

# ANNUAL REPORT

2022 - 2023



INDRAPRASTHA INSTITUTE of INFORMATION TECHNOLOGY **DELHI** 



# **Table of Contents**

01

Executive Summary

07

About Us

13

**Faculty** 

18

**Departments** 

26

Research Centres **37** 

Education

46

Online Programs 51

Innovation, Research & Development

**59** 

Sponsored Research

**62** 

Industry Interactions 66

Entrepreneurship and Start-up Ecosystem **71** 

Technology Innovation Hub

**77**Collaborations

81

Sustainable Development Goals 86

Outreach and Professional Services

102

Placements and Internship

107

Student Matters 120

Alumni Affairs 129

Quality and Process Improvement Initiatives 132

Infrastructure

138

IIIT-Delhi Rankings 140

Fifteen Years of IIIT-Delhi

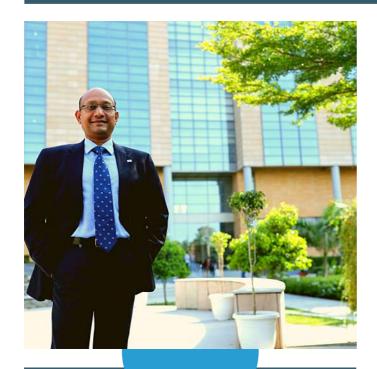
144

Faculty and Officers

# **Executive Summary**



# **Executive Summary**



IIIT-Delhi continuously
strives to introduce new
areas in its academic
programs to generate
intellectual capital for the
nation and help the
Institute lead on the
technological front.

Ш

Right from its inception in 2008, IIIT-Delhi has aimed to transform lives through high-quality education, excellence in research, and thought leadership by taking an industry-focused stance that is globally connected and socially relevant. The Institute celebrated its Foundation Day this year with the theme 'Onwards and Upwards,' signifying the enthusiasm, optimism, and zeal of IIIT-Delhi to establish itself comprehensive research-led teaching institute in India. The Institute recently underwent a visioning exercise and set goals for the next five years. It nurtures a collective vision to foster learning, knowledge creation, curation, dissemination for a thriving humanity. It prospect of encourages the innovation-driven catalyzing entrepreneurship, thereby addressing the tactical goals of the nation and the emerging needs of a global society. IIIT-D continuously strives to elevate its benchmarks and set higher standards. The last year has been no exception, whether in teaching, starting new academic programs, research excellence, global engagement, knowledge transfer, social impact, outreach activities, or entrepreneurial pursuits. This report summarizes what the Institute has accomplished during the past year.

IIIT-Delhi currently offers eight B.Tech. programs, including five interdisciplinary ones, three PG programs with eight specializations, and a Doctorate in six allied disciplines. In the year 2022, the Institute admitted 611 students into the B.Tech. programs, 211 students into the M.Tech. programs, and 84 Ph.D. students.

IIIT-Delhi will organize its **Twelfth Convocation** ceremony this year, and **Mr. Sunil Kant Munjal** will be the Chief Guest. Mr. Munjal is the chairman of Hero Enterprise, besides being a business promoter, an institution builder, a social entrepreneur, an angel investor, and a thought leader. He is also the founder of India's Serendipity Arts Festival. In the preceding Convocation, **Dr. Arunabha Ghosh**, Founder and CEO of the Council on Energy, Environment, and Water (CEEW), graced the event as the Chief Guest. During the last year's Convocation, the Institute conferred degrees upon 390 B.Tech., 191 M.Tech., 5 M.Tech. Dual degree, and 21 Ph.D. students.

IIIT-Delhi strives to attract and retain the most **outstanding faculty**. The faculty members are among the country's finest and are internationally recognized. Last year, the Institute added 11 new faculty members, of which 6 have a Ph.D./ post-doc experience from abroad. IIIT-Delhi has always been sensitive to the importance of **gender diversity**, and 45% of the new faculty members are women. The faculty members were invited to more than 250 venues as speakers in the past year. The faculty members have organized several **Faculty Development Programs (FDPs)** and were invited as guest speakers for many more FDPs. Several faculty members received distinguished awards and accolades, including the CXO Health Excellence Award, The Mahony-Neumann-Room Prize, Biology and Biochemistry in India Leader Award, New and Future Al Educator Award from AAAI, INAE Young Innovator and Entrepreneur Award, among others.

IIIT-Delhi continuously endeavors to introduce **new areas in its academic programs** to generate intellectual capital for the nation and help the Institute lead on the technological front. The Institute has started a new two-year M. Tech. (Research) Program in the department of CSE to attract quality postgraduate students, tap the potential of growing industrial research in CSE, and provide additional thrust on research and innovation.

The Institute has signed an MOU with the **State University of New York at Albany, USA,** for enabling dual degree programs at the undergraduate and graduate levels, facilitating faculty exchanges, and exploring collaborative scientific and academic research activities. The unique 2+2 and 3+1 model at the undergrad level is being started for the first time at the Institute.

This year, we have started a **new Postgraduate Diploma program** focused on Data Science in Health and Climate Change for Social Impact. This will be a first-of-its-kind program focusing on issues at the intersection of climate change and health. The program aims to provide data analytics training to individuals to tackle challenges in Healthcare, Climate Monitoring, and challenges at the intersection of Health and Climate. This is externally funded by Data.org.

IIIT-D has set up a **Franco-Indian collaboration** supported by the Ministry of Europe and Foreign Affairs and the Ministry of Higher Education and Research in France. This initiative will reinforce the university and scientific cooperation between France and India while benefiting our students and academic communities in both countries.

Carrying out cutting-edge research that is both **meaningful and impactful** is in the institutional DNA of IIIT-D. Last year, the faculty members and students published 369 research papers, including 199 journal papers, 137 conference papers, 33 workshop papers, and 16 book/book chapters. Some research papers have received the best paper/poster awards at notable national and international conferences. IIIT-Delhi's faculty members proactively participate in international collaborations, establishing partnerships with esteemed universities and institutes worldwide. Last year, IIIT-D faculty engaged with their peers in over 40 countries, resulting in diverse research collaborations.

**External research funding** is an important instrument for the sustainability of the research ecosystem. Sponsored projects are essential for strengthening a curiosity-driven and applications-inspired research

culture in higher education institutes. In the Financial Year 2022-23, the Institute has received funding for **32 new Sponsored Research Projects** for a total sanctioned amount of over **Rs. 15 crore**. Apart from the sponsored research projects, the Institute also receives funding for consultancy projects, fellowship projects, corporate projects, and other funding for research centres and education programs. The Institute regularly organizes internal workshops on grant writing, patent filing, and monetizing research.

IIIT-D is an ongoing story of **transformation**. This year, the Institute has established a new Centre of Excellence in Electronics Systems Design Centre at IIIT-D. This unique Centre will work on globally competitive electronic product platforms - including hardware and software systems - to develop design and R&D capability. The Centre will also help create skilled manpower in the domain. The **Center for Quantum Technologies**, inaugurated last year, is developing 'affordable solutions' focusing on **Indiaspecific opportunities** and requirements.

IIIT-D believes in **solving real-world problems** through an extensive network of **partnerships and collaborations**. IIIT-D has set up an **Electropreneur Park** through a strategic partnership with Software Technology Parks of India (STPI) – supported by MeitY, India Electronics and Semiconductor Association (IESA), and STPINEXT. It leverages the triple helix of academia, industry, and the government in a manner to produce a multiplier effect. The Electropreneur Park will promote innovation, leading to the creation of startups in electronic design and fabrication.

All India Institute of Medical Sciences (AIIMS) and Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) and have signed a Memorandum of Understanding (MoU) to work on various aspects of digital health areas jointly. Under the MoU, IIIT-Delhi, and AIIMS will work together in areas such as Artificial Intelligence (AI), Machine Learning (ML), and Computational Genomics to advance clinical medicine, public health, and biomedical research.

IIIT-D has also partnered with **Max Healthcare** to focus on joint research activities and academic exchanges. IIIT-Delhi will bring its expertise in data science, machine learning, and artificial intelligence to this partnership and help develop innovative solutions to augment the depth and breadth of healthcare services while reducing costs. Additionally, IIIT-D will also focus on enhancing the training of healthcare professionals and promoting research in healthcare technology to make a lasting impact in the healthcare space.

The Institute takes pride in developing strong **linkages with industry**. The Institute is actively involved in collaborative research with national and international organizations to remain at the forefront of scientific and technological developments. IIIT-Delhi has forged research collaborations with Vehant Technologies, ScanBalt, STPI's **Electropreneur Park**, Enord, Data.org, J-PAL South Asia, Max Healthcare, the Ministry of Rural Development, and many more. IIIT-D is also leading an international collaborative project intending to establish **Hubs in Robotics and Autonomous Systems** within India to address the problem of scarcity of skilled manpower in robotics technology. The project involves ten partners from five different countries, and is funded by the European Education and Culture Executive Agency to the tune of 800,000 Euros.

IIIT-Delhi has always believed in creating and nurturing the **spirit of innovation** among its faculty and students. **iHub Anubhuti, the Technology Innovation Hub** at IIIT-D, has made significant progress in Research, Startup promotion, and skill development in the area of Cognitive Computing and Social Sensing (CCSS) in the last year. iHub Anubhuti has forged partnerships with the Ministry of Rural Development and Max Healthcare for jointly conducting research projects and product development.

iHub Anubhuti partnered with AICTE and various education institutions across the country to promote skill development in the area of CCSS. iHub Anubhuti has launched Startup support programs Seed Fund, Prototyping Grant, and Incubation for Startups. Also, more than 2100 Students across the country participated in various skill development activities conducted at iHub Anubhuti. iHub Anubhuti inaugurated the **Medical Cobotics Center** in September 2023 to conduct Research and Skill Development in the area of Healthcare.

IIIT-Delhi organized its annual event **Research, Innovation, and Incubation Showcase (RIISE)** in May 2023 and attracted participants from academia, industry, government, and policymakers. This year's themes focused on new advances in diverse areas, including the challenges of an Al-driven world, Industry 4.0, EV Design, Rethinking Communication in 2030, etc. As a first, the research posters were categorized as per their **technology readiness levels** (TRLs), and provided a peek into how research at IIIT-D is developing people-centered technology that could impact our daily lives.

To bolster its **global connectivity**, IIIT-Delhi has entered into several Memorandums of Understanding (MoUs) with numerous universities to facilitate research collaboration and faculty/student exchange programs. Some partner institutions include the State University of New York, USA; Nagasaki University, Japan; Université Côte d'Azur, France; University of Oulu, Finland. IIIT-Delhi also organized a Fireside chat with **Sam Altman, CEO of OpenAl**, in June 2023 at the Institute. This event had overwhelming participation and was telecast live by Digital India.

**Entrepreneurial thinking** is a mindset, and the Institute focuses on how innovation and entrepreneurship can play a positive socio-economic role in society. Currently, there are 29 startup companies on campus, of which 6 are startups by faculty members, 1 is a student startup, 2 are startups by our alums, and 5 are faculty-mentored. IIITD-IC received Rs 5 Crore from DPIIT under the Startup India Seed Fund Scheme. With support from DSIIDC, the Incubation Centre has set up a **Drone Innovation Lab** to facilitate startups in the drone sector and provides resources to help startups build drones indigenously. The Incubation Centre also supported 13 innovators to develop prototypes under DST's NIDHI PRAYAS Program through grant support of up to Rs. 10 lakh. In addition, two startups at the Incubation Centre received grants of Rs. 35 lakhs and Rs. 30 lakhs from MEITY for scaling and commercializing their products (one in the healthcare sector, one in UAV/drones). An MOU has also been signed with **TiE Delhi** to foster future entrepreneurs and innovators.

**Sustainable development** is now a responsibility that every organization must shoulder in light of the daily environmental degradation that is taking place. The Institute has consciously decided to dedicate its expertise for promoting and supporting the Agenda 2030 for Sustainable Development Goals (SDGs). IIIT-Delhi has started the tradition of hosting an **Annual Conclave** with a simple idea: to create a public platform to discuss the use of information technology for sustainable development of the national capital region. The fourth edition of the Digital Delhi Conclave was centered on "Quality and Equitable Education." The Conclave also brainstormed on the role and impact of digital technologies in imparting quality education equitably.

Promoting **diversity on campus** stands as a vital principle, and at present, IIIT-Delhi boasts a student body representing over **24 nationalities**, thus embracing a rich multicultural environment. International students are offered fellowship opportunities ranging from 25% to 100% of the tuition fee, exemplifying the Institute's commitment to fostering inclusivity. In the preceding academic year, 35 scholarships, with a total value of over \$1,78,125, were granted. The Institute has started a new **Women Empowerment Scholarship in STEAM Education (WESSE)** in which the top 100 female students who

scored more than 95% aggregate marks in the class XIIth Board Exam and are admitted to IIIT-Delhi in any B.Tech. program will be granted a 50% scholarship on the tuition fee.

This year, the Institute has recorded a **placement of over 96**% of students. Despite challenging economic conditions in certain regions and the global job market, students secured **760 offers** during this placement season. Among these, **604 were full-time job offers, and 156 were internships.** There is a substantial increase in A+ offers (CTC > 11 LPA) compared to the previous year. Out of 604 full-time offers, 591 were A+ offers.

Apart from academics and research, the Institute has a vibrant student community that organizes and participates in various **extracurricular activities**. Interested students can participate in the National Service Scheme (NSS), Student Counselling Service, Student Committees, Sports Activities, Student Publications, Student Welfare, etc. The students run as many as **30 clubs** and have won several medals/ prizes. The Office of Student Affairs organized a variety of events, including the annual sports festival "Astra," alumni-student matches, the "GOONJ: Cloth Donation Drive," celebrations for International Yoga Day (June 21, 2023), Expressive Art Therapy sessions, the cultural event "Odyssey" and TedXIIITD. Several activities under the ambit of **G20** celebrations were conducted that also involved international students.

The Institute's **alumni strength has reached 3242** this year. In recognition of the exceptional accomplishments and contributions of our alumni who are effecting positive change through their professional or academic achievements and meaningful community engagements, the Office of Alumni Affairs at IIIT-Delhi has introduced the **'Young Alumni Awards'**. The Institute convened its annual alumni meet in a physical format after a hiatus of three years. An Alumni Wall has also been created at the Institute, which portrays the Alumni Awardees and the footprint of our alums across the globe.

The Institute organized a 5-week **Summer Camp 2023** as part of its outreach activity. Approximately **40 undergraduate student volunteers** from IIIT-Delhi trained over 250 students from nearby **government schools** in academic and extracurricular activities. The Summer Camp provided a unique opportunity to the participants for an immersive experience in an academically-rich environment, pickup soft skills in a fun-filled manner, and added exposure to the culture of a research-led institute like IIIT-D. With an impressive gender ratio of close to 50-50, the participants were exposed to a variety of diverse topics: from astronomy to yoga, and from entrepreneurship to self-defense.

This year, **Quacquarelli Symonds (QS)** ranked IIIT-D in the **top 400** in their Asia University Rankings 2022. The Institute also featured on the THE World University rankings in the band **601-800**, and at spot 137 in **THE Asia Ranking 2022**. **THE Impact Ranking** (SDG-based ranking by Times Higher Education) has also ranked the Institute at #3 in India under efforts for SDG number 1 (No Poverty); and 5 th under SDG number 10 (Reduce Inequalities). IIIT-Delhi ranked 13 th in the category 'Top Government Colleges for Engineering in 2021' by India Today. IIIT-D received the **University of the Year award in the 10-30** years category at the **FICCI Higher Education Excellence Awards 2022**.

In the near future, IIIT-Delhi is committed to 'moving the needle' in research, teaching, and entrepreneurial activities, and defining the future of higher education. IIIT-D will continue to nurture leaders of tomorrow with strong character, competence, and concern for society.

Prof. Ranjan Bose Director, IIIT-Delhi

# **About Us**







# **About Us**

Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) was created by an Act of the Delhi Legislature empowering it to carry out R&D, conduct educational programs, and grant degrees. The **General Council** is the apex body of the Institute, chaired by the Hon'ble Lt. Governor of Delhi, and the **Board of Governors** is the policy and decision-making body of the Institute. The **Senate** is empowered to take all academic decisions.

IIIT-Delhi is a comprehensive **research-led teaching institute** where faculty, students, staff, and alumni work together in a spirit of discovery and creativity to build a better world. The Institute emphasizes on quality education, curiosity-led research, and innovation leading to entrepreneurship. The teaching activities at the Institute derive strength from the cutting-edge research conducted by faculty, strong industry linkages, and international collaborations.

IIIT-Delhi has six **academic departments** - Computer Science and Engineering, Electronics and Communication Engineering, Computational Biology, Human-Centered Design, Mathematics, and Social Sciences & Humanities. Its **research centres** include the Infosys Centre for Artificial Intelligence, Centre for Design and New Media, Centre of Technology in Policing, Centre of Excellence on Sustainable Mobility, Centre of Excellence in Healthcare, Centre of Excellence on Light Fidelity, Datakart Centre of Excellence, Center for Quantum Technologies, and Centre of Excellence in Human-Centered Computing.



IIIT-Delhi had set up a **Technology Innovation Hub** called **iHub Anubhuti** under the National Mission on Interdisciplinary Cyber-Physical Systems. The aim is to catalyze state-of-the-art research, technology transfers, engagements with industry, and entrepreneurial activities last year. This year, the iHuB of IIIT-Delhi collaborated with the iHuB of IIT Delhi to set up **India's first Medical Cobotics Centre** at the institute. IIIT-Delhi is also a part of the **Delhi Science and Technology cluster** and addresses some of the hyperlocal problems through research.

The Institute has a healthy **innovation ecosystem** leading to entrepreneurship. The IIITD Innovation and Incubation Centre is instrumental in driving the growth of entrepreneurial activities at the campus, including providing incubation support, funding, infrastructure, mentoring etc. to students, faculty members, and alumni of the Institute. The Incubation Centre is supported by funds from DST, MEITY, and the Delhi government.

IIIT-Delhi is committed to **Sustainable Development Goals**. In support of the 'Agenda 2030' for Sustainable Development Goals, the Institute hosts an Annual Conclave to create a public platform to discuss the use of information technology for the sustainable development of the **National Capital Region**.

IIIT-Delhi has a built-up area of 100,000 square meters. This includes a modern lecture hall complex, R&D Block, state-of-the-art classrooms, research labs, a library and information centre, incubation centre, hostels for boys and girls to accommodate 1800+ students, dining and student activity centre with multiple eateries including a 24-hour canteen, and Faculty residence blocks. The campus also has a multipurpose playing field, a gymnasium, indoor swimming pool, badminton, and squash courts, outdoor tennis courts, basketball and volleyball courts. The campus incorporates several green-building features and is (provisionally) **GRIHA rated, a zero-discharge campus** with sewage treatment plants, rainwater harvesting system, heat pumps, and solar power plants on terraces of all new buildings.

IIIT-Delhi aims to attract top academics from around the world who can contribute to the vision and mission of the Institute. IIIT-Delhi is committed to playing a role in scientific leadership by creating new knowledge, defining the future of higher education, preparing leaders for tomorrow, and making a tangible impact for the betterment of society.



# **Mission**

The mission of IIIT-Delhi is to be a global centre of excellence in Information Technology education, training and research. Its twin aims are:

- To carry out advanced research and development in information and software technologies, and in leveraging IT in specific domain areas
- To train and educate, at both undergraduate and postgraduate levels, engineers of outstanding ability who can become innovators and new product creators

# **Vision**

The vision of the Institute is to be a world-class research-led institution of higher education in IT and allied areas which:

- Is globally respected for research and education
- Offers thriving UG and PG programs
- Is socially relevant, industry facing, and globally connected

It aims to encourage innovation and entrepreneurship in specified domain areas of IT. Towards this end, it plans to organize itself as a conglomerate of R&D Centers, some of which would be in partnership with different companies and global organizations. All Centers will also be engaged in research and teaching. These Centres, with various labs, will be the hub of activity, with active contributions from faculty and students.

