mother is a teacher, and my father is a medical representative. I have always loved space and everything related to the universe ever since I learned as a child that the Sun is a star and that all the stars we see in the night sky are like the Sun, only much bigger in size. That curiosity has stayed with me ever since.

I was not very good at mathematics until Class 7, when I changed schools and, along with that, my maths teacher changed. Later, solving mathematics problems became one of my favourite activities. I was not always the brightest student, but I always worked hard to stay at the top of my class. For most of my school years, I remained a topper. Because of my fascination with space, I chose Mathematics in Class 11, prepared for the JEE, and eventually secured admission to the Aerospace Engineering programme at IIT Bombay.

The scholarship has played a very important role in my journey. Coming from a family with a modest financial background, it would have been difficult to even think of choosing IIT Bombay—or any other good university—for engineering. Because of the scholarship, my family never had to think twice about how we would pay the fees. It has made it possible for me to receive a quality education while staying focused on my goals. Thank you once again for this life-changing opportunity.

WINGS SCHOLARSHIPS:

ENABLING DREAMS, INSPIRING FUTURES

For a young woman with the talent and determination to build a future in science, technology or engineering, the right support at the right time can make all the difference.

The **WINGS (Women INspiring Growth in STEM) Scholarships** at IIT Bombay is helping make that support possible. Providing full tuition assistance to meritorious undergraduate women students, the scholarship ensures that financial considerations do not limit their aspirations or their ability to pursue excellence.

This initiative is made possible through the generous support of alumnus **Mr. Bharat Desai** and his wife, **Ms. Neerja Sethi**, whose commitment to advancing women's participation in STEM is creating opportunities for talented young women to learn, grow, and realise their potential.

The impact of WINGS goes beyond financial assistance. It gives students the confidence and freedom to focus on their education, explore new possibilities, and envision themselves as future engineers, scientists, researchers, and innovators.

Every young woman supported through WINGS represents a step towards a more diverse STEM ecosystem—and a future where talent, ambition, and potential, rather than financial circumstances, define how far a student can go.



Scan to discover how IIT Bombay's Scholarship Programme is shaping Rutuja's educational journey.

IIFL SCHOLARSHIPS

Enabling Dreams, Inspiring Futures

The **IIFL Scholarships** at IIT Bombay supports talented students from economically constrained backgrounds, providing them with financial assistance towards tuition and other educational expenses.

We are deeply grateful to the **IIFL Foundation** for its generous support and belief in the transformative power of education. Their commitment gives deserving students greater financial stability and the confidence to pursue their academic goals without the constant worry of educational expenses. IIFL supported 75 students in the Academic Year 2025-26.

Through this partnership, IIFL Foundation is helping IIT Bombay build an academic community where financial circumstances do not define opportunity—and where deserving talent has the space to thrive.

PRAMILA SCHOLARSHIPS

Making Dreams Possible

The **Pramila Trust** has established a scholarship programme at IIT Bombay to support students over seven years, the Trust will fund 16 undergraduate scholarships, covering the academic journey of students.

As **Mr. Vikrant Udeshi**, Trustee, Pramila Trust, puts it, "No student should have their future aspirations curtailed by family circumstances."

Through the Pramila Scholarships, the Trust is helping create a more level playing field—enabling students to remain in higher education, access opportunities at a premier institution, and build pathways towards greater socio-economic mobility.

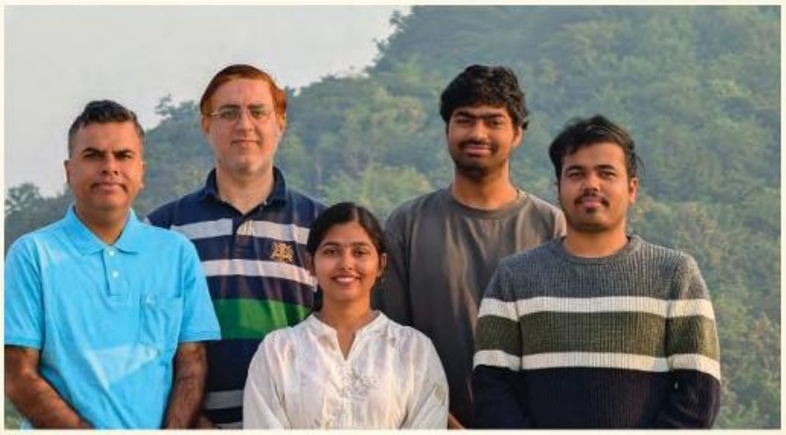


NURTURING TOMORROW'S CLIMATE LEADERS

"ACCESS" Awards & "SPURS"

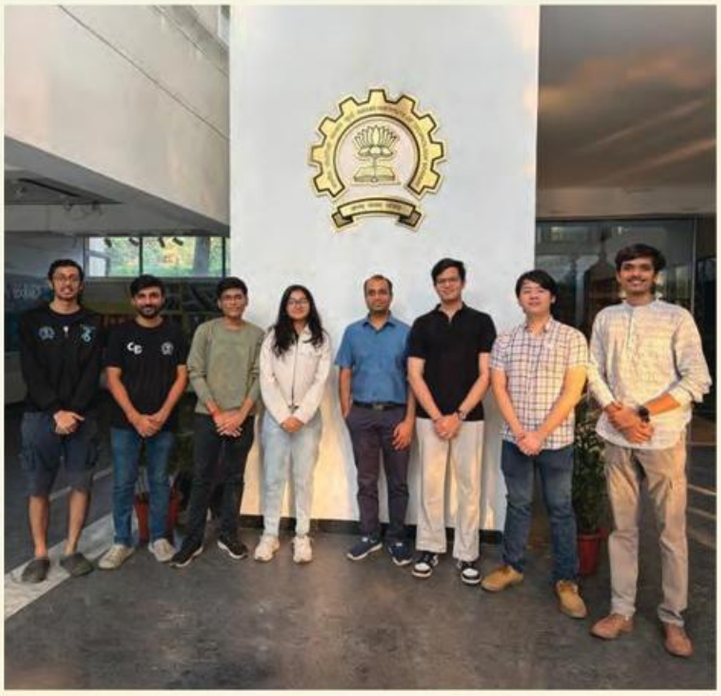
At the intersection of purpose and possibility, **Dr. Vinaya Kapoor** and **Dr. Samir Kapoor,** esteemed alumni from the Class of 1992, continue to champion the belief that interdisciplinary innovation and early academic mentorship are essential to addressing the world's most pressing climate and sustainability challenges.

Their vision has shaped two transformative initiatives at IIT Bombay: the **ACCESS (Accelerating Climate, Energy & Sustainability Solutions) Award** and **SPURS (Summer Program for Undergraduate Research in Sustainability)**. Together, these initiatives nurture climate leadership, accelerate sustainability-focused innovation, and strengthen the Institute's action-oriented ecosystem for climate solutions.



Established in 2023, the ACCESS Award recognises interdisciplinary ideas addressing climate and sustainability challenges, with an emphasis on research that can move towards practical application.

The 2025 edition invited proposals across two thematic tracks: Climate Impact & Adaptation, and Climate Mitigation & Finance.



