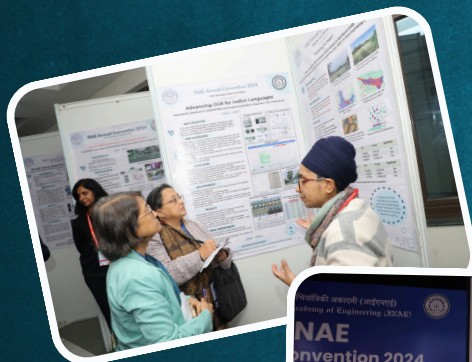




INDIAN INSTITUTE OF TECHNOLOGY DELHI

# IRD CONNECT

NEWSLETTER  
OCTOBER - DECEMBER 2024



**PUBLISHED BY**  
INDUSTRIAL RESEARCH AND DEVELOPMENT (IRD) UNIT



# HIGHLIGHTS

## DRDO Industry Academia-Center of Excellence (DIA-CoE) at IIT Delhi Transfers Technology to the Industries

DRDO-Industry-Academia Centre of Excellence (DIA-CoE) organised an event titled 'DRDO-Industry-Academia - Global Approach to Readiness of Indigenous Military Applications' (DIA-GARIMA) at IIT Delhi on December 19, 2024. During the event, 10 tripartite agreements were signed between DRDO, IIT Delhi and industry partners, in the presence of Dr Samir V Kamat, Secretary, Department of Defence R&D and Chairman DRDO; Prof. Rangan Banerjee, Director - IIT Delhi; Prof Naresh Bhatnagar, Dean (R&D); Dr. Subrata Rakshit, DG (TM); Dr N Ranjana, Director FTM; Dr M H Rahaman, Director DIA-CoE (IIT Delhi) and industry representatives.

The DIA-CoE, IIT Delhi has engaged nearly 100 faculty members and 200 research scholars in its research areas to achieve self-reliance in defence futuristic technology thereby improving the capability and capacity of defence R&D in the country. Standard Operating Procedures for Engaging Industry through academia was brought out by DFTM, DRDO to engage the industry actively through DIA-CoEs. This SOP has paved the path for activating the 'I' part of DIA-CoE.

### Details of Agreements signed

#### ➤ **Transfer of Technology of Light Weight Bullet Resistant Jacket (ABHED- Advanced Ballistic High Energy Defeat) to:**

1. MIDHANI (Mishra Dhatu Nigam), Rohtak
2. SMPP Pvt Ltd, Delhi
3. AR Polymers (MKU), Kanpur

#### ➤ **Memorandum of Agreement (MoA) for Development of Indigenous Ballistic Material with Reliance Industries Ltd., Vadodara**

#### ➤ **MoA for limited series production of Extreme Cold Weather Clothing with:**

1. Aeronav Industrial Safety Appliance, Delhi
2. Arnaf Industries Ltd, Delhi
3. Arrow Garments, Tirupur

#### ➤ **MoA for limited series production of Extreme Heat Protective Clothing with:**

1. Arrow Garments, Tirupur
2. Aeronav Industrial Safety Appliance, Delhi
3. Katalyst TECHTEX Ltd, Delhi





# HIGHLIGHTS

## Hon'ble Raksha Mantri Shri Rajnath Singh Admired Exhibition Set-up by DIA-CoE

On this occasion, Hon'ble Raksha Mantri Shri Rajnath Singh also visited the exhibition set up by DRDO Industry Academia - Centre of Excellence and defence industries during DIA-GARIMA event, wherein technologies and products developed by Defence-Industry-Academia co-operation were showcased. The industry participation was quite heartening for IIT Delhi.



Defence Minister Shri Rajnath Singh had a good discussion at the exhibition put up by the DIA-GARIMA at IIT Delhi on December 19, 2024. [Read More>>](#)



# HIGHLIGHTS

## Visit of Hon'ble Raksha Mantri Shri Rajnath Singh at INAE Annual Convention 2024

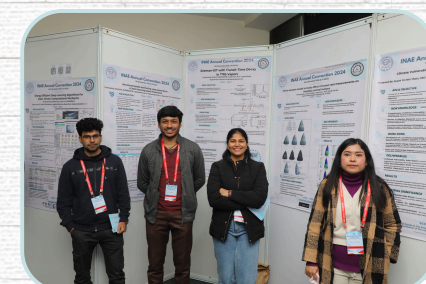
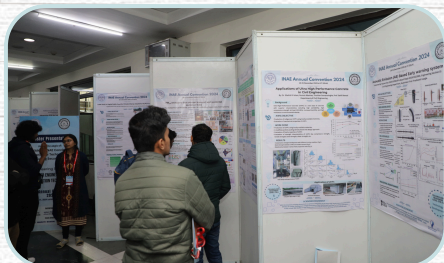


Hon'ble Raksha Mantri Shri Rajnath Singh graced the inaugural session as the Chief Guest of the 3-day INAE Annual Convention 2024 held on December 19, 2024, at the Lecture Hall Complex (LHC) of the Indian Institute of Technology Delhi. This event was attended by a large number of INAE Fellows, Foreign Fellows, Young Associates, faculty members and students of IIT Delhi.