# **General Council**

The General Council is **the apex body** of the Institute, chaired by the Hon'ble Lt. Governor of Delhi. The current members of the General Council are:

### Hon'ble LG Delhi, Mr. Vinai Kumar Saxena

Chancellor, IIIT-Delhi

### Mr. Kiran Karnik

Chairman, Board of Governors, IIIT-Delhi

### Dr. Srivari Chandrasekhar

Secretary, Department of Science & Technology

### Ms. R. Alice Vaz

Principal Secretary Higher Education, GNCTD

### Mr. Ashish Chandra Verma, IAS

Secretary (Finance), Govt of NCT of Delhi

### Dr. Samir Vankatpati Kamat

Secretary, Department of Defence R&D and Chairman, DRDO

### Mr. Rajesh Gera

Director General, National Informatics Centre

# Ms. Debjani Ghosh

President, NASSCOM

### Mr. Alkesh Kumar Sharma

Secretary, Department of Electronics and Information Technology

### Prof. Ranjan Bose

Director, IIIT-Delhi



# **Board of Governors**

The Board of Governors is the main policy and decision-making body of the Institute. The current members of the board are:

### Mr. Kiran Karnik

Chairman, Former President, NASSCOM

### Ms. R. Alice Vaz

Principal Secretary Higher Education, GNCTD

### Mr. Ashish Chandra Verma

Secretary (Finance), Govt of NCT of Delhi

### Ms. Sandhya Vasudevan

Independent Director / Strategic Advisor, Former Managing Director, Deutsche Bank Group & Thomson Reuters India

### Ms. Neelam Dhawan

Independent Director, Hindustan Unilever Limited

### Mr. Som Mittal

Former President, NASSCOM

### Mr. Bhaskar Pramanik

Former Chairman, Microsoft India

### Prof. Ranjan Bose

Director, IIIT-Delhi

### **Prof. Sujay Deb**

Professor, IIIT-Delhi

### **Prof. Vikram Goyal**

Professor, IIIT-Delhi



# Faculty



13



# **Institute Faculty**

The faculty at IIIT-Delhi is known for their significant contributions to their respective fields. IIIT-Delhi follows a rigorous selection process to ensure that faculty members are well-qualified, experienced, and have a strong research background. Members at IIIT-Delhi have obtained their Ph.D. degrees from prestigious institutions in India and abroad.

The faculty members at IIIT-Delhi are actively engaged in research and regularly publish their work in reputed international journals and conferences. They also participate in collaborative research projects, both national and international, which helps in fostering innovation and keeping up with the latest advancements in their fields.

In addition to their research contributions, the faculty at IIIT-Delhi are dedicated to providing a high-quality education to their students. They use innovative teaching methods and employ a student-centric approach to foster critical thinking and problem-solving skills among the students. Many faculty members are also involved in mentoring students and guiding them in their research endeavors.

"The true teachers are those who help us think for ourselves"

Dr. Sarvepalli Radhakrishnan
Second President of India

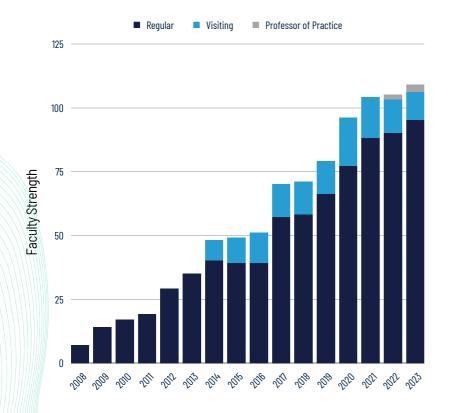


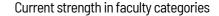
# **Institute Faculty**

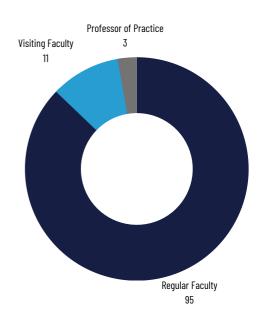
# **Faculty Strength**

The quality of education at the institution is mainly dependent on its faculty. There are 95 regular faculty members and 11 visiting faculty members. IIIT-Delhi has, since inception, been following a tenure-track system, and has also been recruiting Professors of Practice. The Institute currently has three Professors of Practice in various expertise. These methods and approaches are now included in the National Education Policy 2020 recommended actions.

The Institute offers generous faculty fellowships, research initiation grants, sabbaticals, etc., to the faculty to pursue their research interests. It also provides enabling mechanisms to take up deep-tech and entrepreneurial ventures. The figure below on the left shows the increase in faculty strength of the Institute over the years, and the figure on the right shows the current strength in faculty categories.



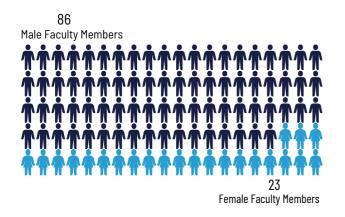


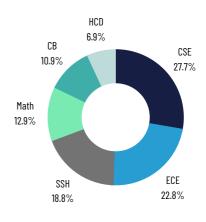


### **Faculty Diversity**

IIIT-Delhi boasts of diverse faculty, as evident from the data presented in two key charts. Inclusivity is a priority at IIIT-Delhi, **reflected in 45% of new faculty being women**. The figure below on the left showcases the institute's commitment to gender diversity, with 22% representation of women faculty.

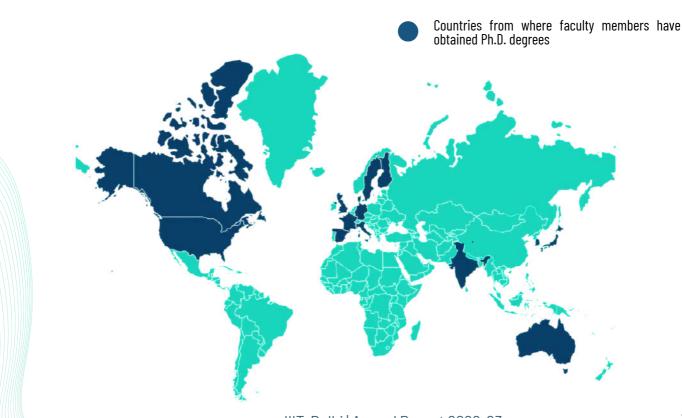
The figure below on the right provides a glimpse into the diverse research areas embraced by the faculty across six distinct fields. These fields include Computer Science and Engineering (CSE), Electronics and Communication Engineering (ECE), Computational Biology (CB), Human-Centred Design (HCD), Mathematics (Math), and Social Sciences & Humanities (SSH). This representation underscores the institute's dedication to promoting multidisciplinary research and collaborative endeavors.





# **Educational Qualification of Faculty**

All regular faculty members have Ph.D. degrees from prestigious institutions around the globe, ensuring top-tier education and cutting-edge research for the students. Most faculty members have post-doctoral experience from abroad and regularly collaborate with researchers across the globe. Map below shows the countries from where faculty members have obtained Ph.D. degrees.



# **Professor of Practice Position**

IIIT-Delhi has introduced a new position, 'Professor of Practice.' The faculty in this category are distinguished professionals, either practicing or retired. These professors can be from both academic and industry backgrounds. The working title of Professor of Practice helps promote the integration of academic scholarship with practical experience. The appointees provide faculty, undergraduate, and graduate students with an understanding of the practical applications of a particular field of study. These positions are limited-term contractual positions for teaching courses, advising students, and setting up research collaborations in areas related to their expertise and experience.

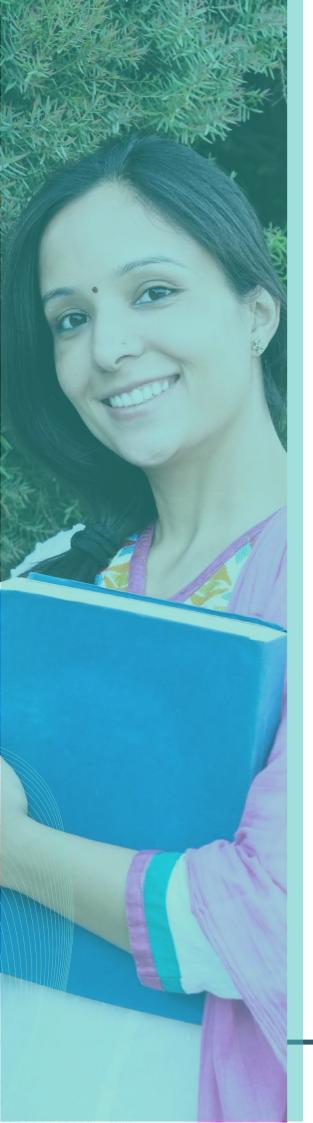






# Departments





# **Academic Departments**

Indraprastha Institute of Information Technology Delhi, one of India's leading teaching and research institutions, is dedicated to finding solutions to significant challenges and preparing students for the future.

Apart from the conventional CSE and ECE departments, IIIT- Delhi is also a pioneer in interdisciplinary studies and is home to such departments. The programs offered under these departments combine two or more traditional academic courses of study into a more personalized major. Unlike conventional degrees, where one studies subjects from a single discipline, an interdisciplinary degree allows students to explore a more focused topic that transcends multiple domains. An interdisciplinary degree allows a student to be better prepared to handle real-world challenges. Interdisciplinary education is also at the core of the National Education Policy 2020. This flexible structure is ideal for students who have multiple interests to combine into one specialization.

"All of us do not have equal talent. But, all of us have an equal opportunity to develop our talents"

Dr. A. P. J. Abdul Kalam

Scientist, Professor, and Former President of India

# **Department of Computer Science Engineering**

IIIT-Delhi is widely recognised for its Computer Science program. It has one of the country's first and foremost research-based computer science program. The program trains the next generation of innovators to solve realworld problems and improve the way people live and work.

The CSE department endeavors to be a significant regional, national, and international resource center for the development of computing and its applications. The department is witnessing a period of exciting growth and opportunity through technology development and its recognition in research excellence.

# LABS

- RESEARCH Al in Education; Cross-Caps Lab
  - Cross-Caps Lab
  - Cryptology Research Group (CRG)
  - Distributed Computing and Learning Lab (DCLL)
  - Graphics Research Group (GRG)
  - High Performance Computing Lab (HiPeC)
  - Human-Machine Interaction Lab (HMI)
  - Information Management
  - Knowledgeable Computing and Reasoning Lab (KRaCR)
  - Data Science Lab

- Laboratory for Computational Social Systems (LCS2)
- Mélange Lab
- Interactive & Intelligent Systems Lab
- Multimodal Digital Media Analysis (MIDAS) lab
- NeatAl ServoLab (Nice Lab)
- Network and Security Lab (NSL)
- Program Analysis Group
- The Sengupta Lab
- Theoretical Computer Science
- VISION Lab

# **EDUCATIONAL** • **PROGRAMS**

- B.Tech. in Computer Science Engineering
- B.Tech. in Computer Science and Artificial Intelligence
- M.Tech. in CSE Research
- M.Tech. in CSE-General and with specialization in Al, Data Engineering, Information Security, and Mobile Computing
- Ph.D. in CSE and allied research areas

# RESEARCH \* AREAS

- Biomedical Engineering & Medical Informatics
- Computer Graphics & AR/VR
- Computer Networks & Networked System
- Computer Vision & Multimedia Computation
- Cybersecurity & Privacy
- Data Management & Data Science
- Hardware, Robotics & Electronics

- HCI & Human Centered Computing
- Machine Learning & Al
- Signal Processing
- Software Engineering & Programming
- Theoretical Computer Science
- Affective Computing
- Social Robotics
- Speech and Audio Processing



# Department of Electronics and Communications Engineering

The Electronics and Communications Engineering (ECE) department's research and development focuses on various areas of Electronics & Communication Engineering with different application domains to train and educate engineers of outstanding ability at undergraduate and postgraduate levels to become innovators and new product creators.

As a discipline, ECE focuses on the design of underlying hardware systems. The curriculum is directed to applications in major areas such as telecommunications, energy, and electronics sectors while encouraging the development of necessary skills to integrate hardware and software components.

# LABS

- RESEARCH LiFi & Wirocomm Lab
  - Mobility and Optimization Lab
  - Circuit Design Research Lab
  - Advanced Multi-core Systems Lab
  - Signal Analysis for Large Scale Applications (SALSA) Lab
  - Smart & Sustainable mobility Lab
  - Automatic control Lab
  - Space Systems Lab

- Photonics & quantum electronics Lab
- Algorithms to Architecture Lab
- Intellicom Lab
- Nanoscale devices and Circuit Lab
- SBILab
- **Visual Conception Group**
- RF and Applied Electromagnetics Lab
- Shannon Lab
- Advanced ECE Lab

# **EDUCATIONAL** • **PROGRAMS**

- B.Tech. in Electronics and Communications Engineering
- B.Tech. in Electronics & VLSI engineering
- M.Tech. in Electronics and Communications Engineering with specialization in VLSI
- M.Tech. in Electronics and Communications Engineering with specialization in CPS
- M.Tech. in Electronics and Communications Engineering with specialization in ML
- Ph.D. in Electronics and Communications Engineering

# AREAS

- RESEARCH Signal Processing and Machine learning
  - Electronic Devices, Circuits & Systems
  - Wireless Communication & Systems
  - Controls & Robotics
  - Advanced Systems



# **Department of Computational Biology**

The Department of Computational Biology (CB) aims to conduct conduct cutting-edge research research at the interface of the biological and computational sciences. CB department at IIIT-Delhi is one of the rapidly emerging and leading centres worldwide that develops mathematical and computational techniques for delineating complex biological systems and developing solutions for problems in partnership with the industry, research, and academic laboratories.

The focus of this department is to conduct outstanding research at the interface of biological sciences and computer science to bridge the gap between diverse biological streams, starting from biological networks to molecular biology, to computational fields including algorithm development, high performance computing, etc. Through these activities:

- The CB Department promotes advanced computation and informatics approaches to increase our understanding of normal and disease-associated biological processes, drug development, and therapeutic responses.
- The CB Department stimulates and facilitates the collaboration among medical science biologists, clinical investigators and health care researchers.
- The CB Department educates the next generation of computational biologists through direct participation in research activities

### RESEARCH LABS

- RESEARCH Computational Biology for Health Lab
  - Complex Systems Lab
  - Algorithms for Transcriptomics of Tomorrow Lab
  - Reggenlab: Regulatory Genomics Lab
  - Computational Structural Biology Lab
- PROGRAMS •
- B.Tech. in Computer Science and Biosciences
  - B.Tech. (Minor) in Computational Biology
  - M.Tech. in Computational Biology
  - Ph.D. in Computational Biology and allied areas
  - RESEARCH AREAS
- Systems and network biology
- Bioinformatics and translational medicine
- Precision medicine and health informatics
- Structural Biology and Biophysics

- AI/ML for Medicine and Public Health Lab
- The Chemosensory Lab
- Systems and Mathematical Biology Lab
- The Translational Biology Lab
- Microbiome Informatics Lab

- Biostatistics/ Quantitative Genetics
- Computational Neuroscience
- Computational Gastronomy



# **Department of Mathematics**

The Department of Mathematics at the Indraprastha Institute of Information Technology Delhi (IIIT-Delhi) is dedicated to fostering a vibrant academic environment for research and teaching in the field of mathematics. Established in 2017, the department has rapidly gained prominence and has a diverse faculty with expertise in various areas of mathematics.

The faculty members in the Department of Mathematics at IIIT-Delhi are highly qualified and bring their extensive research experience to the table. They specialize in a wide range of mathematical disciplines, including algebra, algebraic coding theory, number theory, combinatorics, theoretical computer science, applied cryptography, computational mathematics, functional analysis, operator theory, partial differential equations, operator algebras, mathematical biology, mathematical logic, foundations of mathematics, and statistics. Their expertise contributes to the intellectual and research-driven atmosphere within the department.

# ESEARCH

- Ph.D. Lab I: Maryam Mirzakhani Research Lab
- Ph.D. Lab II: Paul Erdős Research Lab

# EDUCATIONAL • PROGRAMS •

- B.Tech. in Computer Science and Applied Mathematics
- **PROGRAMS** Ph.D. in Mathematics

# RESEARCH AREAS

- Algebra
- Algebraic geometry
- Algorithms and approximations
- Applied and computational topology
- Coding theory and cryptography
- Combinatorics
- Differential geometry
- Free noncommutative analysis
- Functional analysis
- Harmonic analysis
- Logic and foundations of mathematics

- High performance computing
- Mathematics underlying biology, computer
- Graphics, fluid dynamics, machine learning
- Number theory
- Operator algebras and theory
- Optimal control
- Optimization
- Partial differential equations
- Scientific computing
- Statistics



# **Department of Human-Centered Design**

With an increasing focus on user experience, the importance of Human-Computer Interaction (HCI), Interaction Design, and Design Thinking are also increasing rapidly in IT-based products and services. Digital media is at the heart of many design aspects like social media, gaming, virtual and augmented reality, etc. The department of Human-Centered Design (HCD) focuses on design research areas strongly related to IT and CSE.

The department offers an interdisciplinary program in B.Tech. in Computer Science and Design (CSD) and Ph.D. to develop next-generation engineers with strong computing skills and design thinking capabilities and knowledge in areas like Animation, Digital Media, Virtual Reality, Gaming, etc.

# **RESEARCH** • Weave Lab

- Multimodal Digital Media Analysis (MIDAS) Lab
- Human-Machine Interaction Lab (HMI)
- Accessibility and Inclusive Design Lab
- Creative Interfaces Lab

# PROGRAMS •

- **EDUCATIONAL** B.Tech. in Computer Science and Design
  - Ph.D. with Specialization in Human-Computer Interaction

# **AREAS**

- **RESEARCH** Wearable Computing
  - **Education Technology**
  - Design Research
  - Human-Computer Interaction
  - Fieldwork for Design
  - **Design Futures**
  - Participatory Design

- **Human-Centred Al**
- **Human-Robot Interaction**
- Affective Computing and Machine Learning
- Perceptual foundations of Design
- Product Design & Modern Prototyping
- Multimodal semantic and sentiment analysis of user-generated social media content
- Inclusive Design and Accessibility



# **Department of Social Sciences and Humanities**

The Department of Social Science and Humanities (SSH) at the Indraprastha Institute of Information Technology (IIIT-Delhi) is home to a multi-disciplinary faculty offering courses and conducting research in Economics, Sociology, Cognitive Science, Philosophy, Political Science and Communication Theory.

The SSH department at IIIT-Delhi seeks to bridge the disciplinary boundaries between various IT and social science streams and develop a cross-disciplinary research and teaching agenda that is forward looking and cutting edge in technology education.

### RESEARCH LABS

- Game Theory and Market Design Lab
- Cognitive Science Lab
- Econometrics Lab

# PROGRAMS \*

- B.Tech. Computer Science and Social Sciences
- B.Tech. (Minor) in Economics
- Ph.D. in Sociology/Social anthropology

# RESEARCH AREAS

- Digital Politics; Data and Governance
- Social and Climate Movements
- Civic Media and Journalism
- Natural Resource & Agricultural Economics
- Ecological Economics
- Applied Econometrics
- Industrial Organization
- Applied Game Theory
- Spatial Analyses
- Industrial Organization
- Applied Game Theory
- Behavioural and Experimental Economics
- Natural Resource Economics
- Moral and Political Philosophy
- Digital dissent; and Digital citizenship
- Whistleblowing
- Civil disobedience
- Democratic secrecy and epistemic injustice
- Design ethnography

- Urban Research Lab
- Ethnography Lab
- Academic Writing Lab
- Ph.D. in Economics
- Ph.D. in Philosophy, Communication, Governance and Politics
- Ph.D. in Cognitive Science
- Kantian transcendental Idealism
- Husserlian phenomenology
- Social and Political Philosophy
- Gender and Technology
- New reproductive Technologies
- Digital Technologies; Demographic Anthropology
- Intimate Relations
- Migration and Transnationalism
- Distinctiveness of everyday political practices in new urban spaces
- Social Class; Gender; Urban Space and Community
- Neo-Urban; Spatial Sociology
- Virtual Community and Solidarity
- Role of attention in visual processing
- Studying mechanisms of emotion and motion perception
- Microfinance and economics of digital marketing
- ICTs and Development
- Theories of Cosmopolitanism, Home, and History of Ideas in South Asian Studies



# Research Centres





# Research centres

Curiosity-driven research, combined with the highest standards of rigor, has the potential to create the maximum impact. IIIT-Delhi boasts several research centres, where faculty members, often from different departments, work together on collaborative research projects. Most of these research centres are externally funded and define their research agenda. The research centres are involved in high-impact, industry-facing projects.