ACCESS AWARD 2025 WINNERS

CLIMATE IMPACT & ADAPTATION

FIRST PRIZE

Team SWIMS Innovators

Smart Weather Integrated Mobility Solutions (SWIMS)

SWIMS developed a climate-adaptive infrastructure intelligence platform that integrates weather, traffic, and road-condition data to support predictive maintenance of urban transportation networks. By enabling municipalities to shift from reactive repairs to proactive, climate-responsive planning, the solution aims to improve road safety, enhance climate resilience, and support more sustainable and inclusive cities.

CLIMATE MITIGATION & FINANCE

FIRST PRIZE

Team ACTIONN

A Climate Services Enterprise for Clean Cooking (ACTIONN) in Rural India

ACTIONN proposed a scalable clean-cooking ecosystem that combines efficient biomass and biogas technologies with carbon finance mechanisms. The initiative aims to reduce household emissions, improve public health outcomes, create rural livelihood opportunities, and accelerate India's transition toward cleaner energy access, while contributing to national climate goals.

SECOND PRIZE

Team SunSpring

SunSpring: Bottling Sunlight for Equitable Access to Clean Drinking Water

Team SunSpring developed an advanced solar-powered desalination system that reimagines the traditional solar still. Leveraging high-efficiency nanocarbon-based solar absorbers and innovative heat recovery mechanisms, the solution seeks to significantly improve freshwater production, while providing an affordable and sustainable pathway to clean drinking water.

SPURS: RESEARCH BEGINS EARLY

Launched in 2025, SPURS is founded on the belief that climate leadership begins early. The programme provides undergraduate students with an opportunity to engage in hands-on, faculty-mentored research focused on sustainability and climate-related challenges.

The inaugural SPURS cohort in 2026 brought together selected students from diverse academic backgrounds to work on projects spanning renewable energy, climate adaptation, sustainable systems, urban resilience, environmental data science, and related fields. Working closely with IIT Bombay faculty, students gained exposure to real-world problem-solving, interdisciplinary research, and the process of developing solutions for pressing sustainability challenges.

SPURS serves as a unique platform for nurturing the next generation of sustainability researchers and changemakers, while strengthening the culture of undergraduate research at IIT Bombay.

CATALYSING RESEARCH EXCELLENCE

FELLOWSHIP PROGRAMMES

Great research begins with talented people and the opportunity to pursue ambitious ideas. The named fellowships help make that possible by connecting postgraduate and PhD students with fellowship opportunities supported by corporations, foundations, alumni, and philanthropists.

These fellowships play a vital role in enabling advanced research by providing financial assistance while creating opportunities for meaningful engagement with industry and research ecosystems. In doing so, they strengthen collaboration between academia and industry, driving innovation, and the development of practical, real-world solutions. Beyond funding, the fellowships also offer valuable exposure to research and development initiatives, supporting students in their academic and professional growth.

The Dean ACR office currently supports **143** active fellowship recipients, with 45 of them supported through corporate-funded fellowships, reflecting the growing role of industry in nurturing the next generation of researchers.

CORPORATE FELLOWSHIP PARTNERS

adani
Ansys
CITADEL | Securities
facebook
FedEx
MIRAE ASSET Foundation
Optiver
TATA TRUSTS
tcs

A CIRCLE OF OPPORTUNITY

FINANCIAL AID PROGRAMME (FAP)

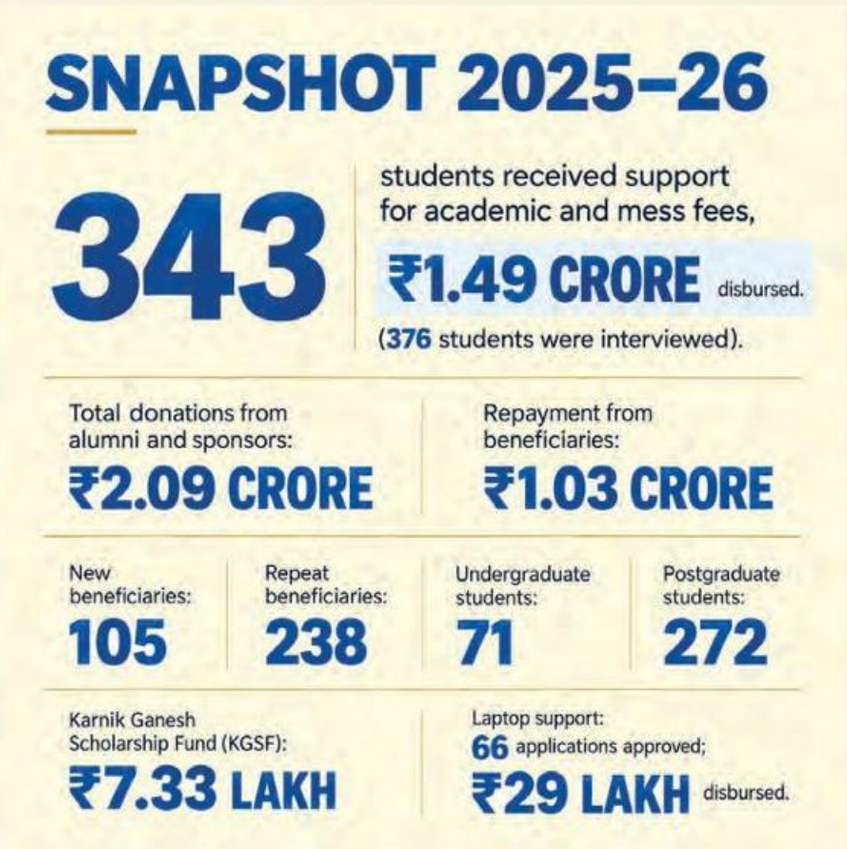
For 17 years, the **Financial Aid Programme (FAP)** has helped create a circle of opportunity, ensuring that financial constraints do not stand in the way of an IIT Bombay education. Built on an honour-based, sustainable peer-to-peer model, the programme provides merit- and need-based scholarships to undergraduate and postgraduate students, while creating a cycle of support that benefits future generations.

Beyond financial assistance, FAP prepares students for life after graduation through career-readiness initiatives such as industrial visits and mentoring programmes. The programme supports academic expenses, including tuition fees, hostel and mess charges, as well as laptop purchases, enabling students to continue their education, graduate successfully, and leverage their knowledge and skills to build meaningful careers and lives.

Open to students across academic programmes and disciplines, FAP is supported by alumni and other donors representing batches from 1967 to 2025. Its repayment model allows funds to be reused, extending the value of each contribution beyond a single cohort.

TO DATE

- Total students benefited: **1,802**.
- Total amount disbursed: **₹19.89 crore.**



EXCELLENCE IN PhD RESEARCH

NAIK AND RASTOGI AWARD FOR EXCELLENCE IN PhD RESEARCH

Instituted through the support of **Mr. Sandeep Naik** and **Mr. Shantanu Rastogi**, the **Naik and Rastogi Award for Excellence in PhD Research** celebrates IIT Bombay's top PhD graduates. The award recognises outstanding doctoral research across disciplines, reflecting the Institute's commitment to nurturing scholarship that advances knowledge r

In 2025–26, 44 students from 21 different departments were honoured for their groundbreaking work. From engineers unlocking tomorrow's technologies to social scientists tackling pressing global issues, the awardees represent the breadth and depth of research excellence across IIT Bombay.