In his speech, Raksha Mantri lauded the role of IITs in the country's scientific development in collaboration with the Defence Research and Development Organisation (DRDO). He called for establishing an even better organic relationship among the industry, research & development organisations and academia. He also called upon the scientists and engineers to gain command over high-end technologies, such as Artificial Intelligence & Quantum Computing, in tune with the changing times, with the aim to further strengthen India's position in the field of advanced, frontiers & cutting-edge innovation leading to Atma Nirbhar Bharat, a self-sustainable developed country.



He also appreciated the poster session presented by the Master's students and PhD research scholars from IIT Delhi. A total of 127 posters, covering various engineering disciplines, were displayed. Among them, 23 students were selected and awarded **₹10,000 each** by INAE and IRD Unit, IIT Delhi. The evaluation and selection process was conducted by INAE fellow experts from various engineering fields.





# HIGHLIGHTS



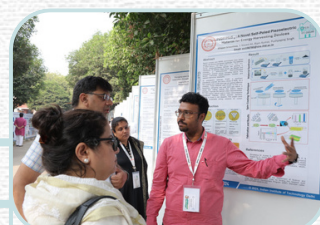
## Open House 2024: IIT Delhi Showcased its Contribution to the Nation-Building

IIT Delhi's 17<sup>th</sup> Open House, organized on November 09, 2024, sparked curiosity and attracted thousands of school kids for showcasing breakthrough innovations in AI, healthcare, and quantum technology, inspiring young minds. The Open House saw an unprecedented response, with around 4,000 students from 58 schools and colleges across Delhi-NCR. Teachers and the general public joined in making the event a grand showcase of IIT Delhi's contributions to national development through research and innovation.



The IIT Delhi Open House event featured eminent speakers including Padma Shri Dr. Randeep Guleria (Ex-Director - AIIMS Delhi, Chairman - Institute of Internal Medicine & Respiratory and Sleep Medicine and Director of Medanta Medical School), Mr. Rajat Mishra (Director & CEO, EFKON India Group), Prof Rangan Banerjee (Director - IIT Delhi), Prof. Naresh Bhatnagar (Dean R&D), Prof. Bhaskar Kanseri (Department of Physics), Prof. Mohammad Ali Haider (Vice Provost for Research and External Engagement, IIT Delhi - Abu Dhabi) and Prof. Tapan K. Gandhi (Chairperson - Open House 2024) who encouraged students to propel India's scientific and technological advancement for serving nation and humanity.

On this occasion, over 250 research projects were showcased, offering visitors an immersive experience through live demonstrations, detailed presentations and informative poster displays. Some of the interesting projects were AI-based project for detecting gallbladder cancer from ultrasound images, a laser-based solid-state lighting system for efficient white light, a smart walking stick enhancing mobility for the elderly, a portable microscopic air quality monitoring and bioaerosol imaging system for real-time environmental monitoring, 5G authentication and key agreement protocol on XBee for secure communications, rapid testing kits for food and environmental applications, Atoms at Play: Molecular Dynamics Simulations to explore atomic interactions, etc. Attendees had a chance to witness and engage with researchers, and deepen their understanding of the scientific and technological advancements driving progress in various industries.







# In the MEDIA

## Testimonials

*My experience at IIT Delhi has been great, particularly the optics experiment that was demonstrated — it was very interesting, and the professors who delivered the seminar were also excellent.*

**-- Mohammad Asif, Class 11,  
Ramjas School**

*The exhibition at IIT Delhi is a fabulous experience. Seeing such models, which were so informative and creative, allowed me to appreciate the creativity of others and the level of the models presented. The new topics and the information provided about the models were extremely helpful for me. I hope to motivate myself from this experience to do much better in life. These model exhibitions inspire students because they encourage us to practice, work hard, and perform activities that explore the reality of life.*

**-- Akansha Nayak, Class 11,  
MCLSBM School**

*The Open House provided my students with a glimpse of science beyond textbooks, showing them its real-world applications and inspiring them to think about their future.*

**-- Teacher Ajay Malhotra,  
Rukmani Devi Public School**

## Explore More

[IITD Open House Website](#)

[Watch Event on YouTube](#)