These research centres work at the frontier of research and education, where risks and rewards are high, and the potential benefits to society are the most promising. The faculty groups associated with the centers endeavor to identify 'up-and-coming' areas of research that can grow into significant initiatives. Some of the research centres at IIIT-Delhi are gaining recognition as 'the premier' go-to centres in the country.

"If there has been any success in my life, that was built on the unshakable foundation of failure."

Sir J.C. Bose

Physicist, biologist, biophysicist, botanist, archaeologist.

# **Infosys Centre for Artificial Intelligence**

The faculty and research scholars of Centre for Artificial Intelligence (CAI) are actively involved in high-quality research in Al-related areas that lead to on-ground impact. CAI has published on scientific advancements and technology developments relevant to healthcare and cancer research in high-impact journals such as IEEE Transactions on Computational Social Systems, Computers in Biology and Medicine, Medical Image Analysis, and more in the past year.

The Centre also assists the CSE department in managing two-degree programs: M.Tech. in CS with a specialization in Al and B.Tech. in CSAI. In addition to degree programs, the Centre also supports and conducts educational training, seminars, workshops, faculty development programs, and short-term training courses for students and non-student professionals. In the year 2021-22, the centre has also published in core  $A^*/A$  journals and conferences.

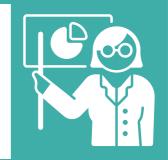


### **Research Publications**

In the past year, students and faculty at IIIT-Delhi have made contributions to the academic landscape, publishing **63** research papers. These publications were featured in **56** prestigious conferences, along with seven research journals. The topics covered a wide range of disciplines, including Computational Social Systems, Biology, Medicine, and Medical Image Analysis. Among the notable venues for these publications were IEEE Transactions on Computational Social Systems, the 30th ACM International Conference on Information, AACL-IJCNLP, ENLSP, AAAI Conference on Artificial Intelligence, PAKDD, among others.

### **Core Faculty Members**

The Centre for Artificial Intelligence at IIIT-Delhi boasts a talented and diverse team of 24 core faculty members, each contributing significantly to the center's excellence and impact. Their research areas span a wide spectrum of Al-related domains, including Machine Learning, Natural Language Processing, Cybersecurity, Computational Biology, Computer Vision, Network Science, and Data Analytics. The faculty's collective expertise adds immense value to the centre, fostering a rich and multidisciplinary research environment. Their work not only advances the frontiers of Al but also addresses real-world challenges in various sectors, including healthcare, social networks, intelligent systems, and sustainable development.





# **Research Awards and Grants**

The Centre for Artificial Intelligence, IIIT-Delhi, celebrates its accomplished faculty members who have been honored with prestigious awards and grants. In last year faculty have received a grant of totaling **78 lakh INR**. The awards include the 2022 JPMC Research Award, PAKDD '22 Early Career Research Award, IIT Mandi Young Achiever Award in academic excellence, DTI 2022 Award, INAE Young Innovator and Entrepreneur Award, and Faculty Research Award by Applied Solar Technologies. These recognitions showcase the faculty's commitment to advancing the frontiers of Al and making impactful contributions to the field.



# **Center for Design and New Media**

The Center for Design and New Media (CDNM) is a pioneering interdisciplinary hub, uniting experts in design, computer science, and new media to conduct cutting-edge research and foster education in Interaction Design, HCI, Animation, Gaming, and more. Its focus extends to effectively leveraging these innovations in domains like education, healthcare, and transportation. The CDNM's objectives encompass conducting world-class research programs in Interaction Design and New Media, nurturing the next generation of engineers for IT products, animation, gaming, and virtual reality industries, and actively engaging with industrial, government, and civil society partners to facilitate collaborative innovation and bolster the country's ecosystem in these areas. The center strives to advance research in diverse domains like Human-Computer Interaction (HCI), Graphics, Multimedia, Games, Virtual and Augmented Reality, and New Media. By forging strong ties with academic and industrial partners, CDNM aspires to scale new heights and actualize its visionary mission.



# **Ongoing Projects**

The ongoing research projects at the CDNM, encompass a wide spectrum of cutting-edge topics. From Affective Cognitive Neuroscience and Al utilization for Social Good to Robot-assisted Diagnosis for Children with Autism and Al Empowered Attention Evaluation for Children with ADHD, the centre is at the forefront of impactful research. Other projects include exploring inclusive Al, analyzing human movement in the metaverse, developing telehealth solutions, and promoting mental health interventions. With a focus on **innovation**, accessibility, and societal well-being, CDNM's diverse projects demonstrate its commitment to advancing knowledge and creating a positive impact.

# **Talks and Keynotes**

The distinguished faculty of the Center have received numerous invitations to deliver talks and participate in esteemed events worldwide. Their expertise spans diverse fields such as Embodied Conversational Agents, Human-Computer Interaction (HCI), Accessibility and Inclusion in Design, Correcting Algorithmic Biases, and Femtech. These talks were delivered at prestigious institutions, conferences, and symposiums, including Techsagar, Cadence Design Systems, ICWSM, Summer Institute in Computational Social Science, Lovely Professional University, Indiana University, Amity School of Fine Arts, and University of Delhi. The faculty's influential contributions promote knowledge dissemination and discussions in their respective domains.





### **Highlights**

CDNM faculty was recognition in the **World's Top 2% scientists database** and won ACM Multimedia Asia's Best Demo Paper award showcasing impactful research contributions. Further Indo-EU proposal acceptance reflects CDNM'S faculty success as PI. The center's dedication to excellence is evident through a research scholar's selection for the DERC Summer School and the availability of an NPTEL Mooc Course on "Affective Computing." Furthermore, the center's alumni securing positions in prestigious companies like Microsoft, Google, Amazon, and Goldman Sachs reaffirm CDNM's commitment to nurturing talent and industry connections.



# **Centre of Technology in Policing**

IIIT-Delhi's "Centre of Technology in Policing," aims to strengthen Delhi Police with advanced crime prevention and control technology. The research centre is providing technical expertise to the Delhi police. It will assist the concerned department in criminal identification, law and order management, cyber policing, traffic management, and combating terrorist activities by using Artificial Intelligence (AI), social media analysis, biometrics, image processing, big data, and network forensics. The centre works hand-in-hand in helping Delhi Police safeguard the lives of citizens and public and private infrastructure using smart technologies.

# **%**

### **Ongoing Projects**

The center had designed a comprehensive software system with the goal of delivering actionable alerts through an intuitive graphical user interface (GUI). This software processed inputs from diverse sources, including area CCTV systems, open-source intelligence (OSINT), seized mobile phones, laptops, and more. It aggregated and analyzed information from various channels, such as First Information Reports (FIRs), dossier databases, interrogation reports from criminals and drug peddlers, and even public complaints on social media. Additionally, the software had identified technology solutions for crime investigations, traffic management, intelligence gathering, and counterterrorism efforts. The project had envisioned the integrated use of modern technology and artificial intelligence to enhance law enforcement.

### **Collaboration with Delhi Police**

Delhi Police has signed a Memorandum of Understanding with the Centre. The collaborative Safe City project envisions integrating a vast network of 15,000 cameras, encompassing railway stations, bus stands, and the Delhi government's installations. This massive surveillance system will be closely monitored at police headquarters, with Al at the helm, bolstering the ability to take proactive precautionary measures. The infusion of Al in policing will enable swift detection of suspicious activities, predictive crime analysis, and enhanced resource allocation, positioning this milestone initiative as a transformative force in crime reduction and fostering a safer environment for all citizens.





# Centre of Excellence in Healthcare

The Centre of Excellence in Healthcare (CoEHe) at IIIT-Delhi, supported by the Delhi Knowledge Development Foundation (DKDF), contributes to health systems transformation through data, analytics, and digital platforms. The mission is to make healthcare accessible, affordable, and accountable to all through low-cost technology solutions. The vision is to be a catalyst for health systems transformation by bringing data and intelligence to the point of care. With a core team of faculty members having diverse expertise in health technologies, the centre is creating cutting-edge scientific advances in data-driven public health and medicine through research, education, and engagement with the industry and policy. The solutions produced at the centre are relevant to the challenges faced by India, yet globally competitive.

The Centre has several Memorandums of Understanding with think-tank institutions such as International Digital Health and AI Research (IDAIR), Geneva, Access Health International, USA, and grassroots organizations such as the WISH/LEHS Foundation. Core faculty also lead the AI/ML for Healthcare Theme of the Delhi Research Implementation and Innovation, DRIIV Cluster. The CoEHe collaborates with health institutions such as AIIMS, New Delhi, PGI Chandigarh, and grassroots organizations like Swasti, Child Survival India, and WISH Foundation.



### **Collaboration with AIIMS**

AllMS and IIIT-Delhi signed an Memorandum of Understanding to collaborate on digital health. They will work together on Al, ML, and Computational Genomics to advance clinical medicine and public health. The focus is on innovative technologies to improve patient care and healthcare delivery. Joint research, training, faculty exchange, and workshops are part of the collaboration. The aim is to address major health challenges, enhance access to healthcare, and promote genomic research for personalized treatments. Additionally, the plan is to develop a universal health coverage framework under Ayushman Bharat Digital Mission for accessible healthcare services to all citizens.



# **Centre of Excellence on Sustainable Mobility**

Centre of Excellence on Sustainable Mobility (CSM) was inaugurated in April 2022 by the Delhi Government through a one-time grant from Delhi Knowledge Development Foundation (DKDF) for working on problems related to urban transportation.

CSM is established to develop solutions for the problems in the mobility of Delhi/NCR, help the Delhi transport department identify problem areas, and define a technology roadmap to solve urban mobility problems in Delhi. One of the other mandates of the Centre is also to spin-off and promote startups in the area of mobility and to work with the Delhi government in cooperation with their startup policy. Finally, training and capacity building of the transport department and organizations like DTC, and DTIDC is also in the mandate of the Centre. In the past, IIIT-Delhi has been contributing to initiatives like Open Transit Data, EV charging data, Contactless Ticketing in the buses, and other ITS solutions already deployed in Delhi transit. The CSM has already partnered with the transport department to re-develop the One Delhi App, which is ready to be released.



# **Research Projects**

Several research projects are underway to address various aspects of urban management. "Fight Against Coronavirus" focuses on developing and maintaining IT platforms for COVID-19 management. "Data Trust" aims to create a mobility data platform with inputs from different transport providers. The "Chartr Android App" offers real-time bus and metro information, while "Last Mile Connectivity" collects data on available options in Delhi. In Tamil Nadu, an "Open Data Policy for Transport" aims to share public transport operations' data. "DST Air Quality Monitoring" deploys vehicle-mounted sensors for accurate air quality assessments. Another app, "MyBus" provides real-time bus locations in Delhi, and "Odd Even Analysis" analyzes the impact of road rationing on traffic congestion.

### **Key Collaborations**

The Centre has established fruitful collaborations with esteemed partners, including the World Bank India, Omidyar Network India, Delhi Government, DIMTS (**Delhi Integrated Multi-Modal Transit System**), Transport Department Delhi, NDMC (New Delhi Municipal Council), IIT Kanpur, and IIT Madras. These partnerships form a robust network for advancing research, innovation, and sustainable development in various domains. Working together, they aim to tackle urban challenges, implement transformative projects, and foster socioeconomic growth, making a significant impact on the region's urban ecosystem and enhancing the quality of life for citizens.





# **Centre of Excellence on Light Fidelity**

IIIT-Delhi has a Centre of Excellence on Light Fidelity (LiFi), anchored by TSDSI and ETSI. The CoE's vision focuses on enhancing last-mile connectivity through Visible Light Communication (VLC). It aims to connect Indian entrepreneurs with pioneering VLC academic researchers and standardization bodies. Capacity building will be facilitated through research collaborations and expert exchanges between India and the EU. The CoE will design relevant LiFi courses and provide training for academic faculty, students, and engineers. This transformative initiative holds great potential to revolutionize internet access and foster innovation in India and beyond.



### **Projects**

The Centre is spearheading various cutting-edge research projects. "Design of Non-Orthogonal Multiple Access (NOMA) Systems for Future Vehicular Communications" is funded by SPARC. "Optical Wireless Access Network for Rural and Urban Communications" is supported by MEITY. "Center for Secure and Resilient Quantum Optical Networks" is part of the VIRTUAL NETWORKED CENTER Scheme funded by Indo-U.S. Science and Technology Forum (IUSSTF). "Machine Learning for Efficient Millimeter-Wave Communication" receives support from DST-SERB under TARE Scheme, while TCS funds research on 'Massive Connectivity in V2X Communications.' These projects drive innovation and advance technology in diverse domains.

# **Key Collaborations**

The Centre boasts extensive collaborations with renowned organizations, including Intel, Velmenni, ERNET India, Georgia State University, Cognizant, University of Surrey, The University of Edinburgh, TCS, Reliance Jio, C-DOT, IIT Delhi, and Ericsson. These strategic partnerships foster a diverse and vibrant research ecosystem, driving innovation, knowledge exchange, and technological advancements. By working together, the Centre and its collaborators contribute to cutting-edge research and real-world solutions, pushing the boundaries of science and technology to create a positive impact on society and industry.





### **Research Publications**

The Centre's research has gained recognition in esteemed venues. Notably, in the Journal of Optical Communication and Networking (JOCN) and Vehicular Communications conference, work on optical wireless architecture and V2V data offloading was featured in 2023. Additionally, the IEEE 97th Vehicular Technology Conference accepted research on UAV and OIRS-assisted OWC architecture. Noteworthy contributions include work in IEEE Open Journal of the Communications Society, Photonics Journal, Internet Technology Letters, IEEE Access, and Transactions on Green Communications and Networking. These achievements showcase the Center's prominence in cutting-edge research domains.



#### **DataKart Centre of Excellence**

It's the age of disruptions, and Information Technology is at the core of the transformations. With the rise of Big Data, AI, and myriad applications, IT has to be recognized as a source of immense social and economic power. At the same time, technologists and computer scientists must understand the world they are helping to build.

GS1 India signed a Memorandum of Understanding (MoU) with MIDAS Research Lab of Indraprastha Institute of Information Technology (IIIT) Delhi, to create the DataKart Centre of Excellence (DCoE). The creation of DCoE aims to apply Artificial Intelligence, Machine Learning, and other futuristic technologies to develop tools for image compression, attribute extraction, and improving the quality of product data in DataKart (National Product Data Repository).

The collaboration enables the development of cutting-edge technologies for making the DataKart more robust and dependable. This will benefit Businesses (retailers, online marketplaces, point-of-sale providers, and, aggregators) and end-consumers access to quality product data. This collaboration allows GS1 to leverage IIIT-Delhi researchers' expertise to develop advanced data collection tools, improve data accuracy and quality, and enable small and medium businesses to share their product data with retailers and online marketplaces.

The collaboration brings together research professionals and academic scholars to develop cuttingedge technologies for making the National Product Data Repository more robust and dependable. The DCoE will ensure that the repository's published data is of the highest standards and is available for businesses and consumers for validation.







# **Centre of Excellence in Human-Centred Computing**

#### As a part of the EU Erasmus+ Design and Innovation Capacity Building (DESINNO) project

The Indraprastha Institute of Information Technology Delhi has established a new Centre of Excellence (CoE) in Human-Centered Computing. The CoE will focus on teaching relevant courses on Human-Centered Computing and will also facilitate research collaborations, capacity building, and exchange of researchers and experts between the European Union (EU) and India.

The CoE is established as part of the EU Erasmus+ Design and Innovation Capacity Building (DESINNO) project. It brings together IIIT-Delhi, the World University Of Design (WUD), the Regional Institute of Management and Technology (RIMT) from India, the University of Aegean, Greece, Brunel University, UK, and Politecnico di Milano, Italy, and CREATHIDEV from Europe. These institutions anchor the activities under this project from India and the EU, respectively.

Human-Centered Computing combines design principles with computing to help develop systems that support human capabilities and cater to human needs; for example, in a recent work, researchers developed a mobile-based learning platform for community health workers. The platform is designed so that it becomes easy to use by community health workers who have low technology exposure. CoE aims to develop design and technology solutions to enhance human capabilities in different domains of interest. The CoE also supports entrepreneurs and researchers by bringing them together on one platform with expert mentors available from all fields. The CoE provides state-of-the-art fabrication facilities with the latest computing and design equipment to support entrepreneurial and research activities. The group members are actively engaged in cutting-edge human-centered computing research related to healthcare, education, and women's safety, among others.







# **Center for Quantum Technologies**

Center for Quantum Technologies (CQT) is focused on becoming the nation's foremost knowledge development and dissemination hub in this domain. the nation's foremost knowledge development and dissemination hub in this domain. Its mission entails interdisciplinary research and development in quantum computing, communication, and materials, delivering affordable solutions tailored to India's unique opportunities and needs. Additionally, the Center aims to cultivate a skilled workforce at undergraduate, graduate, and post-graduate levels, capable of propelling quantum technologies forward in India.



#### **Research Projects**

The Center is actively engaged in the research project "Classical and Quantum Error-Correcting Codes and Mathematics over Finite Fields for Smart Telecommunications." The project is funded by DST (India) & RSF (Russia), showcasing CQT's dedication to advancing quantum technologies and its ability to secure collaborations with esteemed funding agencies. As a leading research hub, CQT's work in this field exemplifies its commitment to pioneering advancements and innovation in quantum communication and error correction.

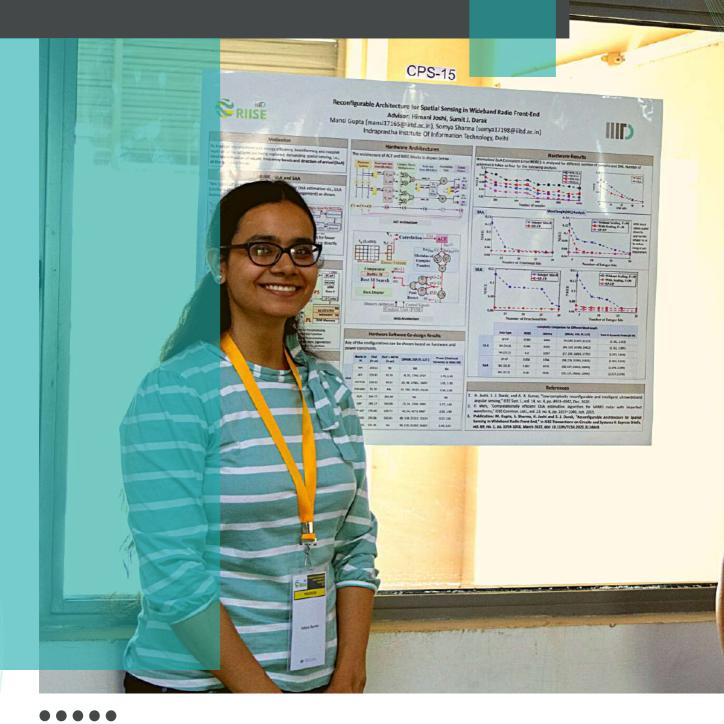
#### **Research Publications**

The Center's research publications have been featured in prestigious venues such as the Journal of Applied Physics, Results in Surfaces and Interfaces, Advances in Mathematics of Communications, IEEE Transactions on Nanotechnology, IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Japanese Journal of Applied Physics, and the 35th International Conference on VLSI Design and 21st International Conference on Embedded Systems (VLSID). These notable platforms highlight the Center's prominence and dedication to advancing cutting-edge research in diverse domains.





# Education





# **Educational Programs**

As we gaze into the future, IIIT-Delhi envisions expanding its array of programs offered across undergraduate, postgraduate, and doctoral levels. The Institute takes pride in its unwavering dedication to students' triumphs and will persist in delivering a tailored and empowering educational journey to each enrolled student.