#	Name	Department
1	Vijay Hari Shinde	Department of Aerospace Engineering
2	Lakshya Kumar Athankar	Department of Aerospace Engineering
3	Roshan Keshari	Department of Biosciences and Bioengineering
4	Gautam Sharma	Department of Biosciences and Bioengineering
5	Papade Sandesh Eknath	Department of Biosciences and Bioengineering
6	Mahrukh Arif Mir	Department of Chemical Engineering
7	Pankhedkar Nimish Milind	Department of Chemical Engineering
8	Argha Saha	Department of Chemistry
9	Tanu Sharma	Department of Chemistry
10	Supratim Ghosh	Department of Chemistry

#	Name	Department
11	Tejmani Behera	Department of Chemistry
12	Anish Chakraborty	Department of Chemistry
13	Sanjukta Das	Department of Civil Engineering
14	Chaidul Haque Chaudhuri	Department of Civil Engineering
15	Tejasvi Ashish Chauhan	Department of Civil Engineering
16	Omprakash R R	Department of Civil Engineering
17	Roshan Raj	Department of Computer Science and Engineering
18	Sumit Kumar Sharma	Centre for Research in Nanotechnology & Science (CRNTS)
19	Mohuli Das	Department of Earth Sciences
20	Nandeshwar Ruchira Hemant Kumar	Department of Electrical Engineering
21	Sutapa Dutta	Department of Electrical Engineering
22	Mehta Parth Harshadbhai	Department of Electrical Engineering
23	Avirup Mandal	Department of Electrical Engineering
24	Puranik Vishal Eknath	Department of Energy Science and Engineering
25	Anil Kumar	Department of Energy Science and Engineering
26	Ankita	Department of Humanities & Social Sciences
27	Subhankar Dutta	Department of Humanities & Social Sciences

S No.	Name	Department
28	Mohammed Saad Munaf Qadri Zeenat	Department of Mathematics
29	Neeraj Kumar Mishra	Department of Mechanical Engineering
30	Upendra Yadav	Department of Mechanical Engineering
31	Sumant R. Morab	Department of Mechanical Engineering
32	Prashant Kumar Chaurasia	Department of Mechanical Engineering
33	Arjun Varma R	Department of Metallurgical Engineering & Materials Science
34	Deepesh Yadav	Department of Metallurgical Engineering & Materials Science
35	Pai Namit Narasimhan	Department of Metallurgical Engineering & Materials Science
36	Amar Bharti	Department of Physics
37	S. Mahesh Chandran	Department of Physics
38	Kashimul Hossain	Department of Physics
39	Konkathi Preethi	Centre of Studies in Resources Engineering
40	Najmul Haque Barbhuiya	Department of Energy Science and Engineering
41	Neha Uttam	Shailesh J. Mehta School of Management
42	Manav Brahmanand Khaire	Ashank Desai Centre for Policy Studies
43	Vikram Singh Chandel	Department of Climate Studies
44	Siddhartha Ganguly	Centre for Systems and Control



NURTURING RESILIENCE FOR LIFE

STUDENT FLOURISHING HUB

Student well-being is an integral part of higher education, helping students maintain a healthy balance between academic pursuits, personal growth and overall well-being.

There were existing Student Wellness support programmes supported by Classes of 1986 and 1992.

Building upon the existing initiatives- IIT Bombay launched the **Flourishing Hub** in March 2025 in collaboration with the Class of 1998 and supported by Classes of 1997 and 1999.

The Hub equips students with psychological tools, life skills, and peer support frameworks through experiential learning and curriculum-integrated programmes, helping them build resilience, emotional well-being, and a sense of purpose.

In its first year, the initiative reached 4,284 students through 675 workshops, delivering 961 hours of learning with the support of 14 instructors.

WHAT IT STRIVES FOR

Vision
A thriving student community where well-being is a shared value, a lived experience, and a way of life.

Mission
To nurture resilience, psychological strength, and purpose in every IIT Bombay student through experiential learning and curriculum-integrated programmes.

4,284
Students reached through 675 workshops delivering 961 hours of learning.

PROGRAMME HIGHLIGHTS

Wellness Course

The **Wellness Course** has been integrated into the first-year undergraduate curriculum, making well-being a part of every incoming student's academic experience. Delivered through 359 workshops to 1,396 students, the course covers eight modules on substance use, sleep, digital well-being, relationships, resilience, purpose, conscious citizenship, and redefining success. It received an overall rating of 4.62/5.0, with completion rates of 99.5% (NOCS01) and 99.0% (NOCS02).

Mentorship Ecosystem Students Supporting Students:

The Hub's mentorship ecosystem comprises two complementary programmes. The **Mentorship Eligibility Course**, a prerequisite for aspiring mentors, prepares students to take on mentoring responsibilities, while the Mentorship Training Course provides clinical psychology-grounded training in empathy, active listening, and psychological first aid.

In its first year, 1,362 students enrolled in the Mentorship Eligibility Course, with 710 students completing it across 100 workshops. The course received the highest overall rating among the Hub's offerings at 4.70/5.0. The **Mentorship Training Course** was delivered to 897 students across 76 workshops, earning an overall rating of 4.61/5.0.

Flourishing Leadership

Leading with Purpose Designed for students taking on positions of institutional responsibility, the **Flourishing Leadership Course** focuses on values-based leadership, helping participants lead with clarity, integrity, and accountability. The course was delivered through 49 workshops and received an overall rating of 4.50/5.0, with the Ethics & Integrity module receiving 4.62/5.0.

Flourishing Retreats

Transformation Beyond the Lecture Hall two-day residential **Flourishing Retreats** were held at Manashakti Mind Gym, Lonavala, in September, October, and November 2025, bringing together 65 students. The retreats combined science-backed mindfulness, nature treks, and team-building activities. Participants consistently described them as among the most meaningful experiences of their time at IIT Bombay.

Open-access Programmes Extending Learning Across Campus:

The Hub conducted 10 Wellness Wednesday sessions, 19 Flourishing Friday sessions, 40 Yoga & Meditation sessions, and 16 Discover Your Future alumni career orientation sessions throughout the year. These programmes extended opportunities for learning and engagement beyond the classroom and were supported by a network of 44 student volunteers, General Secretaries, and Mentor Heads, who played an important role in mobilising participation and supporting Hub operations.



FOCUS AREAS

The Flourishing Hub focuses on five interconnected areas of student development:

- Psychological Strength & Resilience: Building the ability to navigate setbacks, manage stress, and recover from challenges through evidence-based learning.
- Emotional Intelligence & Self-Awareness: Helping students better understand their emotions, behaviour, and relationships through modules on sleep, digital well-being, substance use, and healthy relationships.
- Purpose & Meaning: Encouraging students to look beyond grades, placements, and rankings to explore personal purpose through courses such as Redefining Success and Discovering Meaning & Purpose.
- Peer Support Culture: Building a campus-wide support network by training mentors in empathy, psychological first aid, and ethical conduct.
- Value-Driven Leadership: Equipping student leaders with the clarity, integrity, and accountability needed to lead with purpose.