[IITD Newsletter Coverage](#)

[IITD Press Release](#)

[Coverage by DD India](#)

## Print Media



### THE HINDU

## IIT Delhi's annual Open House shows AI's potential use in health care, tech



A student demonstrates the uses of an AI-powered project on display at the Open House. SPECIAL ARRANGEMENT

**The Hindu Bureau  
NEW DELHI**

The Director of Indian Institute of Technology, Delhi, Rangan Banerjee, on Saturday said the institute, which had begun with a focus on science and engineering research only, is now involved in innovations in the health care and social sciences sectors as well. Mr. Banerjee was speaking at the annual Open House of the institute, where 250 innovative research projects were on display to engage young audiences, who could have a look at the facilities on offer at the institute.

Around 4,000 students from 58 schools and colleges across the Delhi-NCR region, along with their teachers and members of the general public, visited the campus to see how the institute was contributing to nation-building, the university said.

On display were projects by students of the institute that showcased innovation in areas such as

AI in health care, quantum technology, and semiconductor advancements.

The projects included an AI-based innovation for detecting gallbladder cancer from ultrasound images, which aimed to save lives through an early, non-invasive diagnosis; a smart walking stick enhancing mobility for the elderly, and a Portable Microscopic Air Quality Monitoring and Bioaerosol Imaging System for real-time environmental monitoring.

"We are collaborating with AIIMS to start a centre of excellence for AI in health care. Our goal is to shape the future generations that will transform the country and the world. We want to make an impact through our research," Mr. Banerjee said.

Chief guest Randeep Guleria, former Director of AIIMS New Delhi, inaugurated the Open House. "In the future, engineering, computation, mathematics, humanities, and medicine will merge into one big area," Mr. Guleria said.





## Sponsored Research & Consultancy Projects

(Oct-Dec 2024)



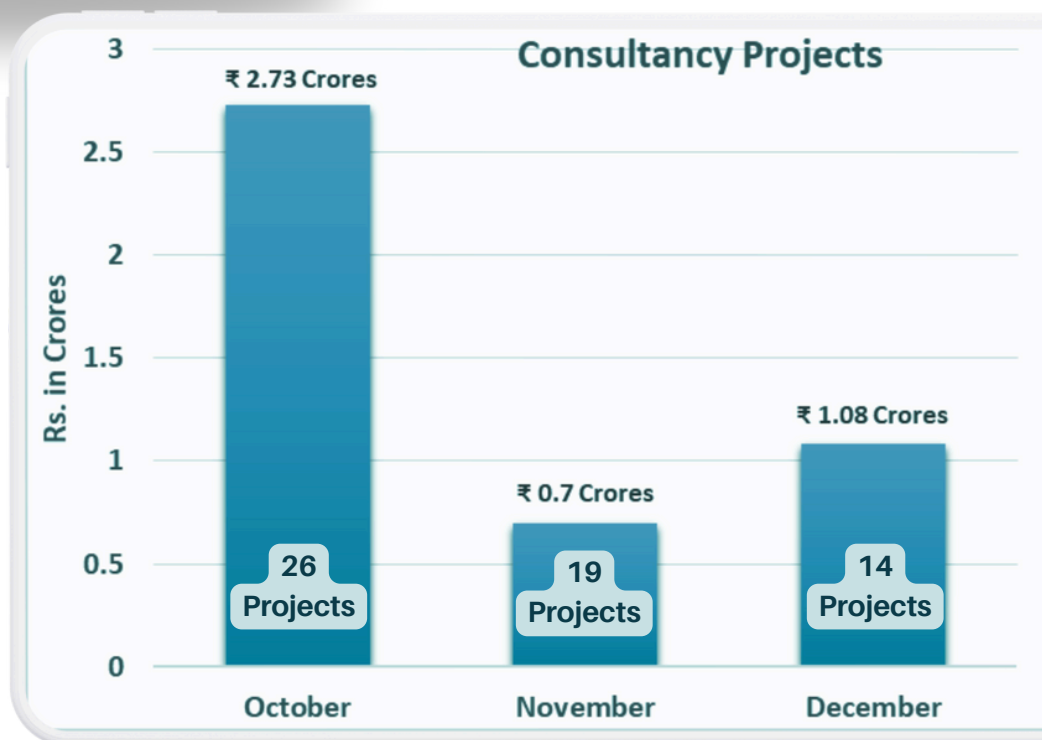
Total

**79**

**Sponsored Research +  
Miscellaneous Projects**  
with sanctioned value of

**₹114.66 Crores**

Total  
**59**  
**Consultancy Projects**  
with sanctioned value of  
**₹4.51 Crores**