IIIT-Delhi is committed to a research-based educational model, fostering an interdisciplinary learning environment, and nurturing spirit of inquiry. These aspects collectively shape an enriching educational ecosystem that not only imparts knowledge but also equips students with the prowess to innovate and explore. This commitment to research-backed education cultivates a deep-seated culture of curiosity and problem-solving among the students.

The Institute acknowledges the significance of interdisciplinary education, recognizing that real-world challenges transcend traditional boundaries. By encouraging students to collaborate across disciplines, IIIT-Delhi prepares them to tackle complex issues holistically, promoting a well-rounded understanding of today's multifaceted challenges.

"Education is not just about going to school and getting a degree. It's about widening your knowledge and absorbing the truth about life."

Ms. Shakuntala Devi

Indian mental calculator and writer, popularly known as the "Human Computer"

# **New Programs**

#### B.Tech. program in Electronics and VLSI Engineering (EVE)

The objective of the B.Tech. program in Electronics and VLSI Engineering (EVE) is to prepare students to undertake careers involving innovation and problem solving using suitable techniques and hardware and software technologies, or to undertake advanced studies for research careers.

In order to give due importance to applied as well as theoretical aspects of EVE, the curriculum for the B.Tech. (EVE) program covers most of the foundational aspects and also develops in students the engineering skills for problem solving. Towards this, the B.Tech. (EVE) program at IIIT-Delhi starts with computing and Electronics courses first, and allows the possibility of doing science courses later. Besides being better suited for developing engineering capabilities, it also enables the possibility of students seeing newer applications and possibilities of using computing and electronics in these subjects.

#### M.Tech. (Research) program in Computer Science Engineering (CSE)

The two-year program is designed to nurture students at the pre-doctorate level for solving complex research problems in computer science and engineering relevant for industry and society. The program is open to students with a B.E./B.Tech. in CSE/IT/ECE/EE, or an M.C.A., or an M.Sc. in Mathematics/Statistics with a valid GATE score.

The program will equip the students with comprehensive in-depth understanding of a foundational topic of today's cutting-edge computing technology. They will be able to apply existing algorithms, models, and techniques to solve research problems efficiently. They will also be able to design, develop, and evaluate new systems for novel applications that meet the desired needs of industry and society. In addition to developing their technical skills, students will also learn professional and ethical responsibility. They will be able to communicate effectively with a wide range of audience and will be able to work effectively both individually and as part of a team.

The institute will be offering the M.Tech. course with a lower fee, higher scholarship and incentives that are at par with Ph.D. students. IIIT-Delhi M.Tech. fees for research program is lower in the first year of the program than that of a regular M.Tech. CSE course at IIIT-Delhi.

The second-year program fee is significantly subsidized. Eligible students can get a high scholarship of Rs 21,000 per month to cover almost all expenses during the course. The institute will also provide travel support, in addition to the support of up to Rs 50,000 for purchasing a laptop and an additional contingency of up to Rs 10,000 per annum.

IIIT-Delhi will also allow a student of this program to convert to a full-time one-year Ph.D. program with a full tuition fee refund. Meanwhile, a graduate student of the program will be eligible to pursue a sponsored Ph.D. degree from the institute with full tuition fee waiver.



# **Ongoing Program**

#### **B.Tech. Programs**

- Computer Science and Applied Mathematics
- Computer Science and Artificial Intelligence
- Computer Science and Biosciences
- Computer Science and Design
- Computer Science and Engineering
- Computer Science and Social Sciences
- Electronics and Communications Engineering
- Electronics and VLSI Engineering

#### M.Tech. Programs

#### **General Courses**

- Computational Biology
- Computer Science and Engineering
- Electronics and Communications Engineering

#### Specializations offered in M.Tech. Program

- CSE Artificial Intelligence
- CSE Data Engineering
- CSE Information Security
- CSE Mobile Computing
- CSE Research
- ECE Cyber-Physical Systems
- ECE Machine Learning
- ECE VLSI & Embedded Systems

#### Ph.D. Programs

- Computational Biology
- Computer Science and Engineering
- Electronics and Communications Engineering
- Human Centered Design
- Mathematics
- Social Sciences and Humanities

#### **PG Diploma Programs**

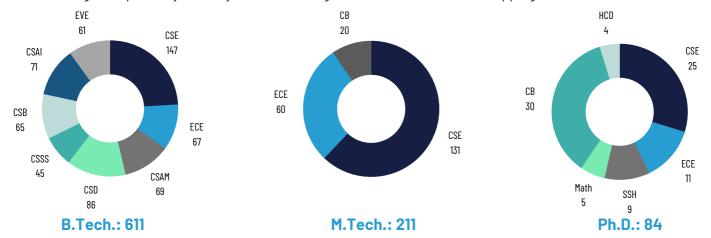
- PG Diploma in Computer Science and Al
- PG Diploma in Data Science & Al



## 2022 Admissions

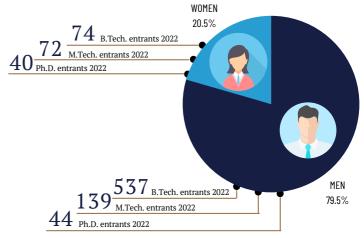
IIIT-Delhi continues to be an be an aspirational Institute for engineering students. This is manifested in the increasing demand to secure admission at the Institute. The Institute's enrollment has consistently increased over the past few years. A total of 906 students were enrolled in batch for the 2022 fall semester under seven programs of B.Tech., three specialisations for M.Tech. and in Doctorate Program under the research areas of six broad disciplines. Figures below provide a summary of students admitted in each stream within their respective programs.

The Institute's success in attracting more external funding, the best faculty members, and unmatched research infrastructure has contributed significantly to the student strength in doctoral programs. The enrolment growth at the postgraduate level has been focused on specialised programs. IIIT-Delhi subscribes to the view that a Master's degree is primarily industry-focused, though it can also be used as a stepping stone for research.



IIIT-Delhi is constantly striving to achieve a good gender ratio at the Institute by providing a safe and healthy learning environment with equal opportunities. The overall ratio is shown in the figure on the right.

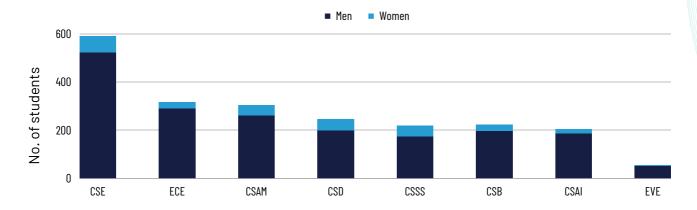
The Institute has over **41% female** students in the M.Tech. and Ph.D. programs combined.



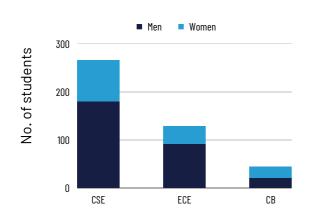


## **Students on Roll**

#### **B.Tech. students**

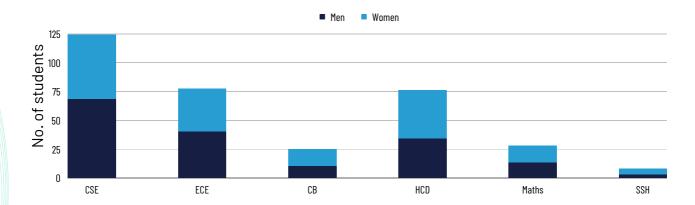


#### M.Tech. students



IIIT-Delhi believes in going the extra mile to ensure student success by providing various academic and research avenues. The Institute strongly believes in providing students with the flexibility to make their program. Several students go for long internships in research labs, industries, and start-ups in their program's third and fourth years, which gives them industry exposure and a taste of entrepreneurship. As a result, many students extend their program by six months to a year. The figure above shows all the U.G. students on roll at the campus. The figure on the left and bottom give the details of P.G. and Ph.D. students respectively.

Ph.D. students



# **International Students and Exchange Programs**

IIIT-Delhi encourages international students to seek admission in the B.Tech., M.Tech. and Ph.D. programs. The Institute takes pride in providing interdisciplinary educational options to the international students by providing them with a platform where knowledge meets achievement, experience meets future projections, and ambition meets inspiration.

#### Direct admission for the international students

The admission process is simple, requiring the student to submit a portfolio of their achievements at the school level. Shortlisted candidates are interviewed and also offered merit-based scholarships. The same panel also reviews applications from ICCR and recommends admissions. This has also helped to increase the diversity of students enrolled at IIIT-Delhi. This year 22 students have joined through direct admission porcess. Students from **Russia and South Korea** have joined the Institute for the first time. **A total of 51 international students joined IIIT-Delhi in 2022-23, adding to a total of 158 students from 24 countries.** 

#### **University Exchange Program**

IIIT-Delhi has signed an Memorandum of Understanding with many universities to facilitate student exchange. Some of these universities are: Nagasaki University, University of OULU, EDCIL India Ltd, Namibia University of Science and Technology, University of Albany, State University of New Work, USA, ICCR, Université Côte d'Azur, France. Six students have joined IIIT-Delhi through ICCR and three have joined through study in India program.

#### **Admissions through DASA and ICCR**

IIIT-Delhi also takes admissions through DASA (Direct Admission of Students Abroad), an initiative by the Government of India (GOI) for Foreign Nationals, NRIs (Non-Resident Indian), PIOs (Person of Indian Origin) & Overseas Citizens of India (OCI); and ICCR (Indian Council for Cultural Relations). This year 21 students were admitted through this process.

A large number of admitted international students can get fellowships **up to 100%** of the tuition fee. In year 2022-23, **35 scholarships were given worth \$1,78,125.00** 



#### **Eleventh Convocation**



This year, the Institute conferred degrees upon 390 B.Tech., 191 M.Tech., and 5 M.Tech. Dual degree and 21 Ph.D. students

Chief Guest at the Eleventh convocation was **Dr. Arunabha Ghosh, Founder, and CEO of the Council On Energy, Environment, and Water (CEEW)** 

Indraprastha Institute of Information Technology, IIIT-Delhi hosted its 11th Convocation on Saturday, November 26, 2022. The Convocation was hosted by the Institute in person on campus after a gap of 2 years due to COVID19. More than 500 students this year received degrees. This year, the Institute conferred degrees upon **390 B.Tech.**, **191 M.Tech.**, **and 5 M.Tech. Dual degree and 21 Ph.D. students**. With this year's graduation, the total number of Ph.D. degrees conferred by IIIT-Delhi is **100.** Ph.D. graduates from the Institute are working in research labs and as faculty members in India and abroad.

Dr. Arunabha Ghosh, Founder, and CEO of the Council On Energy, Environment, and Water (CEEW), graced the convocation ceremony as the chief guest. Dr. Arunabha Ghosh is an internationally recognized public policy expert, author, columnist, and institution builder. Dr. Arunabha said, "I am sure many of you chose to become engineers because you like the orderliness of variables you can control. For the things you make, may you design well. You will go ahead and build the world. But I also hope that at least some of you are excited by the millions of permutations that lines and dots can make, generating new possibilities not just in the built environment, but also in the natural, societal, economic and political environments. May you be courageous enough to attempt that change. You will go ahead and shape the world. Congratulations! May you not just build the world but shape it — in a better image. Thank you."

Encouraging the graduating students, Prof. Bose urged them to use every experience as a teacher to make them more aware of who they actually are. He challenged the students to be the leaders, the innovators, and the change-makers. He also advised them that while they go about moving-the-needle, they must lean on the side of kindness and compassion. They should not forget to check their moral compass, emotional GPS and the inner thermostat as they navigate the vicissitudes of life. He concluded by expressing his confidence that the graduating students have their own unique stories to script, their individual trails to blaze, and thereby leave permanent footprints in the sands of time.



#### 11th Convocation Medal Winners



OSHEEN SACHDEV Chancellor's Gold Medal



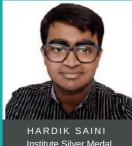
HRITIK GOEL Institute Silver Medal



ROHITH RAJESH Institute Silver Medal



LAKSHYA A AGRAWAL Institute Silver Medal



Institute Silver Medal



SONALI SINGHAL Institute Silver Medal



Institute Silver Medal



VRINDA NARAYAN All Round Performance Medal



SHUBHI SINGHAL All Round Performance Medal



LAKSHYA A AGRAWAL All Round Performance Medal



ARNAV TANDON All Round Performance Medal



RUHMA MEHEK KHAN All Round Performance Medal



VRINDA SINGHAL All Round Performance Medal



THARUN S Gold Medal for Excellent Academic Performance



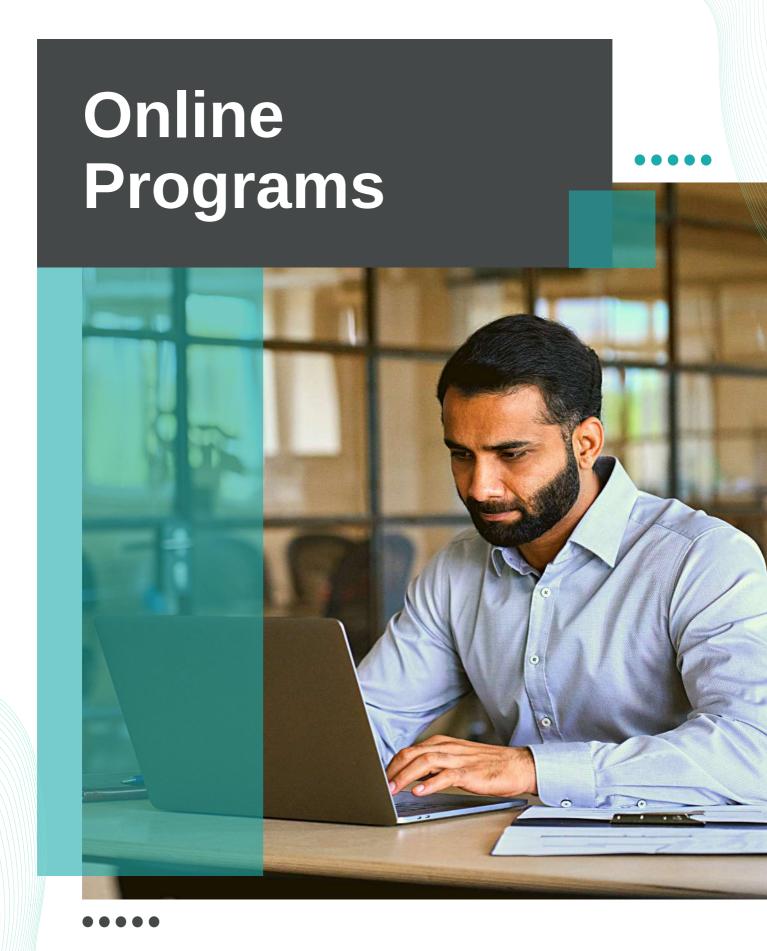
HIMANI JOSHI Ph.D. Dissertation Award



Ph.D. Dissertation Award









# **Online Programs**

IIIT-Delhi offers a range of online skill development courses designed to enhance knowledge and expertise in various domains. These courses cater to both professionals seeking to upgrade their skills and students looking to acquire new knowledge. With a focus on practical learning and industry relevance, IIIT-Delhi's online courses cover areas such as data science, artificial intelligence, machine learning, blockchain, cybersecurity, and more.

The courses are crafted by experienced faculty members and industry experts, ensuring quality content and effective learning outcomes. Through flexible schedules, interactive online platforms, and hands-on assignments, participants gain valuable skills and credentials to excel in their respective fields.

"We are all now connected by the Internet, like neurons in a giant brain."

Prof. Stephen Hawking English Theoretical Physicist



# PG Diploma in Data Science and Artificial Intelligence

To cater to the upskilling needs of IT professionals and meet the industry requirements, IIIT-Delhi, in collaboration with IBM, launched a ninemonth-long PG Diploma program in Data Science and AI (PGD DS&AI) in 2020. This online program is specifically designed to accommodate the busy schedules of professionals, as it is conducted on weekends, including Saturdays and one Sunday every month.

This course is offered in partnership with IBM

The PGD DS&Al program is highly comprehensive, aiming to provide professionals from various industry verticals with the necessary skills to reboot their careers in the fields of data science and artificial intelligence. Recognizing the importance of practical experience, IIIT-Delhi has established a strong industry collaboration, providing participants with ample opportunities to work on real-life data science projects. This hands-on approach ensures that learners can apply the concepts and techniques they acquire in real-world scenarios.

The courses are taught by experienced faculty members from IIIT-Delhi as well as industry leaders in Analytics from IBM. This collaboration allows participants to benefit from the expertise and insights of both academia and industry, gaining a well-rounded understanding of the subject matter. The Memorandum of Understanding signed between IIIT-Delhi and IBM further strengthens this partnership and ensures the program's quality and relevance.

The PGD DS&AI program covers a wide range of topics, including data mining, machine learning, deep learning, natural language processing, and predictive analytics. Participants acquire practical skills in programming languages such as Python and R, as well as tools and frameworks commonly used in the industry. The program also emphasizes the ethical and responsible use of data science and AI technologies.



# Post Graduate Diploma in Computer Science and Artificial Intelligence

IIIT-Delhi launched the Post Graduate Diploma Program in Computer Science and Artificial Intelligence in collaboration with Great Learning in year 2021-22, one of India's leading EdTech companies for higher and professional education. The program will be delivered online and includes a combination of live classes by IIIT-Delhi's faculty, hands-on tutorials, and project-based learning sessions. The program will address the growing need for talent in cutting-edge areas that require a sound grounding in Computer Science fundamentals and an ability to apply artificial intelligence (AI) techniques.

The course is offered in partnership with Great Learning

Specifically tailored to accommodate the challenges of both employed professionals and students, this yearlong online program offers a sound comprehension of the principles of Computer Science and Artificial Intelligence. The program further provides interactive live lectures, practical tutorial segments, recorded educational videos, insights from industry experts, and practical projects, thereby exposing students to real-world problem statements.



# **Certificate Program in CS Teaching**

India has over 10,000 engineering colleges and 100s of degree-granting institutions that focus on engineering. Often the quality of education in many academic institutions is mediocre, primarily due to the background of the faculty. If the quality of education has to improve, teachers in these colleges/universities need to be re-trained through a suitable T3 program.

The course is offered in partnership with ACM

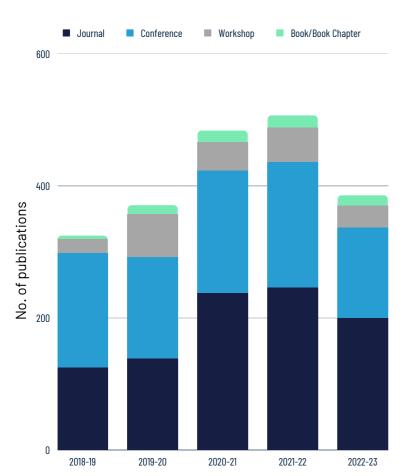
IIIT-Delhi has designed an online program for CS Teachers to improve teaching. The program will use the talent of experts across the country for enhancing CS teaching in colleges and other institutions. For this, modules on teaching important CS topics have been proposed. These modules will be designed for the teachers who have taught CS a few times. The goal is to improve the teaching capability of the teachers by providing a deeper understanding of concepts and applying concepts for problem-solving. The inclination should be towards developing the capacity to design hands-on assignments for students, sharing possible labs/assignments/projects/lecture slides, providing other valuable resources, etc. The eventual goal, of course, is that this will then improve the teaching of CS to their students.

The program is a collaborative effort among the faculty from reputed institutions. In such an arrangement, the teaching load is distributed, and the best experts from these leading institutions are invited to participate. To facilitate this program, IIIT-Delhi has agreed in principle to offer Certificates (and later Post-Graduate Diploma) to participants who complete one or more modules.



The focused approach of the Institute towards quality education, research, and innovation plays a central role in the advancement of society. It fosters economic growth, strengthens technological progress, and enhances job creation. In addition, IIIT-Delhi aims to create an ecosystem for more vital collaboration with industry in several modes, including consultancy, sponsored research projects, technology transfer, and continuing education.