IMPACT

These experiences illustrate how the Hub is helping students build resilience, support one another and develop a stronger sense of purpose Participant feedback provides an early indication of how students experienced the programme. Students cited practical learning, greater confidence in discussing issues such as substance use, and a renewed interest in supporting peers.

The feedback illustrates how the Hub is helping students build resilience, support one another and develop a stronger sense of purpose.

LOOKING AHEAD

The Flourishing Hub plans to build on this:

- Expanding the Wellness Course to additional cohorts while refining content based on first-year feedback and working towards integration across all undergraduate years.
- Scaling the mentorship ecosystem by increasing the number of trained peer mentors, deepening the Mentorship Training Course, and strengthening linkages between the Hub and the Institute's formal student support infrastructure.
- Expanding the Flourishing Leadership Course to reach a broader cohort of student leaders and exploring integration with Institute leadership development frameworks.
- Growing the open-access programme calendar, including Flourishing Friday, Wellness Wednesday and Discover Your Future (DYF), with greater alumni and expert participation, including domain-specific sessions for different student communities.
- Increasing the number and accessibility of Flourishing Retreats, making immersive well-being experiences available to more students.
- Building an evidence base by tracking long-term student outcomes, mental health indicators, and academic engagement metrics to contribute to national and global conversations on student well-being in higher education.

STUDENT AWARDS

At IIT Bombay's 63rd Convocation in August 2025, 149 students received Institute awards.

The 78 Awards recognised academic achievement and other forms of student excellence across the Institute during the 2025–26 reporting year.

78
Awards

149
STUDENTS AWARDED



THE STUDENT AWARDS & RECIPIENTS FOR ACADEMIC YEAR 25-26

#	Award Name	Department	Student Name
1	Dr. Manu Akula Memorial Award for Academic Excellence in CTaM	Department of Civil Engineering	Sanidhya Garg
2	Dr. Manu Akula Memorial Award for Academic Excellence in CTaM	Department of Civil Engineering	Rekha Sharma
3	Bhavesh Gandhi Memorial Prize	Department of Electrical Engineering	Sameep Chattopadhyay
4	Bhavesh Gandhi Memorial Prize	Department of Electrical Engineering	Sahadev Mondal
5	RG. Manudhane Student M. Tech Excellence Award	Department of Chemical Engineering	Gautam Shreeram Prabhudesai

THE STUDENT AWARDS & RECIPIENTS FOR ACADEMIC YEAR 25-26

#	Award Name	Department	Student Name
6	RG. Manudhane student PhD Excellence Award	Department of Chemical Engineering	Shubham Mireja
7	RG. Manudhane student PhD Excellence Award	Department of Chemical Engineering	Hardik Harhad Jayshree Dodia
8	Indira Manudhane Student Excellence Award	Department of Chemical Engineering	Amrit Raj
9	Pamela and Shiv Khosla Merit Awards	Department of Biosciences and Bioengineering	Dr. Arnab Ghosh
10	The Chemours Future of Chemistry Award IITB	Department of Chemical Engineering	Hari Ramakrishnan Sudhakar
11	The Chemours Future of Chemistry Award IITB	Department of Chemical Engineering	Shreya Goyal
12	The Chemours Future of Chemistry Award IITB	Department of Chemical Engineering	Sai Sandeep Tambaku
13	The Chemours Future of Chemistry Award IITB	Department of Chemical Engineering	Kadambari Umesh Bhide
14	Urvish Medh Memorial Award (For Electrical Engineering)	Department of Electrical Engineering	Sauransh Alok Goenka
15	Urvish Medh Memorial Award (For Electrical Engineering)	Department of Electrical Engineering	Rohan Ramprakash Shukla
16	Urvish Medh Memorial Award (For Electrical Engineering)	Department of Electrical Engineering	Mehta Stavan Dhaval
17	Urvish Medh Memorial Award (For Electrical Engineering)	Department of Electrical Engineering	Samar Perwez
18	Dilip R Limaye Academic Excellence Award	Department of Electrical Engineering	Tamojeet Roychowdhury
19	Mr. Pranab Ranjan Sen Award	Department of Metallurgical Engineering & Materials Science	Jai Devang Shah

#	Award Name	Department	Student Name
20	Late Shri Girish Vishnuprasad Desai Award for Academic Excellence	Environmental Science and Engineering Department	Saumya Yadav
21	Late Shri Girish Vishnuprasad Desai Award for Academic Excellence	Environmental Science and Engineering Department	Muktesh Sugnesh Bhatt
22	Late Shri Girish Vishnuprasad Desai Award for Academic Excellence	Environmental Science and Engineering Department	Benita Nishil
23	Late Shri Girish Vishnuprasad Desai Award for Academic Excellence	Environmental Science and Engineering Department	Tasaduq Hassan Wani
24	Late Shri Girish Vishnuprasad Desai Award for Academic Excellence	Environmental Science and Engineering Department	N.V.M. Sri Harsha
25	Malini Vyavahare (Indore) Memorial Award	Department of Electrical Engineering	Ghosh Devayan Barindranath
26	Prashant Dave Best PhD Thesis Award	Department of Climate Studies	Navinya Chimurkar
27	Mainak Das Excellence in Publication Award	Department of Climate Studies	Vikram Chandel
28	Baishnab and Kasturi Academic Excellence Award	Department of Energy Science and Engineering	Prathmesh Arvind Shimpi
29	Smt. Chander Mohini Kapoor and Jeewan Kapoor Merit Award	Department of Computer Science and Engineering	Harshvivek Kashid
30	Smt. Chander Mohini Kapoor and Jeewan Kapoor Merit Award	Department of Computer Science and Engineering	Nitish Bhat
31	Shri Anil Kushalchand Hirani Award	Department of Chemistry	Jay Arora
32	Shri Anil Kushalchand Hirani Award	Department of Chemistry	Omkar Dinesh Devre
33	Shri Anil Kushalchand Hirani Award	Department of Chemistry	Arush Narayan Srivastav
34	Shri Anil Kushalchand Hirani Award	Department of Chemistry	Suketu Datta
35	Shri Anil Kushalchand Hirani Award	Department of Chemistry	Saurabh Kumar
36	Prof. S N Sinha Memorial Award	Department of Metallurgical Engineering & Materials Science	Jainam Atul Sanghvi

THE STUDENT AWARDS & RECIPIENTS FOR ACADEMIC YEAR 25-26

#	Award Name	Department	Student Name
37	Kanitkar 4th year Merit Award	Department of Civil Engineering	Nakul Agarwal
38	Kanitkar 3rd year Merit Award	Department of Civil Engineering	Puranjay Bansal
39	Bharat Vinod Daftary Award	Department of Biosciences and Bioengineering	Nandhini K
40	Bharat Vinod Daftary Award	Shailesh J. Mehta School of Management	Aditya Paresh Ladhad
41	Shankar Krishnamoorthy Student Excellence Award	Department of Computer Science and Engineering	Kevin Prafull Baua
42	Shankar Krishnamoorthy Student Excellence Award	Department of Computer Science and Engineering	Prerak Contractor
43	Shankar Krishnamoorthy Student Excellence Award	Department of Computer Science and Engineering	Shantanu Welling
44	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Sameep Chattopadhyay
45	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Vineet Pravin Ghule
46	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Anubhav Bhatia
47	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Tamojeet Roychowdhury
48	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Jainesh Manish Mehta
49	Shankar Krishnamoorthy Student Excellence Award	Department of Electrical Engineering	Pratham Kheskwani
50	Shrimati Prakashvati Devi Gupta Merit Award	Department of Chemical Engineering	Pranjal Tandon
51	Prof. K.C. Khilar PhD award	Department of Chemical Engineering	Patel Rahul Shitlaprasad