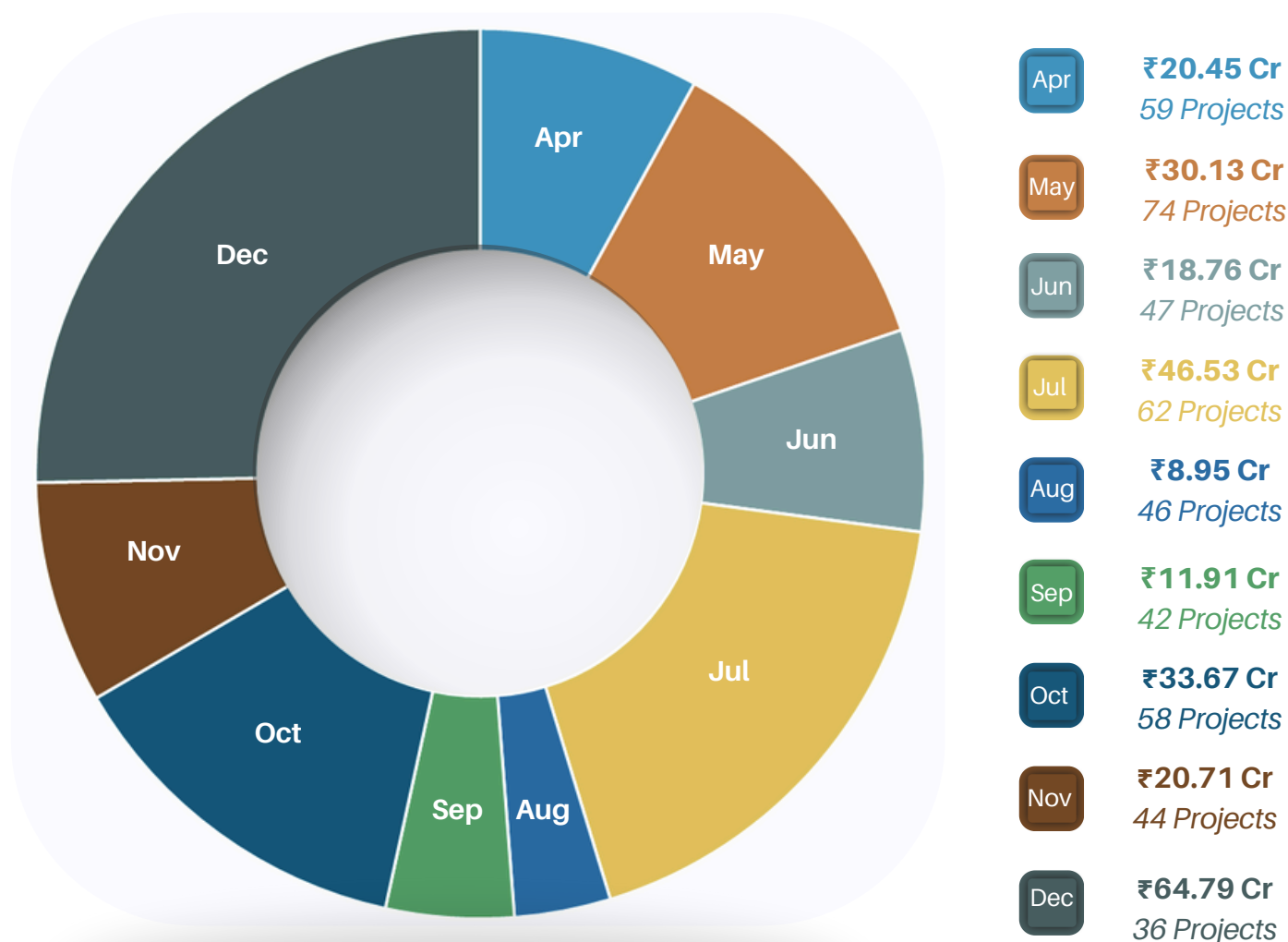
A Total of  
**138 Projects**  
with Sanctioned Value of

**₹119.17 Crores**



## Sponsored Research & Consultancy Projects

(Apr-Dec 2024)



A total of **468** Sponsored Research & Consultancy Projects  
with Sanctioned Value of **₹255.9 Crores**  
were undertaken during April-December 2024





## Some Glimpses of High-Value Sponsored Research Projects (₹ 1 Crore and above) Oct-Dec 2024

₹ 40.48  
Crores

Design and Demonstration of a Highly Scalable Quantum Computer using Semiconducting Qubits

SA: National Quantum Mission,  
Department of Science and Technology,  
Ministry of Science & Technology, India



PI: Prof. Abhisek Dixit,  
Dept. of Electrical Engineering

₹ 9.39  
Crores

Dynamic spectrum sharing technology and in-band coexistence for strategic communications (DISC)