#### **Research Publications**



While the Institute retains the core mission of educating the next generation and cultivating new forms of knowledge, it also embraces the ever-expanding role in driving innovation and catalyzing economic development.

Being a research-focused institute, IIIT-Delhi has successfully established a strong research culture at the Institute by encouraging the faculty members and students to publish their work in top-quality national and international academic venues.

During 2022-2023, our students and faculty members have published papers on some of the best platforms like Nature Publication, PLOS One, ACM, IEEE, etc. The figure on the left shows the number of publications over the years. A detailed list of this year's publications can be found at the weblink iiitd.ac.in/ar/appendices23.



# **Tools and Technologies Developed**

The Institute remains committed to developing technologies that can be transferred for commercial and societal use by other organizations. Our faculty members have been continuously working towards solving societal problems through technology. A few of the tools/technologies developed this year are listed below:

- Optical Wireless Access Networks for Rural, Urban, and Vehicular Communication, where a team of researchers has created a distinctive Relay Broadcast Unit (an Optical Switch) and established a lastmile connection, utilizing solar panels as receivers. This inventive solution significantly contributes to enabling last-mile access from the Gram Panchayat in Bharatnet, marking a remarkable step forward in enhancing connectivity.
- I-BLEND, a vast 52-month electrical energy dataset. This dataset, gathered at a one-minute sampling rate, originates from commercial and residential buildings within IIIT-Delhi's academic campus in India. Additionally, occupancy datasets for campus buildings, sampled every 10 minutes, are included. This release marks India's first extensive energy dataset, enabling research on topics like weather's impact on energy use, anomaly detection, and predictive maintenance algorithms.
- Face Retrieval system from the Criminal Dossier of Delhi Police based on facial attributes as input.
- Web-portal for Delhi Jal Board to efficiently manage consumers' complaints and visualize all lodged complaints on different platforms such as call centers, Twitter, WhatsApp and Email.

















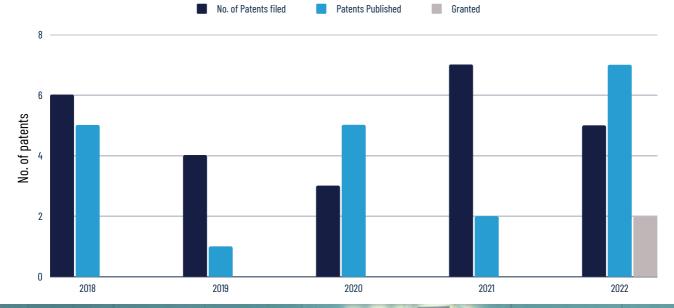




#### **Patents Filed**

Universities and institutes are considered foundational for the growth and development of any country. It is the place for primary research leading to inventions. As innovation has become a core driving force for the Institute, it has motivated the faculty and students to file for patents and copyrights. This year, the faculty members and students filed for multiple patents, a brief of which is given in the figure below.

The patents include inventions like 'Photo-Receiver Enabled Smartphone Cover'. It is a smartphone with data communication and energy harvesting capabilities. The smartphone has a cover with a solar cell (PV cell) that receives light from a LED, generating electric charge. A receiver circuit reproduces a transmitted waveform using the PV cell's output signal. The receiver circuit includes an amplifier to enhance the signal, a voltage level shifter to convert the signal's polarity, and a comparator to adjust a reference voltage (Vref) based on the signal, thus reproducing the original waveform. The other granted patent in this year is 'Escort Bot System and Method', this invention pertains to navigation assistance for visually impaired individuals, specifically involving an escort bot system and method.





#### **New Research Facilities**

In the previous academic year, IIIT-Delhi has made notable strides in enriching the research facilities accessible to students, delivering an elevated academic experience while fostering practical expertise. The introduced enhancements are thoughtfully designed to equip students with the tools they need to excel in research and gain valuable hands-on exposure. The following state-of-the-art facilities have been set up:

#### **Cell Culture Facility**

The establishment of a Cell Culture Facility within the biology Wet Lab provides researchers with a specialised setting to cultivate and sustain various cell types under precisely controlled conditions. This facility holds paramount importance across diverse domains, from foundational research to drug development, disease modelling, and tissue engineering. Students can now delve into the intricacies of cellular behaviour, function, and responses, deepening their comprehension of biological systems.

#### **Nanopore Sequencing Facility**

The incorporation of the Nanopore Sequencing Facility offers a dedicated platform for advanced DNA, RNA, and protein sequencing using cutting-edge nanopore technology. By guiding molecules through minuscule nanopores and gauging their electrical shifts, students can engage in swift and direct sequencing of biological constituents. This facility empowers students to explore genomics, transcriptomics, and proteomics research with elongated read lengths, real-time data generation, and the potential for portable sequencing devices.

#### **Upgraded Configuration Desktops**

These sophisticated systems empower students to undertake intricate simulations, analyse data, and manage multiple tasks with efficiency. With their capacity to navigate resource-intensive software and handle substantial datasets, these desktops elevate the velocity and quality of research projects. Students additionally reap the benefits of improved compatibility with specialised software and enhanced facilitation of collaborative undertakings, fostering a dynamic and enriching learning milieu.

#### **High-Speed Li-Fi Kits**

Within IIIT-Delhi's Electronic and Communication Engineering (ECE) lab, the integration of High-Speed Li-Fi Kits paves the way for students to immerse themselves in the realm of Light Fidelity (Li-Fi) technology. These kits provide a hands-on avenue to explore Li-Fi's potential, offering insights into both rudimentary and advanced modulation techniques. Through these kits, students gain a comprehensive understanding of optical communication, wireless networking, and modulation schemes, equipping them with practical proficiencies and an in-depth grasp of contemporary communication technologies.



#### **Cloudlabs Integration**

Addressing the need for adaptability, Cloudlabs have been seamlessly interwoven into the ECE labs. This groundbreaking approach capitalises on cloud computing to virtualise physical equipment, ensuring that students can execute experiments, and simulations, and interact with authentic hardware from a distance. In an era characterised by remote learning and research, Cloudlabs extend accessibility, flexibility, and collaborative prospects, effectively bridging the divide between conventional and online learning ecosystems.

#### **Cutting-Edge Software Tools**

The assimilation of the most current licensed iterations of industry-standard software tools, including National Instruments' LabVIEW, Synopsys EDA tools, MATLAB, and Xilinx's Vivado and Vitis, stands as a testament to our commitment to equip students with hands-on familiarity in designing, simulating, and optimising electronic systems. Exposure to these tools empowers them with sought-after skills aligned with industry requisites, positioning our graduates for success in the dynamic sphere of electronic and communication engineering.

These enhancements to our research facilities underscore IIIT-Delhi's dedication to furnishing students with an unparalleled learning environment, one that prepares them to excel in their academic pursuits and future professional roles. By delivering state-of-the-art resources, we empower students to explore, innovate, and contribute substantially to the rapidly evolving engineering landscape.

#### **Enhanced IT Infrastructure**

In the realm of enhanced IT infrastructure, IIIT-Delhi stands as a prime example with its cutting-edge technological provisions that cater to the comprehensive computing and communication needs of the Institute. Boasting a robust and dependable computer network comprising over **4000 Nodes**, the campus ensures seamless connectivity. The Institute demonstrates exceptional interconnectivity through a redundant 10 gigabit fiber backbone network, linking hostels, faculty blocks, administrative areas, the library, classrooms, and residences. This connection is further fortified by layer 2 & 3 switches, delivering 1Gbps connectivity at the user end. Each hostel room enjoys an exclusive LAN connection, granting continuous access to online resources. A wireless network, comprising **300+ access points**, spans across faculty blocks, the library, classrooms, and hostels.

The institution's Internet access is equally impressive, facilitated by a 10 Gbps Internet leased line from NKN, supplemented by a backup connection of 500 Mbps operating in failover mode. This connectivity extends throughout the premises via both LAN and Wi-Fi, encompassing residences, academic facilities, dining areas, lecture halls, R&D spaces, the library, and hostels.

A cornerstone of IIIT-Delhi's IT prowess is its self-contained data center. Housing 100 physical servers, 100 VMs, and a unified network storage boasting a capacity of 500 TB, the data center ensures maximum uptime through redundant UPS backup. This connectivity extends to the Internet through public IPs. IP telephony permeates the entire campus, manifesting in the form of 350 IP phones. Cisco Webex Meeting Center, with a host capacity of 200 and VoIP and Video capabilities, and Polycom HDX7000 VC System enhance collaboration and communication. Additionally, platforms like Skype, Zoom, and Meet are facilitated through Logitech Group's Video Conferencing System.

For remote access to IIIT-Delhi's IT resources, a VPN solution is in place, accommodating external connectivity. The critical IT infrastructure is fortified by  $2 \times 100 \text{KVA}$  UPS units, configured in N+1 redundancy. **Three DGX Servers** have been incorporated into the institute, each housing eight A100 40 GB NVIDIA GPUs. These high-performance computing facilities are purpose-built for deep learning and AI research, providing the computational power necessary for handling complex AI projects efficiently.

Academic ERP services are extended to both students and faculty, enabling course registration, add-drop functionalities, grade viewing, and more. The Tape Library Backup Solution leverages LTO 6 Tape Backup to ensure onsite and offsite backup of essential data. A network of five state-of-the-art computer labs, comprising >425 desktops, caters primarily to undergraduate teaching. These labs operate on a 100 KVA UPS supply, with dual-boot Linux and Windows systems running a variety of software. The labs also offer secure domain-based authentication for access to online services.

#### **Institute Innovation Council**

The Institute Innovation Council (IIC) at IIIT-Delhi was established with an aim to inculcate the culture of innovation in the students and faculty at Higher Education Institutions (HEIs). This also includes supporting young students with their ideas and helping them transform those ideas into prototypes while they are in academia.

IIC collaborates with the **entrepreneurship club (E-cell), IRD office, and IIITD Innovation and Incubation Center (IIITDIC)** to encourage the spirit of entrepreneurship among the stakeholders. The IIC organizes a wide range of activities including: ideathons, pitch events, challenges, workshops, seminars and wisdom talks, interaction with entrepreneurs, investors, mentors, etc.

The E-cell publishes a newsletter to announce upcoming events, present insights, and share experiences from the recently conducted events with the IIIT-Delhi community.

#### **Delhi S&T Cluster**

#### **DRIIV (Delhi Research Implementation and Innovation)**

The Delhi Science and Technology (S & T) Cluster, managed by DRIIV, was initiated by the Office of the Principal Scientific Advisor (PSA) to the Government of India. Through this kind of endeavor, the S & T Cluster plans to promote advanced knowledge and expertise in S & T for the overall benefit of different cities in India. The idea is also to ensure an effective contribution to Indian R & D to resolve specific national issues. A conglomeration of academia, industry and government bodies will help identify the solutions to society's problems. Delhi Cluster stems from the understanding that virtual and seamless connectivity among academia, R & D laboratories, industries, and government agencies located in the geographic proximity of a particular city, would encourage focused education, research, and innovation. The cluster will provide a broad platform for knowledge exchange amongst human capital from different institutes towards developing better scientific solutions by bringing scientific equipment-intensive labs together with human capital-rich academic institutes.

Under the scheme, IIIT-Delhi is working towards the following causes:



Air Pollution



Artificial Intelligence/ Machine Learning in Healthcare



Sustainable Mobility: Improving Mobility for Everybody



Effective Education

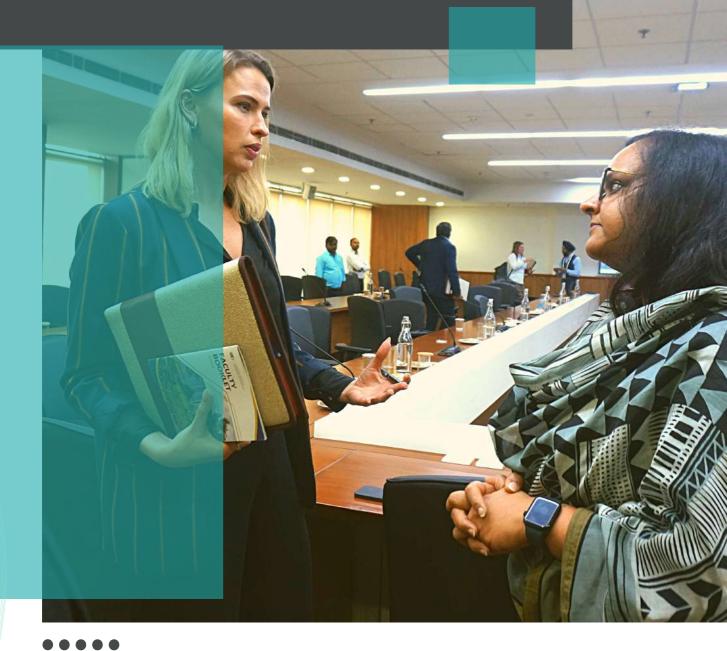
# **List of Labs**

- Academic Writing Lab
- Advanced Multi-core Systems Lab
- AI/ML for Medicine and Public Health Lab
- Algorithms for Transcriptomics of Tomorrow Lab
- Algorithms to Architecture Lab
- Complex Systems Lab
- Computational Biology for Health Lab
- Computational Structural Biology Lab
- Cross-Caps Lab
- Cryptology Research Group (CRG) Lab
- Design and Innovation Lab
- High Performance Computing Lab
- Human-Machine Interaction Lab
- Knowledgeable Computing and Reasoning Lab
- Laboratory for Computational Social Systems
- Living Lab

- Melange Lab
- MIDAS Lab
- Mobility and Optimization Lab
- Nanoscale Devices and Circuit Lab
- NeatAl Servo Lab
- Networks Research Lab
- Quantum Computing Lab
- Reggenlab: Regulatory Genomics Lab
- Signal Analysis for Large Scale Applications
- Signal processing and Bio-medical Imaging Lab
- Space Systems Lab
- Systems and Mathematical Biology Lab
- The Chemosensory Lab
- The Translational Biology Lab
- Weave Lab
- Wirocomm Lab



# Sponsored Research



59



# **Sponsored Research**

IIIT-Delhi has always emphasized bringing real-world relevance into the classroom and has encouraged faculty members to work with industry and government partners on sponsored research.

The faculty members of IIIT-Delhi are involved in collaborative research, funded both by national and international agencies and industry partners. The Institute has set up modern laboratories and supporting infrastructure to carry out cutting-edge research. The faculty members continuously involve students in the projects to provide them an edge over other researchers regarding hands-on practical application in solving real-life issues. The sponsored research has also emerged as a crucial factor in creating the research infrastructure while strengthening the facilities in some of the emerging areas of technology.

These projects and assignments require a fair amount of scientific and technical inputs from the faculty and staff of the Institute. The students also get trained in the process of tackling such practical problems. Equally important is the fact that the knowledge and expertise of the Institute are available for solving some of the pressing technological issues relevant to the industry and the nation.

"The true laboratory is the mind, where behind illusions we uncover the laws of truth."

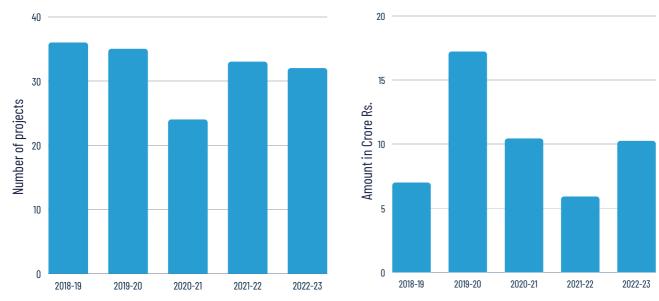
Sir J. C. Bose

Physicist, Biologist, Biophysicist, Botanist, Archaeologist

# **Projects**

Cutting-edge research is carried out both within disciplines and at the interface of domains. One of the parameters to test the efficacy and impact of the research work at the Institute is its applicability to real-world problem-solving. The faculty members at IIIT-Delhi regularly undertake R&D projects sponsored by government agencies, industries, or other institutions to generate new knowledge, develop new technological processes, and create new products.

The faculty members and students working on these sponsored research projects help delineate the difference between engineering and technology to make the maximum impact. The figure below on the left show the number and sanctioned amount of the projects received over the years, and the figure on the right shows earning from the projects over the years. Details of ongoing projects and new projects are given in iiitd.ac.in/ar/appendices23.



In Financial Year 2022-23, the Institute has received **32** Sponsored Researched Projects (SRP) for a total sanctioned amount of Rs. **15,63,98,055**. The fund received in year 2022-23 from SRPs is **Rs. 10,24,89,713** 

Apart from the SRPs, the Institute also receives funding for fellowship projects, corporate projects, faculty award projects, and other funding for centres and education programs. Total external funding received by the Institute in the financial year **2022-23 is Rs. 15,31,12,483** (including faculty consultancy projects which are separately mentioned in the next section).

\*The value of the projects granted in other currencies might change as per the currency conversion rate

#### **The Sponsors**















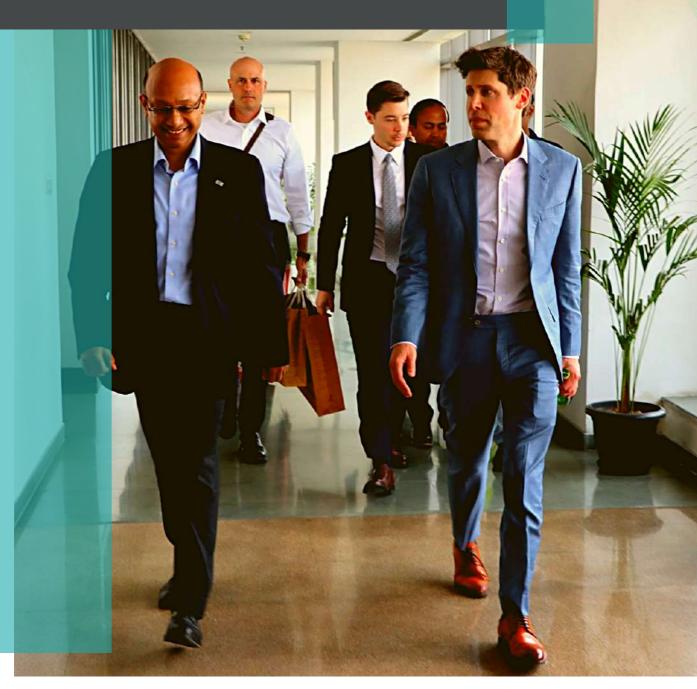
Infosys Centre for Artificial Intelligence







# Industry Interactions



••••



# **Industry Interactions**

Collaborations between universities and industry have given life to many disruptive discoveries over the years. There are several examples of fruitful partnerships between universities, industry partners, and start-ups. Many ideas from research in universities are relevant for industrial innovations. Others reach the market through licensing or start-up companies. Endeavors to find solutions to complex social, environmental, and economic challenges – for example, in energy, environment, health, or security – have increasingly required collaboration between universities and industry because few organisations have the internal capacity to deliver results independently.

University-industry collaboration requires careful management and can bring many benefits. These include a two-way flow of ideas: results can flow out to industry, and they can also be in-bound to fuel research questions. For example, sometimes technical problems experienced at the cutting-edge of practice lead to new questions for science.

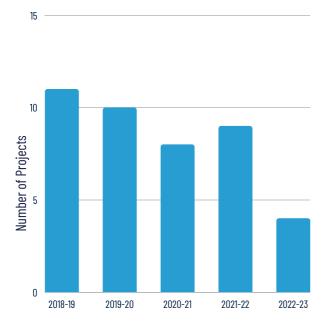
"If you want to walk fast, walk alone. But if you want to walk far, walk together."