#	Award Name	Department	Student Name
52	Prof. K.C. Khilar Prize (M.Tech.)	Department of Chemical Engineering	Chavda Nebha Keshurbhai
53	Dr. Niren Laxmichand Nagda Award	Department of Chemical Engineering	Popalghat Aryan Adinath
54	Dr. Niren Laxmichand Nagda Award	Department of Chemical Engineering	M Bhavana
55	Prof. Ramakrishna Vadrevu Award for Excellence	Department of Chemistry	Abhijit Das
56	Prof. Ramakrishna Vadrevu Award for Excellence	Department of Chemistry	Palak Sanadhya
57	Prof. R.P. Singh Memorial Prize	Department of Physics	Navdha
58	Digamber & Nilima Joshi Award	Department of Humanities & Social Sciences	Jawalgekar Prasad Ashok
59	Prabhakar & Pratibha Mulekar Award	Department of Humanities & Social Sciences	Kanitkar Shruti Prasad Vrinda
60	Shubhada Mulekar Joshi Award	Department of Biosciences and Bioengineering	Nandhini K
61	Nitesh Thakor/Endowment For Excellence Award	Department of Biosciences and Bioengineering	Bidyut Das
62	IEOR Alumnus Endowment: Best Master's Thesis Award	Department of Industrial Engineering and Operational Research (IEOR)	Dhanawade Mayur Ramdas
63	IEOR Alumnus Endowment: Excellence in Doctoral Dissertation Award	Department of Industrial Engineering and Operational Research (IEOR)	Akash Saha
64	Prof. M.N. Gopalan Prize	Department of Mathematics	Yalla Chandra Sri Veerendra
65	Shri Ashok Chaturvedi Memorial Prize	Department of Mechanical Engineering	Kushire Sayalee Vaibhav
66	Akshay Dhoke Memorial Award	Department of Electrical Engineering	Rajput Nikhileshsing Kailassing
67	Shri T.K. Subramanian Prize for Academic Excellence	Department of Mechanical Engineering	Niveditha V Nair

#	Award Name	Department	Student Name
68	Aditya Choubey Memorial Prize	Department of Electrical Engineering	Rohan Ramprakash Shukla
69	Tulsiram Devidayal, P.M. Natu Damle Trust Prize	Department of Mechanical Engineering	Shubhranil Chatterjee
70	Smt. Sarla Doshi Awards - 1	Department of Chemical Engineering	Mahrukh Arif Mir
71	Smt. Sarla Doshi Awards - 2	Department of Chemical Engineering	Pavithra Venkataraman
72	Prof. T S Raghunathan Awards-1	Department of Chemical Engineering	Sai Sandeep Tambaku
73	Prof. T S Raghunathan Awards-1	Department of Chemical Engineering	Vivaan Shah
74	Prof. T S Raghunathan Awards-2	Department of Chemical Engineering	Sai Sandeep Tambaku
75	Prof. T S Raghunathan Awards-2	Department of Chemical Engineering	Vivaan Shah
76	Pradeep Jaipuria Awards	Department of Chemical Engineering	Saatwik Amrawat
77	Pradeep Jaipuria Awards	Department of Chemical Engineering	Soumik Das
78	Pradeep Jaipuria Awards	Department of Chemical Engineering	Shivam Kumar
79	Pradeep Jaipuria Awards	Department of Chemical Engineering	Harish Kumbar
80	Pradeep Jaipuria Awards	Department of Chemical Engineering	Khushal Kumawat
81	Pradeep Jaipuria Awards	Department of Chemical Engineering	Sahil
82	Pradeep Jaipuria Awards	Department of Chemical Engineering	Sekasaria Saurish Deviprakash
83	Pradeep Jaipuria Awards	Department of Chemical Engineering	Maithri Suresh

#	Award Name	Department	Student Name
84	Pradeep Jaipuria Awards	Department of Chemical Engineering	Rhythm Renasaria
85	Pradeep Jaipuria Awards	Department of Chemical Engineering	Jayesh Krishna Prasad
86	Pradeep Jaipuria Awards	Department of Chemical Engineering	Tanay Pravin Mestry
87	Pradeep Jaipuria Awards	Department of Chemical Engineering	Ankit Kumar Marandi
88	Praj Industries Academic Excellence Award	Department of Energy Science and Engineering	Avanti Harshad Kulkami
89	Praj Industries Academic Excellence Award	Department of Energy Science and Engineering	Swapnil Milind Paranjape
90	Prof. A.B. Biswas Memorial & Shri Prakash Krishnan Award	Department of Chemistry	Rohel Hoque
91	Prof. A.K. Mallik Award	Department of Metallurgical Engineering & Materials Science	Atharv Jain
92	K Seshia Research Excellence Award	Department of Physics	Alapati Tharaka Rama Chowdary
93	Hanumantha Rao Award	Centre for Technology Alternatives for Rural Areas (CTARA)	Ashwin Pawade
94	Amrutha award	Centre for Technology Alternatives for Rural Areas (CTARA)	Ayadi Mishra
95	Amrutha Award	Centre for Technology Alternatives for Rural Areas (CTARA)	Ayadi Mishra
96	A.Parthasarathy-G Shanmugam Award in Sedimentology and Petroleum Geology	Department of Earth Sciences	Sankalp Gupta
97	Smt. Jayalakshmi & Sri R. Narasimhan Award	Department of Civil Engineering	D Bharath Kumar
98	Smt. Andal & Sri N.P. Narayanan Award	Department of Civil Engineering	Lekshmi Muraleedharan
99	Dr. P.V. Sukhatme Memorial Award	Department of Mathematics	Harhita Shukla

THE STUDENT AWARDS & RECIPIENTS FOR ACADEMIC YEAR 25-26

#	Award Name	Department	Student Name
100	Dr. P.V. Sukhatme Memorial Award	Department of Mathematics	Rohan Bajaj
101	Dr. P.V. Sukhatme Memorial Award	Department of Mathematics	Yella Chandra Sri Veerendra
102	Dr. P.V. Sukhatme Memorial Award	Department of Mathematics	Swastik Bhowmick
103	Prof. R Vembu Iyer Memorial Prize	Department of Earth Sciences	Samrat Sarkar
104	Ramesh Chandra Sinha Academic Excellence Award	Department of Physics	Navdha
105	Manorama Sinha Academic Excellence Award	Department of Civil Engineering	Rekha Sharma
106	Prof Hira Lal Memorial Award	Department of Chemistry	Nilagriba Das
107	Ajit Shelat Award	Department of Computer Science and Engineering	Pasham Pranay
108	Ajit Shelat Award	Department of Computer Science and Engineering	S Naresh
109	Ajit Shelat Award	Department of Computer Science and Engineering	Kare Mounika
110	Ajit Shelat Award	Department of Computer Science and Engineering	Sagar De
111	Uday Athavankar Prize for Customer Center	IDC School of Design	Abhinav Dhaka
112	Shri Rakesh Mathur Excellence Award	Department of Computer Science and Engineering	Rishabh Raj Prakash
113	Mrs. Rama Mathur Memorial Prize	Department of Mathematics	Suraj Mishra
114	Smt. Vulavala Mangatayaru Memorial Award	Department of Chemical Engineering	Kajal Sharma