SA: Department of Defence Research &  
Development, Ministry of Defence, India



PI: Prof. Swades Kumar De,  
Dept. of Electrical Engineering

₹ 7.72  
Crores

Novel Optical Fiber Technology for Quantum enabled 6G communication

SA: Telecom Centre of Excellence,  
Department of Telecommunication,  
Ministry of Communications &  
Information Technology, India



PI: Prof. Deepak Jain,  
Optics and Photonics Centre

₹ 6.5  
Crores

Project Patang - Tethered Drone-based Last Mile 6G Connectivity and Backhaul Carpet in Advancing Battlefield

SA: Telecom Centre of Excellence,  
Department of Telecommunication,  
Ministry of Communications &  
Information Technology, India



PI: Prof. Vireshwar Kumar,  
Dept. of Computer Science &  
Engineering

₹ 4.57  
Crores

COIL-D: Centre for Indian Language data

SA: Ministry of Electronics and  
Information Technology, India



PI: Prof. Tanmoy Chakraborty,  
Dept. of Electrical Engineering

₹ 3.41  
Crores

Development of 2 pm and 4 pm Laser source for countermeasure applications

SA: Ministry of Defence, India



PI: Prof. Ritwick Das,  
Optics and Photonics Centre

₹ 2.93  
Crores

Development of Flexible and Stable Cross-linked Polyimide Aerogel for High-Temperature Protective Textiles

SA: Department of Defence Research &  
Development, Ministry of Defence, India



PI: Prof. Md. S. Wazed Ali,  
Dept. of Textile & Fibre  
Engineering

₹ 2.74  
Crores

Centre for Advanced Research in Pulmonary Hypertension - IITD part: Pulmonary Artery Denervation for Treatment of Idiopathic Pulmonary Hypertension

SA: Indian Council of Medical Research,  
India



PI: Prof. Naresh Bhatnagar,  
Dept. of Mechanical Engineering





## Some Glimpses of High-Value Sponsored Research Projects (₹ 1 Crore and above) Oct-Dec 2024

₹ 2.63  
Crores

Integrated Magneto-Acousto-Dielectrophoresis based Microfluidics for the Sorting of Bovine Spermatozoa

SA: Department of Biotechnology,  
Ministry of Science & Technology, India



PI: Prof. Sandeep Kumar Jha,  
Centre for Biomedical  
Engineering

₹ 2.59  
Crores

Development of indigenous FACS device for enrichment of X-chromosome bearing spermatozoa in bovine semen

SA: Department of Biotechnology,  
Ministry of Science & Technology, India



PI: Prof. Dalip Singh Mehta,  
Dept. of Physics

₹ 2  
Crores

Bhagwan Birsa Munda Cell (BBMC)

SA: Ministry of Tribal Affairs, India



PI: Prof. Vivek Kumar,  
Centre for Rural Development  
& Technology (CRDT)

₹ 1.76  
Crores

CO<sub>2</sub> Capture and Conversion to Jet Fuel via the Alcohol to Jet Process

SA: Department of Science and  
Technology, Ministry of Science &  
Technology, India



PI: Prof. Sreedevi Upadhyayula,  
Dept. of Chemical Engineering

₹ 1.59  
Crores

SaTC: Small: Role of Network Structure, User Behavior and Influence in Mitigating False Information Spread on Social Networks

SA: Department of Science and  
Technology (DST-International  
Multilateral Regional Cooperation  
Division), Ministry of Science &  
Technology, India



PI: Prof. Tanmoy Chakraborty,  
Dept. of Electrical Engineering

₹ 1.3  
Crores

CoE on Personalized Healthcare at IITD: India's first Center for Precision Medicine & MedTech

SA: Wadhvani Innovation Network,  
Wadhvani Foundation, United States  
of America



PI: Prof. Neetu Singh,  
Centre for Biomedical  
Engineering

₹ 1.12  
Crores

DST Inspire Faculty Fellowship award project Solar Induced Water Splitting: From photo-electrode to green Hydrogen awarded to Dr. Dipika Sharma

SA: Department of Science and  
Technology, Ministry of Science &  
Technology, India



PI: Prof. Pravin Popinand Ingole,  
Dept. of Chemistry





## Some Glimpses of High-Value Sponsored Research Projects (₹ 1 Crore and above) Oct-Dec 2024

₹1.06  
Crores

Extreme Heat Protective Clothing (EHPC) upgradation through value additions with identified industry partners and limited numbers production for testing and validation

SA: Department of Defence Research & Development, Ministry of Defence, India



PI: Prof. Apurba Das,  
Dept. of Textile & Fibre  
Engineering

₹1.03  
Crores

Energy-efficient quantum materials based magnetic tunnel junctions for unconventional computing applications