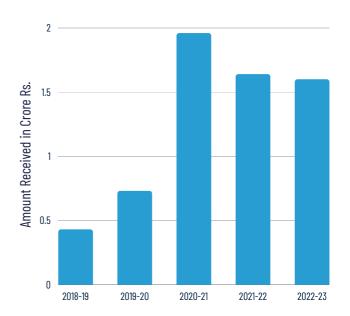
Mr. Ratan Tata

Indian Industrialist, Philanthropist, and a Former Chairman of Tata Sons

# **Consultancy Projects**

With their professional knowledge and expertise, the faculty are involved in numerous consultation projects with the industry and government, advising them on various theoretical and practical problems. The Institute facilities are used for carrying out research, theoretical analyses, or experimentation to deliver such consultancy projects. The figures below show the number and sanctioned amount of the projects received over the years. The details of the ongoing consultancy projects and the new projects are available at iiitd.ac.in/ar/appendices23.





In Financial Year 2022-23, the Institute has received 4 New Consultancy Projects for a total sanctioned amount of **Rs. 1,31,00,200.** In the previous year the Institute has earned **Rs. 16,070,482** from consulatnacy projects

#### **The Sponsors**





















# **Industry Outreach Program**

The Industry Outreach Program (IOP) aims to connect and collaborate with leaders in academia, industry, and government to create industry readiness and foster future discoveries and scientific applications development. IIIT-Delhi recognizes the need to cooperate with the industry and provide direct interactive programs with the industry stalwarts through different Campus Connect programs.

The IOP office aims to engage with industries in four major domains, i.e., sponsored research, industry-sponsored Ph.D. fellowships, courses for industry professionals, and M.Tech. Thesis for the students. GOP (Govt. agencies Outreach Program) is managed by the team IOP and takes inputs from faculty members from time to time. The aim is to engage with government agencies to secure research projects, establish research centers, Ph.D. fellowships, etc.

As an IOP initiative, Fast Retailing Co., Ltd. signed an agreement with the Indraprastha Institute of Information Technology Delhi to create the Fast Retailing Educational Sponsorship Program for students with high potential who seek financial assistance.



Through this educational sponsorship program will be funded by Fast Retailing and cover full tuition and related costs for a total of five freshman students a year, covering the full four-year period for a bachelor's degree and two-year period for a master's degree. The structure of the program will be determined by the IIIT-Delhi to ensure it provides maximum benefit. The recipients will be able to participate in Japanese language and culture studies and intern at UNIQLO India. Candidates who pass certain milestones will also be eligible to join Fast Retailing in Japan or UNIQLO in India, to help leverage skills they gain during their studies.

#### Vision of IOP office

To build research, technology, and innovation collaborations with strong partnerships with industries for mutual benefits through R&D, Projects, IPR, etc.

#### Scope

IOP has a mandate to explore and execute business partnerships with industries and, up to some extent, Government agencies. It is envisaged to be one of the revenue-generating ventures of the Institute. The focus areas of IOP for revenue generation are research and human resource development.

#### **Verticals**



**Fellowship** 



Research partnerships with industries



Industry sponsored lab



Joint M. Tech. thesis



On-campus executive courses



Online executive courses





# **Entrepreneurship and Start-up Ecosystem**

While universities successfully produce good ideas, the socioeconomic ecosystem often fails to transform these ideas/ inventions into innovations that benefit the industry or society. IIIT-Delhi is aware of this weak link and has continuously evolved a culture of innovation and encouraging entrepreneurship.

IIITD Innovation and Incubation Center (IIITD-IC) is a tech incubator that fosters innovation by supporting technology-based start-ups. The aim is to enable an ecosystem for their growth, and IIITD-IC has been facilitating the ICT-based start-ups from various technology verticals.

IIITD-IC is actively contributing to the ecosystem by conducting outcome-focused events and activities. IIIT-Delhi continues to develop the infrastructure and mechanisms that enable the faculty to perform at the best of their capabilities, from idea generation to entrepreneurship. Additionally, intellectual property policies at IIIT-Delhi are open and non-restrictive, and a clearly defined process exists for engaging with the industry of incubating a start-up.

"If you're clear on what you believe, you have a great foundation to go make a market."

Ms. Ginni Rometty
Former President and CEO of IBM



#### **Current StartUps**



#### **START-UPS BY STUDENT**

Vimaan

#### **STARTUPS BY FACULTY**

- Cloud Lab
- Vertiglobal
- Autonomous Patrolling Bot

#### Millimeter Waveradio

Fastcrypt

#### **EXTERNAL** START-UPS •

- Digifolks
- Jivanah
- **Smart Tandoor**
- Piltover
- Onepointfivedc

- Mechphy
- Refu
- **Aaizel**
- **Boxoffice**
- Movio

# START-UPS • ShikshAl Pvt Ltd

- **GRADUATED** Being Vakil Learning Solutions Pvt Ltd

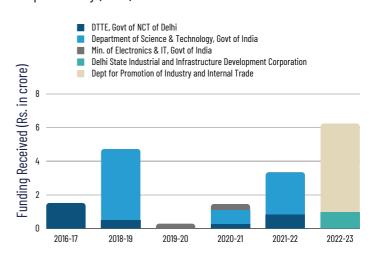
  - Fin Lit Project Services Pvt Ltd
  - Elegtrasoft Education Pvt Ltd
  - ALTT Associates Pvt Ltd
  - Ampviv Healthcare Pvt Ltd
  - I Traffic Exports Pvt Ltd
  - · Precily R&D Pvt Ltd

- VirtuBox Infotech Pvt Ltd
- Digifolks Pvt Ltd
- Embedsense Solutions Pvt Ltd
- Precily Pvt Ltd
- Spurtastic Technologies Pvt Ltd
- Stimveda Neurosciences Pvt Ltd
- Feroma Technologies Pvt Ltd

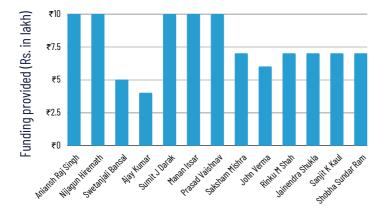
#### **Funding Received**

IIITD-IC has experienced significant support through various funding sources, reflecting a strong commitment to fostering innovation and entrepreneurship. Notably, the Center received a commendable contribution of Rs. **96.29 lakh** this year from the Delhi State Industrial and Infrastructure Development Corporation (DSIIDC) under its Corporate Social Responsibility (CSR) initiatives.

Additionally, the center's growth and innovation efforts have been bolstered by the Department for Promotion of Industry and Internal Trade's (DPIIT) Start India Seed Fund Scheme (SISFS), which provided a substantial funding of Rs. **525.00 lakh**. This initiative demonstrates the government's visionary approach to stimulating startup ecosystems and nurturing emerging enterprises.



#### PRAYAS Grant given by IIITD-IC



IIITD-IC's PRAYAS grant has been instrumental in fueling innovation by providing financial support to a group of talented innovators. This grant has enabled the realization of diverse ideas and projects, as reflected in the individuals who received funding. The contributions range from ₹4.00 lakhs to ₹10.00 lakhs, facilitating the innovative journey of start-ups.

#### **Facilities and Offerings**

IIITD-IC provides incubation space and logistical support. It helps start-ups and existing companies by providing, management, mentorship, co-working space, and technological assistance. The primary purpose of a start-up incubator is to help entrepreneurs grow their businesses. The incubation center also provides a monthly alumni fellowship of Rs. 30,000 to certain start-ups.





Recreational Facilities



IT Infrastructure



Design & Innovation Lab for hardware prototyping



Technical Mentoring



Networking & Marketing opportunities



**Business Advisory** 



Funding opportunities



Connect with Investors



Student Interns & Researchers from IIIT-Delhi

#### **Outreach Initiatives**

The IIITD-IC witnessed a vibrant display of patriotism with the "Har Jagah Tiranga Drive," a spirited event that took place recently. This event was not just a celebration of our national flag, but also a reflection of unity and pride. Alongside this, a remarkable opportunity for innovation and entrepreneurial spirit emerged through the "Pitch Cafe" event organized collaboratively by the E-Cell, IIITD-IC, and IIC. On the 3rd of September 2022, this event served as a dynamic platform for innovators to present and pitch their groundbreaking ideas. The event provided a nurturing environment where these budding visionaries could articulate their concepts, share their aspirations, and receive valuable feedback from a diverse audience.





#### **Achievements**

The collaborative efforts between the Department of Science and Technology (DST) and IIITD-IC have yielded remarkable recognition and opportunities within the startup ecosystem. In a noteworthy achievement, the facilities of IIITD-IC, along with one of its incubatees, **Velmenni, took center stage in a short film crafted for DST's Startup Utsav** as part of the Azadi Ka Amrit Mahotsav celebrations. This recognition not only highlighted the state-of-the-art infrastructure available at IIITD-IC but also showcased the innovative prowess of Velmenni as a promising startup.

Further amplifying its impact, IIITD-IC demonstrated its commitment to fostering entrepreneurship and innovation on a national scale. This was evident when **two startups incubated within IIITD-IC found their place in DST's National Level Compilation Book on 75 startups**. This recognition, within a national context, underscores the caliber of innovation nurtured within the incubation center and positions it as a hub for groundbreaking ideas.

Moreover, the IIITD-IC community played an active role in catalyzing the startup ecosystem by **hosting the** "Investor Pitching Meet 2022." This significant event was conducted under the SIDBI Cluster Intervention Program – Delhi NCR Innovation Cluster on September 15, 2022. By bringing together budding entrepreneurs and potential investors, the meet facilitated valuable connections and opportunities for funding and growth. This initiative aligns perfectly with IIITD-IC's mission to provide a supportive environment where startups can thrive and scale their innovative ventures. Through these achievements, IIITD-IC has solidified its position as a pivotal player in driving entrepreneurial success and technological advancement in the region.

## Technology Innovation Hub





#### iHuB Anubhuti

Technology Innovation Hub (TiH) on "Cognitive Computing and Social Sensing" for Interdisciplinary Cyber-Physical Systems (ICPS), called iHub Anubhuti, has been established by IIIT-Delhi as a Section 8 Company under the aegis of the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) of the Department of Science and Technology, Government of India.

Human Resource Development in "Machine Learning, Artificial Intelligence, and Cognitive Computing & Social Sensing" is an important goal of iHub Anubhuti. Towards this, it will support the human resources at different levels – Undergraduates, Postgraduates, Doctoral, Postdoctoral, Faculty Fellowships and Chair Professors. The aim is to increase CPS's research base and support the technical projects run under iHub Anubhuti.

## "If you're not innovating, you're standing still."

Mr. Sundar Pichai

CEO of Alphabet Inc., the parent company of Google

#### iHuB Anubhuti

#### **Focus**

The focus of the TIH is to develop technological solutions to any cutting-edge problems of national interest pertaining to cognitive computing and social sensing. However, we envision that the TIH will primarily grow in three major application verticals –

- Legal Information Processing System (Legaltech)
- Maternal and Child Public Health (HealthTech)
- Cognitive Computing and Social Sensing (EdTech)



#### **HUB Governing Body**



Ranjan Bose Director IIIT-Delhi

Chairman



Abhay Karandikar Director IITK

Academic representative



Narendra Ahuja

Academic representative



Ajai Chowdhry HCL founder

Industry representative



Debjani Ghosh President NASSCOM

Industry representative



Manish Gupta Director, Google Research, India

Industry representative



Venkat Padmanabhan Deputy Managing Director, Microsoft Research India

Industry representative



Prof. Uday B. Desai IIT-Hyderabad

Founding Director



Dr. Ekta Kapoor

Scientist 'F' & Head



Pushpendra Singh

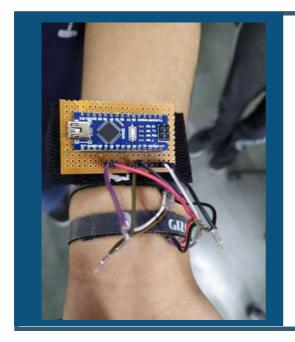
Project Director



Saurabh Kumar Chaubey iHub Anubhuti

CEO

#### **Technologies/Product Developed**



#### NadiPariksha

Remote healthcare monitoring allows people to continue to stay at home rather than in expensive healthcare facilities. Such systems equipped with non-invasive and unobtrusive wearable sensors can be viable diagnostic tools to the healthcare personnel for monitoring important physiological signs and activities of the patients in real-time, from a distant facility. Therefore, it is understandable that wearable sensors play a critical role in such monitoring systems that attracted the attention of many researchers, entrepreneurs, and tech giants in recent years. A variety of application specific wearable sensors, physiological and activity monitoring systems were proposed in the literature.

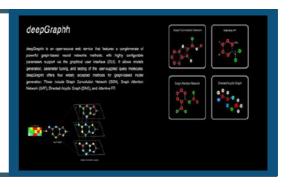
#### The aim is:

- To develop an integrated, and synchronized, dataset of healthdata from wearable sensors to facilitate the research and development in the e-health and m-health domains.
- To develop API tools for the aggregated health data based on artificial intelligence and machine learning techniques enabling intelligent queries.

#### DeepGraphh

DeepGraphh is a web service that features a conglomerate of powerful graph-based neural networks methods, with highly configurable parameters supported via GUI.

It allows model generation, parameter tuning, and testing of the user-supplied query molecules and offers four graph-based model that include Graph Convolution Networks (GCN), Graph Attention Networks (GAT), Directed Acyclic Graphs (DAG), and Attentive FP.



#### Start-ups Incubated/Supported

#### **CoRover Private Limited**



CoRover is a Human Centric Conversational Al Platform, with proprietary Cognitive Al technology.

#### Product key features:

- ISO 27001:2013 Certified (Information Security Management System)
- ISO 9001:2015 Certified (Process)
- Third party Security Test & Certification from CERT-In empanelled company
- Multiple layers of security-hosted in VPC, SSL encrypted and protected by DDOS attack shield
- Enabled with health checks and load balanced which makes the application accessible all times

#### Neuranics Lab Pvt. Ltd.



Neuranics Lab Pvt. Ltd. is a Startup supported by iHub Anubhuti-IIITD Foundation under the scheme of CPS-Seed Support System to leverage Cognitive Computing in the area of Healthcare. The envision of Neuranics Lab is to bring multitude of disease diagnosis in less than ten minutes with Al based diagnostic platform to located in remote areas and hence saving millions of lives by early diagnosis.

Recently, Neuranics Lab won the 3rd ISHIC challenge hosted by joined India Sweden Healthcare Innovation Centre in Delhi.

占

#### **Important News and Events**

Workshop 2023	Hands-on workshop on Python Libraries on Machine learning on 25th January 2023 that aimed develop the foundations of using ML-python libraries and forming the fundamentals of Cognitive Computing Research.
Launch of CHANAKYA Fellowship programs	This Fellowship Program offers an opportunity to UG, PG, Post Doctoral students to do an in-depth analysis and identify solutions with a focus on emerging technologies like Cognitive Computing and Social Sensing.
Launch of CPS Prayas	Under this program tech innovators from Cognitive Computing & Social Sensing domain are to apply for prototype grant under CPS-PRAYAS launched on 22 May 2023. The startups/innovators would be given a grant support upto 10 Lakhs to build their minimum viable product.
National Conference	A three day Symposium- ACM SIGCHI Symposium for HCl and friends was organized from 09.12.2023 - 11.12-2023
Anveshan 2.0 Hackathon	Anveshan was a IIIT-Delhi wide Hackathon event held offline from January 6-8, 2023 for IIIT-D students.  Students worked on the broader focus areas of: a. Human-Centered AI [AI technologies to enhance and empower—not replace—humans.] b. Metaverse [To create virtual shared space, at the convergence of virtually enhanced physical reality and physically persistent virtual space.] c. Technology and society [Understanding how technology influences society and the social factors that influence the technology.] d. Computer Vision e. Natural Language Processing (Text) f. Speech / Audio
Webinar	<ul> <li>A webinar on 360-degree review of ChatGPT (Cognitive Computing &amp; AI) was held on 27.01.2023 to explore the realm of AI by unleashing the power of language generation.</li> <li>A webinar on How AI can transform the hiring process was held on 17.02.2023.</li> </ul>
Head Start RISE	Headstart RISE – Start-up Summit which was held on 04.02.023 was an exclusive startup summit celebrating India's diverse startup ecosystem. The Summit has witnessed participation from Entrepreneurs, Speakers, Investors & Mentors.

#### **Medical Cobotics Centre**

I-Hub Foundation for Cobotics (IHFC), the Technology Innovation Hub (TIH) of Indian Institute of Technology Delhi (IIT Delhi) and iHub Anubhuti, the TIH of Indraprastha Institute of Information Technology Delhi (IIIT-Delhi), signed an Memorandum of Understanding on 17th November 2021 to set up India's first Medical Cobotics Centre (MCC) at IIIT-Delhi.

Medical Cobotics Centre (MCC) is a technology enabled medical simulation and training facility for the young resident doctors besides acting as a validation centre for the research outcomes in the area of healthcare robotics and digital health. It will facilitate the training of other healthcare professionals, paramedical staff, technicians, engineers, and researchers.

IIT Delhi and IIIT-Delhi have strong expertise in engineering and have strong linkages with researchers and medical professionals from various institutions in India, such as AIIMS and others. The two Hubs are committed to developing advanced technologies in the field of medical robotics/cobotics, digital health, sensing and computing technologies desired in robotic-assisted surgeries, training, and medical procedures.

The training programs will be designed in consultation with leading doctors/experts, mainly from All India Institute of Medical Sciences (AIIMS) New Delhi, MAX Healthcare and other prestigious medical colleges. They will be empanelled as guest faculty for conducting the same. The training programs would be at multiple levels (basic/advanced) and cohort-specific like urology, neurology, laparoscopy, and others, but initially limited to minimally invasive surgeries.

There are multiple equipment and sensors that have been installed for capacity building or training purposes, such as Human patient simulators, HPS Moulage kit, Digital PTZ HD Camera, All-in-one computer for simulated patient monitor, EEG band, Chest band bio harness, DGX Servers etc.



## Collaborations



. . . . .



#### **Collaborations**

At IIIT-Delhi, a vibrant culture of collaboration pervades every facet of its operation. The Institute's commitment to collaboration is evident both at the institutional and departmental levels. The faculty, driven by a passion for innovation, is strongly encouraged to engage in partnerships with colleagues not only within the country but also across international borders. These collaborations extend to diverse entities such as universities, industries, government bodies, and ministries, reflecting the institute's comprehensive approach.

On the industry front, IIIT-Delhi has strategically fostered numerous collaborations that empower students and faculty to engage with real-world challenges. These industry partnerships serve as dynamic platforms for knowledge exchange, internships, joint research projects, and technology transfer. By bridging the gap between academia and industry, the institute not only enriches the learning experiences of its students but also contributes to the practical application of cutting-edge research.

Faculty collaborations are a cornerstone of IIIT-Delhi's collaborative ethos. Faculty members are encouraged to establish academic and industry partnership that transcend geographical boundaries. These partnerships enable expertise sharing, cross-fertilisation of ideas, and innovative research. Such collaborations are a testament to the institute's commitment to advancing knowledge and driving societal progress through collective efforts.

IIIT-Delhi's culture of collaboration resonates at every level, enabling the institute to harness the power of partnerships to drive innovation, learning, and impactful contributions to society.

"Coming together is a beginning; keeping together is progress; working together is success."

Jawaharlal Nehru
First Prime Minister of independent India

#### **Institute Collaborations**

In today's changing world, forming research and industrial linkages has never been more critical. Further, the rate of globalization is proliferating with ultra-fast communication channels and growing travel facilities. Universities worldwide are already seeking to make the most of the possibilities this presents by forming global partnerships and fostering relationships with other institutions and industries. The recent pandemic has also highlighted the need for collaboration to address global challenges. Notable collaborations include:

- IIIT-Delhi established an academic and research collaboration with Namibia University of Science and Technology (NUST) through a Memorandum of Understanding (MoU).
- An MoU was signed with Vehant Technologies Pvt. Ltd. to foster cooperation and partnership.
- IIIT-Delhi is leading an Indo-EU collaboration for robotics capacity building.
- Collaboration was initiated between IIIT-Delhi, STPI, Ministry of Communication & Information Technology, Govt. Of India, and IESA to establish Electropreneur Park at IIIT-Delhi.
- A partnership was formed with ScanBalt MTÜ during the InnoHEALTH 2022 conference.
- Space Systems Laboratory and Automatic Control Laboratory at IIIT-Delhi signed an MoU with Enord Private Limited for joint research in drone navigation and control.
- A collaborative effort with All India Institute of Medical Sciences (AIIMS Delhi) aims to address healthcare challenges through digital health innovations.
- A collaboration with Université Côte d'Azur, France aims to promote joint research, innovation projects, and student/faculty exchanges.
- An MoU with Max Healthcare Institute Limited seeks to advance healthcare research and education.
- IIIT-Delhi collaborates with data.org and Abdul Latif Jameel Poverty Action Lab (J-PAL) South Asia to build data capacity and address climate change's impact on public health.