#	Award Name	Department	Student Name
115	Smt. Vulavala Mangatayaru Memorial Award	Department of Chemical Engineering	Pavithra Venkataraman
116	Late Prof. R. Subrahmonia Ayyar Academic Excellence Award	Department of Civil Engineering	Aadishree Srivastava
117	Late Prof. R. Subrahmonia Ayyar Academic Excellence Award	Department of Civil Engineering	Lekshmi Muraleedharan
118	S C Mehrotra Prize	Department of Civil Engineering	Sanidhya Garg
119	S C Mehrotra Prize	Department of Civil Engineering	Puranjay Bansal
120	S C Mehrotra Prize	Department of Civil Engineering	Nakul Agarwal
121	Mrs. Charusheela Dange Award	Department of Physics	Spandan Sachin Anaokar
122	Shri Ram Kumar Gupta Merit Award	Department of Chemical Engineering	Kadambari Umesh Bhide
123	B.K. Nilakhe Award	Department of Physics	Ahire Sara Parag
124	Synopsys Semiconductor Lab for Virtual Fab Solutions: PhD Thesis Award	Department of Electrical Engineering	Sutapa Dutta
125	Dr. Gargi Vishnoi Memorial Prize	Department of Biosciences and Bioengineering	Soumyajit Sarkar
126	Evonik Grow Beyond Yourself Excellence Award in Chemistry- BSc	Department of Chemistry	Ishita Poddar
127	Evonik Grow Beyond Yourself Excellence Award in Chemistry- BSc	Department of Chemistry	Ananya Agrawal
128	Evonik Grow Beyond Yourself Excellence Award in Chemistry- MSc	Department of Chemistry	Lakshya Agarwal
129	Evonik Grow Beyond Yourself Excellence Award in Chemistry- MSc	Department of Chemistry	Iti Mahato

THE STUDENT AWARDS & RECIPIENTS FOR ACADEMIC YEAR 25-26

#	Award Name	Department	Student Name
130	Evonik Grow Beyond Yourself Excellence Award in Chemistry-PhD (Organic)	Department of Chemistry	Borse Nikhil Anil
131	Evonik Grow Beyond Yourself Excellence Award in Chemistry-PhD (Organic)	Department of Chemistry	Priyanka Choudhary
132	Evonik Grow -Beyond Yourself Excellence Award in Chemistry- PhD (Inorganic)	Department of Chemistry	Rajashi Haldar
133	Evonik Grow Beyond Yourself Excellence Award in Chemistry-PhD (Inorganic)	Department of Chemistry	Sunita Sharma
134	Evonik Grow Beyond Yourself Excellence Award in Chemistry- PhD (Physical)	Department of Chemistry	Poulomi Nandi
135	Evonik Grow Beyond Yourself Excellence Award in Chemistry- PhD (Physical)	Department of Chemistry	Porathoor Sini Sunny
136	Vijay Vashee Computer Science Fellowship Award	Department of Computer Science and Engineering	Ramsundar Anandanarayanan
137	Vijay Vashee Computer Science Fellowship Award	Department of Computer Science and Engineering	Kishan Maharaj
138	Vijay Vashee Computer Science Fellowship Award	Department of Computer Science and Engineering	Sameer Pimparkhede
139	Vijay Vashee Computer Science Fellowship Award	Department of Computer Science and Engineering	Kalbande Vedant Uddhaoarao
140	Thomas Dooie, Class of 1974 Award	Department of Computer Science and Engineering	Kartik Nair
141	Thomas Dooie, Class of 1974 Award	Department of Computer Science and Engineering	Atharva Tambat
142	Vijay Vashee Excellence Awards	Department of Computer Science and Engineering	Roshan Raj
143	Vijay Vashee Excellence Awards	Department of Computer Science and Engineering	K Ashwin Kumar
144	Vijay Vashee Climate Change Fellowship Award	Department of Climate Studies	Puja Tripathy

#	Award Name	Department	Student Name
145	George B. Fernandes Award	Department of Computer Science and Engineering	Aditya Anand
146	George B. Fernandes Award	Department of Computer Science and Engineering	Nihar Ranjan Sahoo
147	Winifred B. Fernandes Award	Department of Computer Science and Engineering	Vatsala Sharma
148	Winifred B. Fernandes Award	Department of Computer Science and Engineering	Sweta
149	Winifred B. Fernandes Award	Department of Computer Science and Engineering	Poulami Ghosh




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HOSTEL LEGACY

A LEGACY BUILT ACROSS GENERATIONS

For IIT Bombay alumni, returning to campus has come with a desire to give something back. Over the years, Batch Legacy Projects have turned that instinct into a tradition, with graduating classes coming together to support the Institute and its community. In 2025–26, 24 batches, spanning the Classes of 1963 to 2010, collectively contributed Rs. 18.95 crore. Including individual contributions, the total legacy contribution for the year stood at Rs. 25 crore, with legacy batches pledging a further Rs. 66 crore in support of IIT Bombay.

Alumni have helped build hostels and learning spaces, supported students through financial aid and wellness programmes, backed young and retired faculty, and invested in research, technology and entrepreneurship.

The form of giving has evolved with each generation, while the underlying relationship has remained: alumni choosing specific ways to stay engaged with IIT Bombay and support its continuing needs.

Explore the story of Project Evergreen at IIT Bombay.

THE BATCHES & THEIR LEGACIES

CLASS OF 1963

- The Class of 1963 supports Project Evergreen, contributing towards the development of IIT Bombay's new student hostel complex.
- In recognition of the batch's contribution, an Evergreen Sculpture in Hostel 8 has been named after the Class of 1963.



CLASS OF 1965

- The Class of 1965 has also supported Project Evergreen.
- A wing in Hostel 7 has been named after the batch in recognition of its contribution.





CLASS OF 1966

- The Class of 1966 supports the Financial Aid Programme and the Tinkerers' Laboratory as its Batch Legacy Projects. The initiatives combine scholarships and financial assistance for students with hands-on learning, innovation, and prototyping through the Tinkerers' Laboratory.

CLASS OF 1971

- The Class of 1971 supports Project Evergreen.
- In recognition of its contribution, solar panels installed in the Project Evergreen complex have been named after the batch.



CLASS OF 1972

- The Class of 1972 supports Project Evergreen through the development of Floor 7 of Hostel 21.
- The floor has been named in honour of the batch, linking its Legacy Project directly with student housing on campus.