SA: Ministry of Information Technology, India



PI: Prof. Pranaba Kishor Muduli,  
Dept. of Physics

₹1  
Crore

Fabrication and evaluation of the gamma radiation protective clothing

SA: National Technical Textiles Mission, Ministry of Textiles, India



PI: Prof. Bhupendra Singh Butola,  
Dept. of Textile & Fibre  
Engineering

₹1  
Crore

Development of Leather-like Biocomposite for use in automobiles (Mobiltech)

SA: National Technical Textiles Mission, Ministry of Textiles, India



PI: Prof. Deepti Gupta,  
Dept. of Textile & Fibre  
Engineering

## Quarter-wise High-Value Sponsored Research Projects (₹ 1 Crore and above) Apr-Dec 2024

April-June  
2024

14 Projects  
worth  
₹37.83 Crores

July-  
September  
2024

8 Projects  
worth  
₹39.84 Crores

October-  
December  
2024

19 Projects  
worth  
₹94.82 Crores





## Some Glimpses of High-Value Consultancy Projects (₹ 25 Lakhs and above) Oct-Dec 2024

**₹ 76.71  
Lakhs**

Technical Advice and Checking of the Detailed Design for Kolkata Metro (All Work Orders) - Additional Works and Construction Support Activities (Phase 2)

**SA:** Rail Vikas Nigam Limited, Kolkata, India



**PI:** Prof. Bappaditya Manna,  
Dept. of Civil Engineering

**₹ 50  
Lakhs**

Technical Assessment of Collapse of Canopy Roof at Terminal 1 of Delhi Airport

**SA:** Airport Authority of India, India



**PI:** Prof. Neeraj Kumar Jha,  
Dept. of Civil Engineering

**₹ 45  
Lakhs**

Proof Checking of Structural Design and Drawings of Proposed DDA Integrated Multi sports Arena at Sector 19B, Dwarka, New Delhi

**SA:** Worldstreet Sports Center Limited, New Delhi, India



**PI:** Prof. S. Pradyumna  
Dept. of Applied Mechanics

## Quarter-wise High-Value Consultancy Projects (₹ 25 Lakhs and above) Apr-Dec 2024

**April-June  
2024**

**7 Projects  
worth  
₹4.34 Crores**

**July-  
September  
2024**

**5 Projects  
worth  
₹1.67 Crores**

**October-  
December  
2024**

**3 Projects  
worth  
₹1.72 Crores**





# New Multi-Institutional Faculty Interdisciplinary Research Projects (MFIRP) Promotion by IRD



## MFIRP with Khalifa University (KU), UAE



IITD including IIT Delhi's international campus at Abu Dhabi (IITD-AD) and Khalifa University (KU) contributed matching grants to support five (5) joint projects in the targeted research areas namely Advanced Materials and Devices, Manufacturing & Industry 4.0, Quantum Technologies, Water and Climate Sustainability, Carbon Capture, Utilization, and Storage. The call was announced on December 24, 2024, with the proposal submission deadline of March 07, 2025.

## MFIRP with Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), UAE

IITD/(IITD-AD) and the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) announced a joint call for proposals on December 13, 2024, to support five (5) joint projects in the multidisciplinary research areas targeted towards application of Artificial Intelligence in research areas including but not limited to Healthcare, Smart Cities & Infrastructure, Smart Manufacturing & Materials, Climate Change, Agriculture & Water, Energy & Sustainability. The deadline for the proposal submission was February 14, 2025.



## MFIRP with University of Exeter, United Kingdom



University  
of Exeter

IIT Delhi and University of Exeter, UK (Exeter) contributed matching funds to support six (6) joint projects in the broad thematic areas namely Modelling tools for the Ionosphere, Prediction of Turbine performance using AI/ML, Wearable Device for Sports Concussion monitoring, A Wearable Multimodal Sensing System for Sports Injury Prevention, Aerial Vehicles for High-Rise Building Fires and Wave-Based Fault Detection & Location for AC Side Faults in Phase Shifted Full Bridge.