#### The Collaborators:

































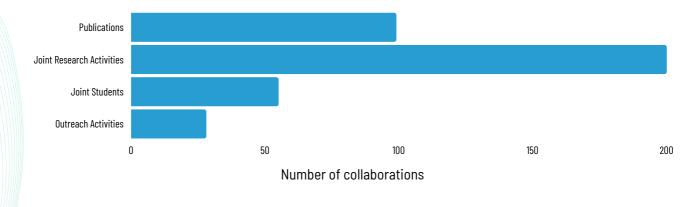


#### **Faculty Collaboration**

IIIT-Delhi's culture of collaboration is the driving force for research innovation. The Institute has an excellent reputation for its external collaborations. It has actively developed strong working relationships with reputable universities, research groups, policymakers, industry partners, and companies. The Institute runs a wide range of highly successful initiatives, including industry-sponsored research, in-house training, consultancy, and workshops. These collaborations add tremendous value to the socially relevant research and training programs of the Institute. The map below shows where the Institute's collaborators are located in, and the figure on the bottom of the page shows the outcome of the these collaborations. A detail list is given in the weblink iiitd.ac.in/ar/appendices23.



#### Outcome of faculty collaborations:



## Sustainable Development Goals





## **Initiatives Towards Sustainable Development Goals**

Sustainable development is crucial to the future of the country and the entire planet. The framework of the Sustainable Development Goals (SDGs) ensures social cohesion, economic prosperity, and protection of the environment. Education, research, and innovation are essential in sustainable development, making universities critical contributors to achieving the goals.

The Sustainable Development Goals provide a common international framework for concrete action. Adopted in 2015 by 193 countries, the 17 goals have 169 targets and are part of the United Nations sustainable development plan to end poverty, protect the planet, and ensure prosperity by 2030.

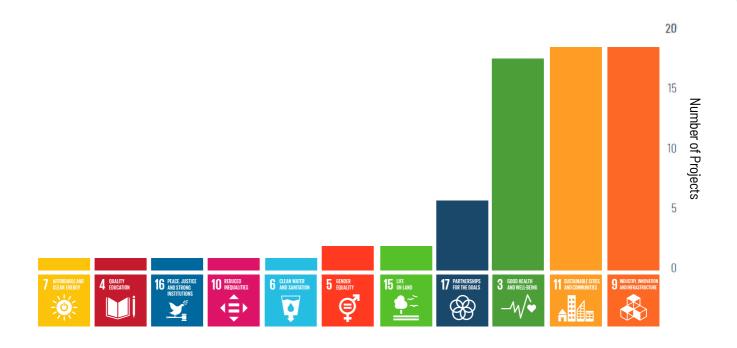
Institute's faculty, teachers, and students work in partnership with citizens and the private and the public sector, co-creating knowledge that can produce solutions. The combination of these core missions gives IIIT-Delhi a unique place in the joint effort to achieve the SDGs.

"Earth provides enough to satisfy every man's needs, but not every man's greed."

Mr. Mohandas Karamchand Gandhi Lawyer and anti-colonial nationalist

#### **Faculty Engagement with SDGs**

Universities in India and around the world are crucial for global sustainable development. IIIT- Delhi plays an essential role in the worldwide agenda for achieving the United Nations' Sustainable Development Goals (SDGs). The Institute contributes to the SDGs through research and education in various disciplines that can potentially contribute to a better future. In a complex and diverse country like India, realizing the Sustainable Development Goals must rest on knowledge, new research, innovation, and citizens empowered by critical thinking. Figure below shows the number of projects under each SDG being carried out at the Institute.



#### New research initiatives towards achieving SDGs

- Machine learning for critical care and community medicine
- Big data for clinical decision support
- Mobile Sensing and Data Analytics for Sustainability and Healthcare
- Mobile Device-centric Environment for Healthcare Delivery, Mobility, and transport
- Security issues in Online Social networks and e-Crime
- Prediction, detection, and monitoring system for landslides in hilly regions
- In-depth Analysis of Abuses in Social Media
- New technologies to transform social life.
- Privacy in India: Attitudes and Awareness
- Visual Wildlife Monitoring
- Autonomous Driving and Road Safety
- Target Tracking in Surveillance Camera
- Networks Medical Imaging
- Biometrics and Forensics
- Contactless Ticketing
- Digital Reproductive Health Management

#### **Sustainable Campus Management**

Sustainable campus management has become necessary to many universities and is often considered part of the institution's societal responsibility. Sustainable management can include energy saving measures, resource efficiency and waste reduction, sharing of services, infrastructure and facilities with other universities or external partners. A key element in all sustainability strategies is the "whole-institution approach," meaning all parts of the university community, including external stakeholders, are involved in the efforts.

#### **Green Campus Initiatives**



- Ecologically friendly campus
- Layout, orientation, and openings of the Campus buildings have been constructed to reduce incident heat in the working areas and reduce the HVAC load with adequate daylighting
- Aligned with the site topography to maintain the natural gradient with no sewage pumping requirements
- Terraces of the buildings are covered with heat reflective tiles / China crazy tile flooring and provided with insulation
- Sun-facing walls of academic and seminar blocks are cavity walls /with insulation. Windows/Glazing in such blocks are provided with vacuum insulated tinted double glass units to optimize HVAC load in the academic spaces
- Low embedded energy items, fly ash-based material as AAC blocks, and PPC Cement have been used in the construction works of the campus

#### **Waste Disposal and Sewage Treatment Plants**

- The entire sewage discharge is treated by 4 STPs, and the treated water and sludge is used for horticulture
- Solid waste management involves the segregation of dry and wet waste through separate colored collection bins, composting machine and two vermicompost pits
- The biomedical waste is disposed of through DPCC-authorized biomedical waste handlers
- E-waste and plastic waste are disposed of through authorized handlers
- The Institute strongly discourages single-use plastic



#### **Water Conservation**



- The rainwater is collected from terraces and used to recharge groundwater using rainwater collection and harvesting structures and swales.
- This enables the conservation of precious water resources, and only recycled water is used for horticulture

#### **Landscaped Greens**



- There are widespread green areas that are creatively landscaped to retain flora and fauna of the region
- The much-needed ambiance is provided with well-manicured lawns bordered by flowering beds, sit-out areas, and an open-air amphitheatre
- A herbal garden with around 30 species of medicinal plants has also been developed on campus

#### **Energy Conservation**

#### -Power Supply, HVAC Systems, Use of Non-Conventional Energy

- The air conditioning is through centralized chillers using energyefficient Screw compressors with VFD that is BMS controlled, and the system is also provided with VFDs, on all pumps and AHU's
- The power consumption is monitored through a power monitoring dashboard to track 24x7 usage of power through smart meters at all locations to prevent any wastage of electrical energy
- The energy-efficient building elements and MRL lifts conserve power Non-conventional Solar power plant energy systems, solar hot water systems with PNG backup, and high-performance heat pumps are used to heat water for the mess canteen kitchens, residential hostels, etc. The remaining academic block terraces have been provided with Solar Photovoltaic Power plants of a total of 220 KW grid-connected systems reducing the campus's carbon footprint



#### **Operations, Maintenance and Security of the Campus**



- The campus is maintained through a Facility Management System
- There is a security agency with CCTV monitoring and Security Access Control Systems in labs, BMS systems, and AMC of all major systems
- Use of Mechanized sweeping and cleaning equipment
- SOPs are available for the smooth operations of all the systems

The campus has received the **Swachh Bharat Campus award**, and the Academic and Lecture Hall Complex areas have secured the **GRIHA 4 star rating** 

# Outreach and Professional Services



86



#### **Outreach and Professional Services**

The Institute organises multiple events and outreach activities throughout the year for the benefit of the academic communities and public good. These activities not only wider visibility for the institute but also foster academic collaborations, exchanges, and knowledge sharing

Some outreach programs are also student-driven which help in their intellectual, emotional, social, moral, and aesthetic development. Growth in creative thinking, enthusiasm, and, positive thinking are some of the outcomes of these outreach activities.

"The end-product of education should be a free creative individual, who can battle against historical circumstances and adversities of nature."

Dr. Sarvepalli Radhakrishnan

Indian philosopher and politician who served as the 2nd President of India

#### Public Lecture: Sam Altman, CEO of OpenAl

IIIT-Delhi had the honor of hosting a distinguished guest - none other than Sam Altman, the CEO of OpenAl! During his visit, Sam met with Prof. Ranjan Bose, the Institute's Director, and Mr. Kiran Karnik, the Chairman of the Board of Governors at IIIT-Delhi.

Over 50+ talented developers specially invited from various parts of the country, had the privilege of engaging with the visionary CEO, making it an incredible opportunity for them. Sam Altman further conducted an insightful fireside chat, attracting more than 2000+ guests nationwide. The event proved to be truly enriching for everyone involved.



#### **Next-Generation Optical Networks Workshop**

The workshop centered around the evolving research of optical networks, which experienced rapid advancements due to the exponential growth of network traffic and the emergence of next-generation services. These developments, coupled with the limitations of existing technologies emphasized the need for long-term, efficient end-to-end solutions. Notably, the availability of significant high bandwidth in optical fiber projected a substantial growth in the optical communication system and networking market, transforming it into a billion-dollar industry.

The workshop aimed to address critical aspects of next-generation optical networks, offering a platform for industry veterans and academia experts to share their invaluable insights. Participants delved into various subjects, such as network management, planning, security, and other cross-layer areas. By discussing the architecture of future optical networks, the workshop provided attendees, including students, researchers, and industry professionals, with a comprehensive understanding of this dynamic field.





## Nineteenth International Conference on Natural Language Processing (ICON-2022)

The nineteenth International Conference on Natural Language Processing (ICON-2022) was held at IIIT-Delhi, India, promoting collaboration among NLP researchers. Submissions covered knowledge integration, code-mixing, semantic structure, and sentiment analysis. The conference featured over 1,500 participants, virtual and in-person, with various events including panel discussions, paper presentations, tutorials, and workshops on diverse NLP topics. Industry Connect facilitated connections between researchers and startups.





#### **Symposium on Computational Gastronomy**

IIIT-Delhi hosted the 4th edition of the 'Symposium on Computational Gastronomy'. Prof. Ranjan Bose, the Director of IIIT-Delhi, and Dr. Ganesh Bagler, faculty at the Department of CB and organizer of event, warmly welcomed all the guests to the inauguration ceremony, which commenced with the traditional lighting of the lamp. The symposium was organized by Complex Systems Laboratory, IIIT-Delhi, in collaboration with the Department of Biotechnology, India, IFCA - Indian Federation of Culinary Associations, Cheetah, and Recipe Cup, providing a platform for diverse insights and discussions in the field of computational gastronomy.



#### **AWL-SSH Symposium 2022**

Academic Writing Lab held the second AWL-SSH Symposium, centered on "Disruption and Its Discontents: Ethics, Politics, and Epistemology of Disruptive Technology." It built on the inaugural event "Crisis of Truth: The digital era and the future of knowledge" (August 2021).

Themes covered included communication technologies for freedom and democracy, disruptive technology's epistemology, Al's challenge to work ethics, digital revolution, discontent, power, algorithmic knowledge, art, ethics of digital identities and dissent, and the digital and the public idea.



#### Public Lecture by Dr. Chayanika Shah

On the occasion of the 14th Foundation Day of the Institute, a Public Lecture titled, 'Inclusive STEM education; Who Benefits?' was delivered by Dr. Chayanika Shah, an Independent Queer Feminist Researcher and Educator based in Mumbai. Dr. Shah, with her expertise in gender studies, has a significant background in co-building autonomous feminist movements in India, in addition to being a Retired Physics Lecturer. The lecture provided an insightful discussion on diversity in academia and how it impacts science innovation and research.

#### **Inauguration of Centre for Sustainable Mobility**

The Centre of Excellence on Sustainable Mobility at IIIT-Delhi signed a vital MoU with the Transport Department (Govt. of NCT of Delhi) to address urban mobility challenges through smart tech solutions. The centre's inauguration took place in the esteemed presence of Shri Ashish Kundra, the Commissioner of Transport, and Principal Secretary of Govt. of Delhi, along with other officials from the transport department. This event marks a significant milestone in the collaboration between IIIT-Delhi and the government authorities to enhance sustainable mobility in the region.



Indraprastha Institute of Information Technology Delhi co-organized and hosted InnoHEALTH 2022. The event, organized by InnovatioCuris (IC), focused on Digital Health, a priority area for the G20 summit 2023 under India's presidency. Policymakers, healthcare experts, providers, academics, scientists, and innovators deliberated on Healthcare Delivery, Health Research & Development, Affordable Treatment, and Digital Health Infrastructure. Discussions encompassed diverse aspects of digital health, including universal health coverage, AI, healthcare data, ethics, inclusion, and digital skilling of healthcare workforce. The event aligned with National Health Policy 2017, National Education Policy 2020, and Ayushman Bharat Digital Mission objectives.

### Digital Delhi Conclave on the theme "Quality and Equitable Education"

IIIT-Delhi successfully organized the fourth edition of its annual Digital Delhi Conclave on the theme "Quality and Equitable Education". On this occasion, Prof. M. Jagadesh Kumar delivered the keynote address. Leading academicians, researchers, research scholars, and policy-makers attended the conclave as speakers, panelists, and poster presenters to share their experiences, present and discuss the most recent innovations, trends, and concerns and discuss the practical challenges encountered and solutions adopted to impart quality education. The event also showcased artwork on this year's theme by artists as well as members of Meraki, the art society of the Institute

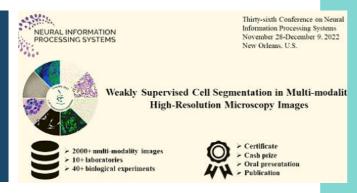












#### NeurlPS 2022

NeurIPS 2022, the "Weakly Supervised Cell Segmentation in Multi-modality High-Resolution Microscopy Images" competition was co-organized by SBILab, ECE Department at IIIT-Delhi. It aimed to benchmark cell segmentation methods for diverse microscopy images, using limited labeled and many unlabelled images to advance fully automatic cell image analysis tools for biological and biomedical research.



#### Visit of Mr. Jean-Noël Barrot, French Minister

Mr. Jean-Noël Barrot, French Minister for Digital Transition and Telecommunications, and delegates from the Embassy of France in India, visited IIIT-Delhi to seek the possibility of Indo-France collaborations.

During the visit of Mr. Barrot, the students and faculty members of the Institute showcased their research projects. During the visit, Minister Barrot spoke about the significance of technological innovation in Indo-French ties and tech opportunities in France for Indian students, researchers, and companies. The event concluded with Mr. Barrot's interaction with the students.



#### **Vigilance Awareness Week**

Vigilance Awareness Week. The valedictory ceremony commenced with a corporate movie by ONGC, followed by an on-the-spot quiz competition for IIIT-Delhi students and staff. Dr. N M Ahuja, Chief General Manager, Vigilance, ONGC, conducted a talk session and administered the integrity oath. ONGC officials, Ms. Seema M Bara, Mr. Neeraj Kharbanda, and Ms. Payal Gupta were present. Winners of various competitions during the Vigilance Awareness Week 2022 were felicitated, and Prof. Ranjan Bose, Director of IIIT-Delhi, addressed the audience and honored the ONGC officials.



#### **Industry Day**

The ECE Department, IIIT-Delhi organized Industry Day on campus to provide a platform for Institute faculty, students, and research scholars to interact directly with industry partners about practical research problems, focusing on building meaningful and long-term collaborations. As a part of Industry Day, interested Industry partners also presented a glimpse of their ongoing research and opportunities for collaborative projects.

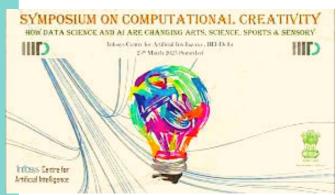
#### Workshop on Public Transit Data systems

The Centre of Excellence on Sustainable Mobility (CSM) at IIIT-Delhi hosted a highly beneficial one-day live workshop on Public Transit Data systems management using Python. Participants had the opportunity to learn and apply Python tools and techniques for efficient management and analysis of public transit data, contributing to advancements in sustainable mobility solutions.

#### **Symposium on Computational Creativity**

The Symposium on Computational Creativity was hosted by the Infosys Center for Artificial Intelligence at IIIT-Delhi. The event brought together researchers, practitioners, and enthusiasts from around the world, exploring the intersection of artificial intelligence, cognitive science, and the arts. The focus was on programming machines to produce creative outputs. Presentations and discussions covered various topics like painting, music, and text generation. Students showcased their work through posters, highlighting the latest advancements in the field. The symposium aimed to foster collaboration and interdisciplinary research, encouraging knowledge sharing and idea development among experts from different fields.





#### **Research Innovation and Incubation Showcase**

IIIT-Delhi successfully hosted the RIISE 2023 conference on the theme 'Intelligent and Innovative Systems Engineering'. The event attracted over 500 participants from academia, industry, and government agencies across India and beyond. It comprised a keynote talk, panel discussions, project demos, and poster sessions covering various topics like artificial intelligence, demystifying 6G communication, EV Design, and Industry 4.0.

The conference provided a valuable platform for researchers, practitioners, and students to exchange ideas, showcase their work, and foster networking opportunities. Moreover, the Start-up Showcase featured more than 10 budding start-ups presenting their ideas and strategies, while the Research Showcase boasted over 300 poster presentations making it a resounding success.







#### **Summer Research Workshop**

The Academic Writing Lab at IIIT-Delhi had organized an exclusive Summer Research Workshop, which was conducted by Dr. Payel C Mukherjee. This enriching opportunity was made available to all doctoral students at IIIT-Delhi, while a limited number of seats were also allocated to doctoral students from various colleges and universities in the Delhi-NCR region.



#### Signal Processing Cup and the Student Job Fair

Prof. Angshul Majumdar, a faculty member at IIIT-Delhi took the initiative to host two significant events, namely the Signal Processing Cup and the Student Job Fair 8 Luncheon, during ICASSP, the prestigious flagship conference of the IEEE Signal Processing Society. His efforts allowed students to showcase their skills in signa processing and provided them with valuable opportunities to explore job prospects in the field.



#### **5G Cellular Systems**

The ECE Department at IIIT-Delhi organized a two-week workshop on 5G Cellular Systems, aimed at skill development and training. The workshop, held from 17th July 2023, covered a comprehensive range of topics related to 5G and beyond 5G systems. Throughout the event, various sessions were conducted by expert speakers. The workshop attracted 70 participants during its initial week, providing them with valuable technical knowledge and essential skills for a successful career in the telecommunications sector. Notably, the workshop was offered free of charge to all participants.



#### **Seventh Summer Camp**

IIIT-Delhi hosted its seventh summer camp for government school students, with nearly 250 children. The camp was inaugurated by the Honorable Delhi Education Minister Ms. Atishi. Students from Delhi government schools attended the four-weeklong camp, engaging in various activities like science, mathematics, entrepreneurship, theater, art, marketing, and more. The camp introduced new modules on Applied Science, Astronomy, and Analytical Reasoning, focusing on developing critical thinking and problem-solving skills.

#### **Mobile Library Book Exhibition**

IIIT-Delhi Library in collaboration with National Book Trust, India organized a Mobile Library Book Exhibition on campus. This unique library on wheels was open to all and visited by the students, faculty, and staff of the Institute all day long. The exhibition displayed a collection of books ranging from biographies of Indian freedom fighters to science fiction, children's stories, and much more which the visitors were able to purchase on the spot.