CLASS OF 1973

- The Class of 1973 contributed towards its Batch Legacy Project, with a strong focus on research and faculty excellence.
- The batch supported establishing the C1973 EV Power Train Lab, a shared facility for interdisciplinary research on electric vehicle powertrains at IIT Bombay.
- Another portion of funds went towards the C1973 Faculty Awards for Research Excellence (C1973 FARE), which recognise and encourage outstanding research by the Institute's faculty.

CLASS OF 1974

- The Class of 1974's Legacy Project combines campus development with an initiative reaching into rural communities.
- HEARTS'74—Habitat for Everyone: Affordable, Resilient, Transformative and Sustainable—supports the development of sustainable, resilient, and affordable housing solutions for rural communities.
- The batch also supports Project Evergreen, contributing towards the development of Hostels 7, 8 and 21, and IIT Bombay's student housing infrastructure.





CLASS OF 1976

The Class of 1976 has chosen multiple causes to support as part of their legacy -

- Financial Aid Programme (FAP).
- Alumni Centre.
- CoE for Critical Minerals.
- Hostel Infrastructure.
- Young Faculty Fellowship (YFF).

CLASS OF 1980

- The Class of 1980 supports hands-on learning, semiconductor technologies, and campus infrastructure through SemiX, Kshitij Lawns and the Class of 1980 Design and Making Lab.
- To mark its 45th Reunion, the batch contributed towards equipment and research at the IIT Bombay Centre for Semiconductor Technologies (SemiX).



CLASS OF 1981



- The Class of 1981 supports both students in need of financial assistance and the expansion of student housing.
- Batch supported the Financial Aid Programme (FAP) and Project Evergreen.
- In recognition of this contribution, the Student Lounge in Hostel 21 and all eight pantries in Hostel 8 have been named in honour of the batch.



CLASS OF 1990

The Class of 1990 launched the IDEAS Programme, Innovation, Development & Entrepreneurship, and Clean Green Campus, with Alumni Support, to fuel innovation and entrepreneurial ambition across campus





CLASS OF 1991

- The Class of 1991 pledged support across faculty welfare, student spaces, and campus infrastructure.
- Its commitment supported the Retired Faculty Wellness Fund, Studio Nine One One (MAD Rooms), and murals in Project Evergreen.
- In recognition of the batch's support for Project Evergreen, three murals across Hostels 7, 8, and 21 are dedicated to the Class of 1991.





CLASS OF 1992

The Class of 1992 pledged towards Project Evergreen, the Student Wellness Centre, Café 92, study rooms in Hostels 3 and 6, Student Scholarships, RISE and FAP.

CLASS OF 1993

The Class of 1993 supported Project Evergreen, Grey Water Recycling, a Lecture Hall, the Young Faculty Fellowship, and the Retired Faculty Wellness Fund.



CLASS OF 1994

- The Class of 1994 supported Project Evergreen, including student well-being spaces in the new hostel complex such as guest rooms for students and their families, counselling facilities, and spaces for yoga and meditation.
- In recognition of the contribution, one wing has been named the ‘C1994 Wing’.
- As part of its Silver Jubilee Legacy Project, the batch also supported the Young Faculty Fellowship, Retired Faculty Wellness Fund, IT Hardware Scholarship, and Scholarship Endowment Fund.
- The batch has also supported the GROWTH-India Telescope (GIT), established in 2018 at Hanle, Ladakh, by IIT Bombay and the Indian Institute of Astrophysics. The fully robotic research telescope studies cosmic transients including supernovae and gravitational-wave counterparts.





CLASS OF 1995

- The Class of 1995 contributed to the Young Faculty Fellowship (YFF) and IIT Bombay's basketball infrastructure. In recognition of this support, the basketball court was renamed ‘Arena 95 – Class of 1995 Basketball Court’.
- The batch also supports the Financial Aid Programme, and the Retired Faculty Wellness Fund.
- During the pandemic, the Class of 1995 contributed Rs 8 lakh from its Legacy Project fund towards IIT Bombay's vaccination campaign for campus residents, including students and staff.

CLASS OF 1996

- The Class of 1996 has spread its Legacy Project across faculty support, entrepreneurship, student technology, and infrastructure.
- The batch committed to the Young Faculty Fellowship and Retired Faculty Wellness Fund for the greatest needs of the Institute.
- The batch committed to the SINE Endowment Fund, supporting the Society for Innovation and Entrepreneurship in nurturing early-stage technology startups through funding, mentorship, and incubation.
- The batch also committed to the Student Technology Teams Endowment Fund, which supports student-led engineering teams participating in international competitions, including Exofly, IITB Racing and the Driverless Racing Team.
- The Class of 1996 also supported Project Evergreen. In recognition of this contribution, the Half Terrace of Hostel 21 has been named 'Vista 96'.





CLASS OF 1997

- The Class of 1997's Legacy Project brings together student housing and well-being with support for faculty.
- The batch contributed to Project Evergreen, and supporting the creation of 9Tea7 Shack, a café within IIT Bombay's residential complex.
- It is also committed to the Young Faculty Fellowship and Retired Faculty Wellness Fund.
- The batch also committed to the Student Flourishing Hub, supporting students' mental wellbeing, emotional resilience, and personal growth through evidence-based wellness programmes, mentorship and leadership development.

CLASS OF 1998

- The Class of 1998 has supported various causes: Chair Professorship in Quantum Computing. Prof. R. B. Sunoj of the Department of Chemistry held the Chair from 2020 to 2023.
- The batch also supported a Student Travel Grant for undergraduate students undertaking academic research and participating in international conferences.
- Through Project Evergreen, five wings of Hostel 7 have been named in memory of five Class of 1998 alumni.
- IITB Student Flourishing Hub, Retired Faculty Wellness Fund, Young Faculty Fellowship and Financial Aid Programme: The initiative supports evidence-based flourishing programmes, expanded access to counselling and psychotherapy, and dedicated flourishing spaces across hostels and academic departments.





CLASS OF 1999

- The Class of 1999 supports Project Evergreen, the Student Flourishing Hub, Financial Aid Programme, Young Faculty Fellowship, Benevolence Fund, and Retired Faculty Wellness Fund.
- Together, these commitments cover student housing and well-being, financial assistance, faculty support and healthcare support for retired faculty.
- As part of Project Evergreen, the 5th Floor of Hostel 7 has been named in honour of the Class of 1999.

CLASS OF 2000

The Class of 2000 supports the New Student Activity Centre (SAC) and the Student Flourishing Hub.





CLASS OF 2001-02

The Class of 2001-02 supports Project Evergreen. In recognition of its contribution, the batch has been granted naming rights for Wing C on the 7th Floor of Hostel 7.





CLASS OF 2009

The Class of 2009 supports Project Evergreen, contributing to the new hostel complex, its common facilities and student amenities, and naming a wing in the project.

CLASS OF 2010

- The Class of 2010 supports Project Evergreen, contributing to the new hostel complex, its common facilities and student amenities.
- In recognition of the batch's contribution, Wing A, Floor 1 of Hostel 7 is called ‘Gift by the Class of 2010’.