### List of IRD Approved IITD-Exeter Projects

	Project Title	IITD PI & Dept.	Exeter PI & Dept.
1	A Wearable Multimodal Sensing System for Biomechanical Modelling and Classification of Muscle Contraction States for Sports Injury Prevention	Prof. Biswarup Mukherjee, Centre for Biomedical Engineering	Prof. Dominic Farris, Public Health and Sport Sciences
2	Prediction of turbine performance using AI/ML in conjunction with computational fluid dynamics	Prof. Rahul Goyal, Energy Science and Engineering	Prof. Gavin Tabor, Engineering (Computational Fluid Dynamics)
3	A new modelling tool for the Ionosphere	Prof. Harish Kumar, Mathematics	Prof. Andrew Hillier, Mathematics and Statistics
4	Traveling Wave-Based Fault Detection and Location for AC Side Faults in Phase Shifted Full Bridge	Prof. Subhendu Dutta, Energy Science and Engineering	Prof. Farhad Namdari, Engineering (Electrical)
5	Unmanned Aerial Vehicles-Assisted Emergency Response for High-Rise Building Fires	Prof. Svetha Venkatachari, Civil Engineering	Prof. Prathyush Menon, Engineering (Environment, Science and Economy)
6	Development of a Wearable Device for Sport-Related Concussion Monitoring	Prof. Shahid Malik, Centre for Sensors, Instrumentation & Cyber Physical Systems Engineering	Prof. Genevieve Williams, Public Health and Sport Sciences





# New Multi-Institutional Faculty Interdisciplinary Research Projects (MFIRP) Promotion by IRD

## MFIRP with University College of London (UCL), United Kingdom



IIT Delhi and University College of London (UCL), United Kingdom contributed matching seed fund grants to support four (4) projects in the research areas of Energy-Efficient Reinforcing Bars for Building Design, Energy Storage Systems, Sustainable Medical Electronics and soot formation from lubrication oil in hydrogen-fueled combustion engines for 2 years.

### List of IRD approved IITD-UCL Projects

	Project Title	IITD PI & Dept.	UCL PI & Dept.
1	Assessment of Energy-Efficient High-Strength Reinforcing Bars for Building Design (MFIRP - UCL)	Prof. Srinivas Mogili, Civil Engineering	Prof. Dina D'Ayala; Civil, Environmental and Geomatic Engineering
2	Reversible Bonding for Optimal Novel Disassembly of Energy Storage System at the End-of-Life (ReBOND) (MFIRP - UCL)	Prof. Abhishek Das, Mechanical Engineering	Prof. Rhodri Jervis, Chemical Engineering
3	Experimental and numerical investigations on the soot formation from lubrication oil in hydrogen fueled combustion engines	Prof. Pavan Prakash Duvvuri, Mechanical Engineering	Prof. Paul Hellier, Mechanical Engineering
4	Smart Surgical Gloves with Fabric Coated TENG and Multimodal Sensing for Sustainable Medical Electronics	Prof. Dhiman Mallick, Electrical Engineering	Prof. Manish K Tiwari, Mechanical Engineering

## IIT Delhi-AIIMS MFIRP Review Meeting

All India Institute of Medical Sciences, New Delhi (AIIMS-D) and IIT Delhi conducted a review of the eighteen (18) joint projects on November 25 and 26, 2024. Under this MFIRP, Twenty one (21) papers have been published, Eighteen (18) new project proposals were submitted to external funding agencies and three (3) project proposals have received funding, along with three (3) patents filed. A highly promising low-cost lightweight polycentric polymeric knee joint (PPKJ) has been produced which is undergoing clinical trials, and many more products such as smartphone-based PT testing system, VR headset to get the 3D image, Wearable electronics for swallow-graphy in stroke patients, an automated digital Visual Acuity test, a novel highly sensitive Surface Enhanced Raman Scattering (SERS) based system for the detection of MDR-TB and XDR-TB, etc. are at different stages of development.



शरीरमाद्यं खलु धर्मसाधनम्

## Visit of National Yang Ming Chiao Tung University (NYCU), Taiwan Delegation



The NYCU delegation visited IIT Delhi on November 04, 2024, to further augment the research and academic cooperation, including the NYCU-IITD Joint Doctoral Degree Program (JDP). The major highlights of this meeting included Exchange of Faculty and Researchers, Industry-Academia Partnerships, Joint Research Areas, and organizing Workshops and Conferences. The research scholars who completed their JDP program highlighted the achievements and milestones achieved under the JDP program. A poster competition was organised for research scholars

which was evaluated for award by the NYCU delegation expert team. Out of 23 posters, based on the criteria of novelty, presentation skill and technology development; eight (8) posters were selected and research scholars were awarded a sum of ₹ 5000 each from IRD.



# Memorandum of Understanding (MoUs)

## IIT Delhi & University College of London

The University College of London (UCL), UK and the IIT Delhi renewed the existing Memorandum of Understanding on collaboration in research and teaching in areas of common interest for another 5 years on November 21, 2024, during the visit of the UCL delegation to IIT Delhi.

## IIT Delhi, University College London & AIIMS Delhi signed Triparty MoU

On November 22, 2024, a delegation team from University College London (UCL) and All India Institute of Medical Sciences (AIIMS), New Delhi, visited IIT Delhi and signed a trilateral Memorandum of Understanding committing to become partners for devising multidisciplinary technology and innovation-focused solutions across healthcare. The partnership will seek to leverage industry connections across all three institutions to advance medical technology in areas including detection, diagnostics and imaging; devices and implants; assistive technologies; digital health; artificial intelligence, machine learning and quantum; surgical and treatment interventions and sensing technologies. [Read More](#) >>



## IIT Delhi & National Institute of Food Technology, Entrepreneurship and Management, Kundli

National Institute of Food Technology Entrepreneurship and Management, Kundli (NIFTEM-K), a national Food Processing and Post-harvest Technology institute signed an MoU with IIT Delhi on December 11, 2024, to revolutionize collaboration in food processing and allied sectors. Piloted by Prof. Kavya Dashora, CRDT, IIT Delhi, this MoU was signed by Prof. Rangan Banerjee, Director, IIT Delhi and Dr. Harinder Singh Oberoi, Director, NIFTEM-K in the presence of Prof. Naresh Bhatnagar, Dean R&D, IIT Delhi and other dignitaries from NIFTEM-K.

### The key highlights of this partnership are:

- Joint research in agriculture & food processing
- Focus on On-Farm Solutions, Supply Chain Management, Bio-Plastics & Climate-Smart Technologies
- Collaboration through Faculty & Student Exchanges, Startup Incubation and more.



Together, NIFTEM-K and IIT Delhi are aiming to tackle challenges in food security, sustainability and innovation to make a real-world impact.



## Research Outreach

### IIT Delhi, IAF Join Hands for AI-powered Research on Technical Textiles; to Focus on Parachutes and Other Safety Equipment



Headquarters Maintenance (HQ) Command, Indian Air Force Nagpur, and IIT Delhi signed a Memorandum of Understanding (MoU) to collaborate on advancing innovative technologies for aviation textiles.

Under this MoU, IIT Delhi and HQ Maintenance, IAF Nagpur, will co-operate, collaborate and promote research and development in areas of obsolescence management, self-reliance, upgradations and digitization through Indigenisation in the field of aviation grade textiles. The MoU was signed by Prof. Naresh Bhatnagar, Dean (R&D) at IIT Delhi and Group Captain Prashant Pathak, Commanding Officer of 16 BRD, AF. The signing ceremony witnessed the presence of Prof. Rajendra Singh, Associate Dean, R&D, Prof R Alagirusamy, HoD, Department of Textile and Fibre Engineering, Prof. Bipin Kumar, Project Coordinator, Department of Textile and Fibre Engineering and other key IAF officials. [Read More >>](#)

### Indian Navy Swavlamban 2024 Event at Bharat Mandapam



Prof. Naresh Bhatnagar addressed the Indian Navy's annual Innovation event SWAVLAMBAN on October 29, 2024. The event was organized on October 28 and 29, 2024, at Bharat Mandapam, aimed to promote 'Make in India' efforts in the defence sector, in line with the directives of the Government of India. The event showcased 200+ defence innovation products developed by MSMEs/Innovators/Start Ups in collaboration with iDEX.

### Prime Minister digitally launched Sustainable Ayush website



Hon'ble Prime Minister Shri Narendra Modi ji in the presence of various dignitaries from the Central Government and IITD faculty members, launched the website <https://sustainableayushcoe.com/> for the Project "Sustainable Ayush For Advanced technological solutions, startup support and net zero sustainable solutions for Rasashastra (Centre of Excellence In Sustainable Ayush)". The website was launched on October 29, 2024, at IIT Delhi on the occasion of 9th Ayurveda Day. The project led by Prof. Sumer Singh, has been awarded by the Ministry of Ayush, Govt. of India, under the Central Sector Scheme for Ayurswasthya Yojana.

### ICMR 3D Printing Workshop



Under the aegis of the ICMR Centre of Excellence (CoE) - a collaborative project initiative between AIIMS and IIT Delhi, the Neuro-Engineering Workshop on 3D Printing in Medical Devices, Simulation and Innovation was held on December 14 and 15, 2024 at the India International Centre, New Delhi. Featuring 20+ expert speakers including Prof. Rajendra Singh - Associate Dean (R&D), Prof. Sunil Jha, Prof. Deepak Joshi, and reputed professors from AIIMS & IIT Delhi, a live demonstration of cutting-edge technologies and a design competition celebrating innovative healthcare solutions, the event brought together 150+ attendees from across India. Vibrant discussions highlighted emerging trends and the transformative role of 3D printing in advancing medical devices, simulation and innovation, fostering collaboration and creativity in healthcare.