HOSTEL LEGACY

WHERE GIVING BACK COMES HOME

For generations of IIT Bombay alumni, the hostel has been central to life beyond the classroom: a place where friendships formed, communities developed and much of campus life unfolded. Hostel reunions bring alumni back to these shared spaces, renewing connections with former batchmates and strengthening their ties to the hostel community.

Many alumni are now supporting the renewal of these spaces for the students who follow. Support ranges from individual rooms and wings to larger redevelopment efforts, connecting alumni giving directly with IIT Bombay's student-housing priorities.

The Hostel Legacy initiative brings these contributions together across redevelopment, student amenities and naming opportunities, linking alumni's enduring connection to their hostels with efforts to improve student life and strengthen hostel communities for generations to come.

Hostel 4, known to generations of students as the “Madhouse”, is one example of this legacy taking shape. Its redevelopment has transformed one of IIT Bombay’s best-known hostels into a renewed residential facility, while carrying forward the identity and spirit that made H4 distinctive. Alumni contributions are supporting this transformation through named rooms and wings, creating a direct connection between the hostel’s alumni community and its renewed home on campus.

The same commitment is shaping the future of Hostel 6. Long woven into campus life, its planned redevelopment will reimagine the residential experience for a new generation, with increased capacity and improved living, shared and student-amenity spaces.

For Hostel 9, redevelopment is similarly an opportunity to renew a longstanding part of the residential campus while creating an environment suited to the needs of today’s students. The new facility will combine greater capacity with thoughtfully planned living and shared spaces. Sustainable infrastructure, alongside greater attention to accessibility and comfort, will support a more inclusive residential environment.

Together, these efforts reflect a simple continuity: the hostels that shaped the IIT Bombay experience for one generation are being renewed to shape it for the next. Alumni support is helping preserve the sense of community and belonging that has always defined hostel life, while creating better spaces for students to live, connect and grow on campus.









ANNUAL LECTURE SERIES

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PROF. C. V. SESHADRI DISTINGUISHED INSTITUTE LECTURE



The year 2025–26 featured a rich lineup of distinguished lectures that brought global experts to IIT Bombay, sparking intellectual exchange across disciplines. These named lecture series celebrate visionary thinkers while offering students and faculty access to transformative ideas from academia, industry, and public life.

The 13th **Prof. C. V. Seshadri Distinguished Institute Lecture** was held at IIT Bombay in February 2026 in memory of the late Prof. Chetput Venkata Seshadri.

Prof. Rama Govindarajan of the International Centre for Theoretical Sciences (ICTS), Tata Institute of Fundamental Research (TIFR), Bengaluru, delivered the lecture, "Cooperative Settling."



Prof. Govindarajan explained how particles settling through fluids interact, and how unsteady effects, particle shape and collective behaviour influence phenomena including marine snow, raindrop formation and sediment dynamics. Her lecture showed how interactions among particles can change settling patterns, clustering, and motion.

PROF. N. R. KAMATH DISTINGUISHED INSTITUTE LECTURE



The **Prof. N. R. Kamath Distinguished Institute Lecture Series** honours Prof. N. R. Kamath, former Deputy Director of IIT Bombay and founding Head of the Department of Chemical Engineering. In early 2026, the series brought two scholars to the Institute for lectures on the future of work and the scalability of cryptocurrencies.

In January 2026, **Prof. Pramod Khargonekar** (B.Tech., Electrical Engineering, 1977) delivered "Future of Work and Workers in the AI Era." Drawing parallels with earlier technological shifts, including the Industrial Revolution, he examined how artificial intelligence could reshape jobs, productivity and skills, and argued for a human-centred approach to the future of work.

In February 2026, **Prof. Bruce Hajek,** Professor at the University of Illinois Urbana-Champaign and a member of the U.S. National Academy of Engineering, delivered "On Scaling Cryptocurrencies: Payment Channels and Bridges." He examined transaction-throughput limits in permissionless blockchain networks and mechanisms, including payment channel networks and bridges, that seek to improve scalability.





RADHIKA RAJAN WOMEN LEADERSHIP LECTURE

The **Radhika Rajan Women Leadership Lecture** was held at IIT Bombay in March 2026, featuring **Ms. Sarita Ahlawat**, Co-founder and Managing Director of BotLab Dynamics Private Limited and recipient of the Women in Civil Aviation Award 2022 and National Tech Excellence Award for Women 2022

In "From Early Failures to World Records: The Story of BotLab Dynamics," Ms. Ahlawat traced the company's journey from its incubation at IIT Delhi in 2016 to the drone show at Rashtrapati Bhavan during the Beating Retreat ceremony in January 2022. She discussed its early setbacks, shift to drone light shows, the work behind seven world records and its plans in the defence sector.

SHASHWAT PANDA MEMORIAL LECTURE

The **Shashwat Panda Memorial Lecture**, held at IIT Bombay in August 2025, featured **Ms. Rama Bijapurkar**, visiting faculty at the Indian Institute of Management Ahmedabad (IIM-A), where she teaches and conducts executive education programmes on customer-based business strategy.

In "Understanding India's Household Consumption Story," Ms. Bijapurkar examined consumer behaviour, demand structures and evolving business models in India's consumption economy, including their implications for investment and growth.







PROF. C. N. R. RAO DISTINGUISHED LECTURE

As part of the **Prof. C. N. R. Rao Distinguished Lecture Series**, IIT Bombay hosted **Prof. J. N. Moorthy** in March 2026. Prof. Moorthy is Professor in the Department of Chemistry at IIT Kanpur and Director of the Indian Institute of Science Education and Research (IISER), Thiruvananthapuram.

In "Rational Molecular Design of Functional Organic Materials," Prof. Moorthy explained the relationship between molecular structure, reactivity and function, and how molecular design can produce materials with tailored properties. He discussed applications including OLEDs, photochromic materials, metal-organic frameworks and porous organic polymers.





DR. RINTI BANERJEE VISITING CHAIR PROFESSORSHIP

Under the **Dr. Rinti Banerjee Visiting Chair Professorship**, IIT Bombay hosted **Prof. Monica Lakhanpaul** in October 2025. The Professorship supports engagement with leading women researchers in translational healthcare. Prof. Lakhanpaul is Professor of Integrated Community Child Health at the UCL Great Ormond Street Institute of Child Health, with expertise in child health equity and participatory research.

In "From Early Years to Emerging Futures: Co-Creating for Societies Impact across Health, Environment and the Arts," Prof. Lakhanpaul examined interdisciplinary and participatory approaches to challenges spanning health, environment and the arts.

Drawing on initiatives including CHAMPIONS, NEON and PANChSHEEEL, she discussed community participation, creative arts and citizen science as methods for advancing equity and sustainability.



SMT. SARLA DOSHI MEMORIAL LECTURE

Dr. Anubhav Saxena, Chief R&D Officer at Pidilite, delivered "From Idea to Impact: Design Thinking Approach" during the **Smt. Sarla Doshi Memorial Lecture** hosted by IIT Bombay.

The lecture explained how design thinking can connect research with commercialisation by aligning technology development with user needs and market viability across Technology Readiness Levels (TRLs).

Dr. Saxena discussed rapid prototyping, iterative testing and collaborative development as practical routes for moving research towards application.







THANK YOU!



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