#### **Blood Donation Drive**

The Institute organised blood donation drive on the occasion of the 14th Foundation Day of IIIT-Delhi. The drive was organized in collaboration with Rotaract Club of Outstanding Business Students and Rotaract Club of Delhi NCR, with support from Rotary Blood Bank. The initiative promoted the noble cause of blood donation and contributed to the welfare of the community. Participants enthusiastically came forward to donate blood, displaying a remarkable spirit of altruism and solidarity. This event highlighted the Institute's commitment to serving society and making a positive impact on people's lives.



#### YouthShala: A notion of Change

E-Cell at IIIT-Delhi in collaboration with The Tale of Humankind (a youth-led organisation catalysing youth action & inspiring change) organized "YouthShala: A notion of Change" on IIIT-Delhi campus. Youthshala is a multi-stakeholder convening and a platform for young people to exchange ideas and bring those ideas into action. The objective was to leverage this platform to motivate & mobilise young individuals to do social good by activating youth communities and collaborating with credible partners. The event hosted global leaders, business executives, social entrepreneurs, leading advocates, innovators, and young changemakers poised to create a singularly substantial impact on the world.









#### **Cope for Hope**

The Well-being Cell at IIIT-Delhi in association with YourDost organized a workshop for the students, faculty, and staff of the Institute on the topic "Cope for Hope", conducted by Ms. Archita Sobti (Psychologist). In this workshop, the participants learned about raising awareness around various mental health concerns, reducing the stigma around seeking mental health support, and encouraging well-informed action so that instances of self-harm can be reduced.

#### **Workshop on Scrap Art**

IIIT-Delhi's Design and Innovation Lab, in collaboration with the Art Society- Meraki, organized a one-of-akind, unparalleled practical learning Workshop on Scrap Art from 5th to 7th August 2022. The workshop provided an introduction to Scrap as well as Junk Art and covered various aspects, including Fundamental and Conceptualization for Scrap Art, Concept Development Session from Scrap piece, Basics of Assembling and Fabrication technique, Welding, Cutting, and Pasting of Metal and Plastic materials, and Construction and Deconstruction of 3D art form for Installation work.

#### **Expressive Art Therapy workshop**

The Well-being Cell at IIIT-Delhi organized an Expressive Art Therapy workshop for the students. The workshop promoted self-care among individuals through a combination of visual arts, music, mindfulness, body movement, and creative journaling techniques. It helped the participants not only relax but also gain new insights into their life.

The workshop was facilitated by Ms. Vasvi Srivastava, an experienced Expressive Arts Therapy Practitioner and co-founder of Abhyaantar Healing Arts.

#### **Clay Modelling Workshop**

The Department of Human Centered Design - IIII-Delhi and Center for Design & New Media IIIT-Delhi, in collaboration with DesignHub (the design club of IIIT-Delhi) organized a two-day Clay Modelling Workshop at the Institute. In this workshop, renowned artists from across the country shared their expertise and skills with the participants while guiding them with clay modelling techniques. The students enthusiastically participated in the event and enjoyed the entire workshop while gaining some hands-on experience with clay modelling.

#### **Painting Demonstration**

The "Painting Demonstration" was organized at the Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi) campus by the Centre for Design & New Media IIIT-Delhi in collaboration with the Department of Human Centered Design - IIIT-Delhi. Two eminent artists conducted the demonstration session, sharing their expertise and skills with the participants as they auided them through the workshop.



#### **Plantation Drive**

To commemorate its 14th Foundation Day, IIIT-Deln took a noble initiative to contribute to the environment by pledging to plant 1000 trees in and around its campus through a day-long plantation drive. The event was organized with great enthusiasm and participation from students, faculty, and staff. The plantation drive was not only a gesture of sustainability but also showcased the Institute's dedication to fostering a greener and more eco-friendly campus.



#### **International Yoga Day**

To foster a culture of holistic well-being and create an environment that promotes physical and mental wellness, IIIT-Delhi organized a comprehensive program for this year's International Yoga Day celebration consisting of yoga asanas practice, fitness challenge, a special Kathak performance, yoga dance, and talks by Yoga experts.



#### **ICCR Horizon Series**

Indian Council for Cultural Relations Zonal Office (North) in collaboration with IIIT-Delhi organized a Cultural Program under ICCR Horizon Series 2023 on campus with a special Bharatnatyam dance performance by Ms. Purvadhanashree.





#### **Workshop on Specific Learning Disabilities**

IIIT-Delhi conducted a Workshop on Specific Learning Disabilities in collaboration with Changeinkk foundation for the administrative staff of the Institute. The workshop provided valuable insights and information about Specific Learning Disabilities such as dyslexia, dyscalculia, and dysgraphia. It also equipped the staff with the knowledge to identify and support students with Specific Learning Disabilities, thus enabling the Institute to provide better education and facilities to the individuals with such disabilities.



#### Workshop on Social Media and Internet Addiction

Social Media and internet has positive uses providing real-time communication. However, its addiction results in disturbing the user's psychological state. To have better insights into this critical and relatable concern of our daily lives, Well-being Cell at IIIT-Delhi in association with YourDost organized an interactive workshop on 'Social Media and Internet Addiction' which discussed the impact of social media on our daily lives and strategies to build healthier routines.



#### **Start-up Fair**

The Start-up Fair 2023, co-presented by the Placement & IOP office, and Innovation and Incubation Center at IIIT-Delhi, aimed to integrate students into the start-up work culture by offering internship opportunities. It provided a platform for start-ups to showcase their vision, products, and technologies and invite students to collaborate. Inspired by the Start-up India initiative, the fair promoted sustainable growth and employment opportunities.



#### **Breathe Your Way to Success**

Well-being Cell at IIII-Delhi in association with The Art of Living organized a workshop titled 'Breathe Your Way to Success' conducted by Mr. Anmol Narang (Faculty, Art of Living).

The workshop was a combination of fun games, activities, interactive discussions, breathing techniques and also touched upon other techniques to improve focus & productivity.

#### **E-Summit**

The E-summit was a grand conclave that provided a platform for the next generation of leaders innovators, and entrepreneurs. Organized for the first time under the aegis of IIIT-Delhi, the event targeted students, young entrepreneurs, and startups. It featured over 15 activities, including start-up fairs pitching & networking sessions, investor talks, and social entrepreneurship fairs, covering various domains

E-summit aimed to empower young entrepreneurs and changemakers to exhibit their work, forge connections with peers, and collaborate on impactfu ideas. The event sought to foster a network or emerging entrepreneurs, investors, innovators, and leaders dedicated to creating positive changes in the world.



#### 'DecodEV' hackathon

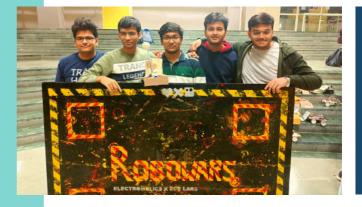
To solve the problems of the Electric Vehicle industry through Data and AI, 'WUElev8 – Where yoU Elevate' in association with 'E-Cell at IIIT-Delhi' invited the young talent, and startups to showcase their talent at the 'DecodEV' hackathon. This hackathon was able to provide 25+ solutions out of which 10+ ideas are expected to be incubated. Being one of the biggest EV hackathons, 150+ participants from 30+ engineering colleges across India, and 50+ guests joined including investors, various EV industry leaders, and academicians attending the event.



#### RoboWars 2.0

ECE Labs and Electroholics Club at IIIT-Delh organized a 3-day event RoboWars 2.0, for first-year students to introduce the world of electronics and robotics to them. The first two days were workshop sessions in which students worked on their bots, and the finale happened on the event's third day.

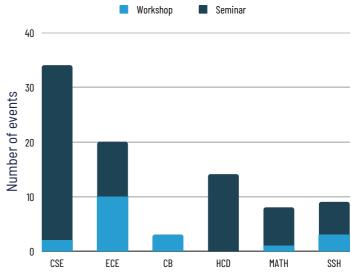
On the final day, the participants were engaged in a knockout tournament with the bots they made in the two-day workshop.



#### **Department Events**

To facilitate collaboration with other scientists and researchers, the departments and the centres regularly organize various seminars and workshops on campus. The departments also organise the students' panels, screenings, and other engaging activities. IIIT-Delhi organized many conferences, seminars, workshops, and short courses in 2022-23.

The breath of the activities organised by the departments covered a wide range of topics including, but not limited include to: Democratizing programming via end-user programming; Investigating cell-fate paradigms during development using single-cell genomics; Quantifying the vulnerability of agricultural Households in India to Extreme Weather Events; Learning with Human-Computer Interactions; a workshop on '3D Scanning; Effective Scientific Communication & Illustration; Conundrums of Class, Caste, and History: Urban Hindu Nadar Identities in South India'; The Philosophy of the Novel and the Novelist's Craft' and more. The figure on the right gives the number of events organized by the departments and details are available at: iiitd.ac.in/ar/appendices23.



#### **Library Outreach Activities**

The Library and Information Center of the Institute conducts many informative events throughout the year. The events invite resource persons from the Institute and external domain experts to deliver talks. In the last year, the Library and Information Centre organized the following events:

- Road to global masters program through GRE
- Mobile library book exhibition
- A webinar on know your library
- A webinar on SIAM online journals
- A webinar on Turnitin: A plagiarism checker
- A webinar on birdwatching
- Book Exchange Week 2023
- Annual Book Exhibition 2023
- A webinar on publishing scholarly content with IEEE: Publishers' Perspective
- A webinar on Algorithms for the People : Democracy in the Age of Al
- A webinar on Overleaf (collaborative writing & publishing)
- A session on Chandrayaan & space technology





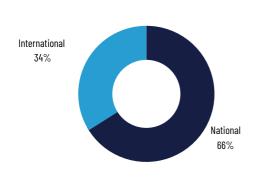




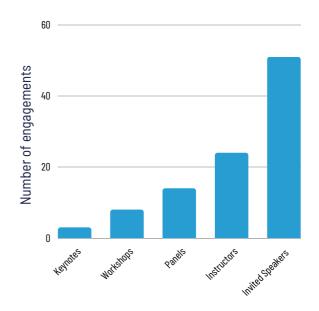
#### **Faculty Outreach Activities**

#### **Invited Talks**

During 2022-23, the faculty members were invited to various institutes and conferences nationally and internationally as guest speakers. Apart from the technical talks, the faculty members were also invited as resources person for FDPs on multiple platforms. The figure below on the left summarises the number of engagement by the faculty in India and abroad. The figure on right gives a brief on the type of engagements. A detailed list is given in the weblink iiitd.ac.in/ar/appendices23.



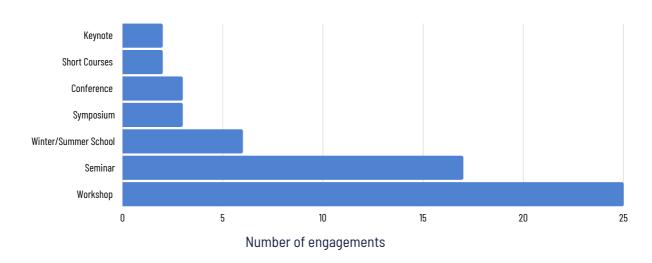
International and Indian engagements



#### **Events Organised**

A strong faculty engagement in outreach is significant for generating and disseminating knowledge. It is a source of new insights and understanding. It builds bridges between theory and practice, directly and indirectly, benefiting the teaching and learning process.

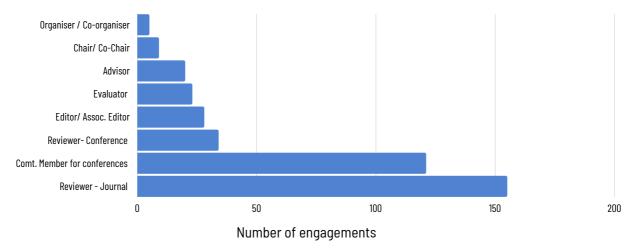
IIIT-Delhi encourages faculty members to undertake outreach activities and organize workshops, seminars, and courses within and outside the Institute. Last year, the faculty members were involved in more than 50 such activities, including organizing workshops, giving talks, organizing short courses, etc. The figure below provides a summarised version of number and types of engagements, and detailed list is given in the weblink iiitd.ac.in/ar/appendices23.



#### **Professional Services by Faculty Members**

Faculty members regularly serve as chairs /members of several national/ international committees and international conferences. Many faculty members are part of editorial boards and regularly serve as reviewers of national and international journals.

Faculty members perform a broad array of services that are vital in supporting and sustaining the quality and effectiveness of the programs at the Institute and departmental levels (institutional service). Faculty members also provide academic and administrative assistance to their disciplines, furthering their research areas as professional service. Additionally, faculty members contribute to the larger community by engaging in outreach activities and making their communities a better place for sustainable living. A brief of the professionals services and number of engagements is shown in the figure below and a detailed list is given in the weblink iiitd.ac.in/ar/appendices23.

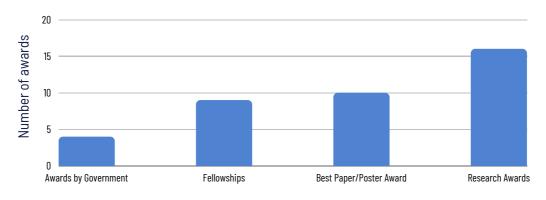


#### **Faculty Awards and Recognitions**

The faculty members of the Institute are well-known in the international academic community for their research. Many colleagues serve on conference committees, editorial boards, and professional societies and have been recognized for their research contributions and accomplishments. The Institute values the hard work of the faculty members and acknowledges the role of awards in nudging towards excellence.

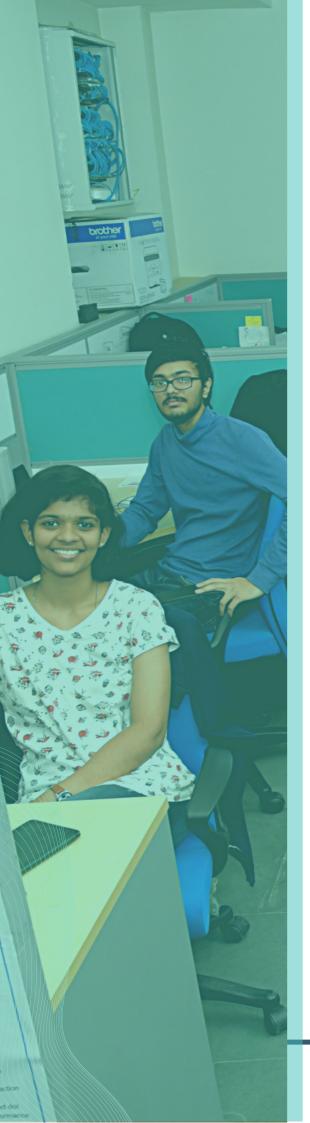
The faculty members have received several academic awards for their outstanding research work. Many of them have received prestigious research grants and fellowships. A summary of the awards/ recognitions is shown in the figure below, and a detailed list is given in the weblink iiitd.ac.in/ar/appendices23.

In the past year, faculty members received recognition for their research contributions by the Indian Government and other international agencies. Several faculty members received distinguished awards and accolades, including the CXO Health Excellence Award, The Mahony-Neumann-Room Prize, Biology and Biochemistry in India Leader Award, New and Future Al Educator Award from AAAI, INAE Young Innovator and Entrepreneur Award, among others.



## Placements and Internship





#### **Placements and Internship**

The presence of world-class research facilities, close institute-industry collaborations, international exchange programs, interdisciplinary research collaborations, and industrial training opportunities help the students of IIIT-Delhi excel and be ahead in the competitive professional environment. The placement drive at the Institute is a year-long event.

The placements, done in two phases, demonstrated the demand for our graduates among the top recruiters in various segments and sectors of the economy. Against the backdrop of general uncertainty due to economic slowdown, and recessionary trends in job creation, IIIT-Delhi students confidently participated in the placement with necessary preparatory activities for students to prepare them on both technical and interpersonal levels. IIIT-Delhi is an Institute that enables the practical employability of the students. Most of the courses involve projects ensuring a hands-on knowledge of the area/technology. This blend of theory and practical skills makes them highly employable compared to any other institute. IIIT-Delhi students enjoy the best combination of strong technical background and excellent soft skills. The Placements Cell at IIIT-Delhi takes a comprehensive examination of the students at the beginning of the 6th semester, which includes courses from all previous semesters, to fill the gaps in what they have studied so far.

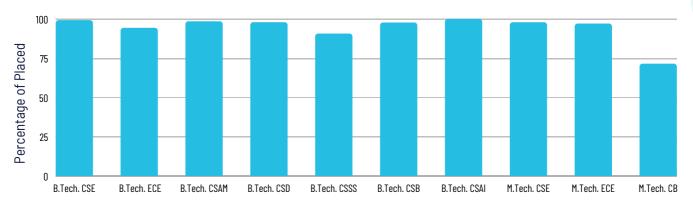
The Placement Cell organizes CV Writing Workshops, Mock Interviews, and Group discussions to prepare every student for job interviews. The Placement Office is run and managed by an efficient team of office staff that handles all aspects of placements at IIIT-Delhi, from contacting companies to managing all the logistics and arranging for the tests and pre-placement talks conducted for final interviews.

"Success can come to you by courageous devotion to the task lying in front of you."

Sir C. V. Raman Indian physicist

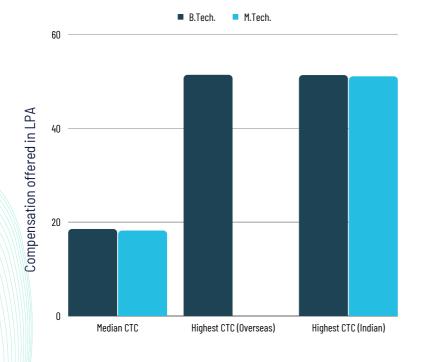
#### **Placement of Class of 2023**

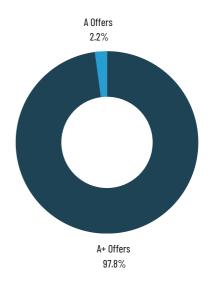
IIIT-Delhi is dedicated to ensuring the successful placement of its students in reputable organizations, and its impeccable placement record speaks for itself. The figure below shows the percentage of students placed from each program in the year 2023.



Total full-time offers: 604

The industry is always in need of highly-skilled fresh talent. IIIT-Delhi addresses this need through a comprehensive and long-term approach to education with a positively charged professional atmosphere. The Institute has a blend of highly accomplished and motivated faculty with an enthusiastic student group. The figure below on the left shows the compensation offered during 2022-23, and the figure on the right shows the categorisation of offers in A and A+ offers.





Total offers in each category
A+ Offers: CTC => 11 LPA
A Offers: 7 lakhs < CTC < 10.5 LPA

#### **Placement Over the Years**

During IIIT-Delhi placements 2022-23, over 151 companies participated in the placement drive and, 96.75% of students have been placed across all the programs. The highest domestic CTC stood at INR 51.03 LPA. The average and median CTC stood at INR 23.72 LPA and INR 18.5 LPA, respectively. The figure below shows the placement statistics over the years.



Year-wise comparison

#### **Top Recruiters**



# **Student Internships**

Industrial exposure and practical experience play a significant role in transiting to the corporate world. Internships have thus become vital as they provide this exposure and experience and help one's personal growth and development. Students from their second and third years of Bachelor's and first year of Master's programs appear for internship recruitment. Keeping the diversity of students in mind and the importance of internships in context, the Placement Office strives hard to provide students with the best opportunities in their field of interest. Placement Office also encourages research by giving students research internship opportunities at esteemed universities.

The summer internship program at IIIT-Delhi continues to grow every year. In addition to IIIT- Delhi students working on projects/research topics through this program, the Institute also gives students from other institutions opportunities to work at IIIT-Delhi.

Students at IIIT-Delhi can opt for the following kinds of internships:

- Summer Internship (only B.Tech.) May July, max duration 6 to 8 weeks
- Long-term Internship Duration 04 to 06 months (Note It is not a mandatory part of the curriculum for any program)

#### **Internship Numbers 2022-23**

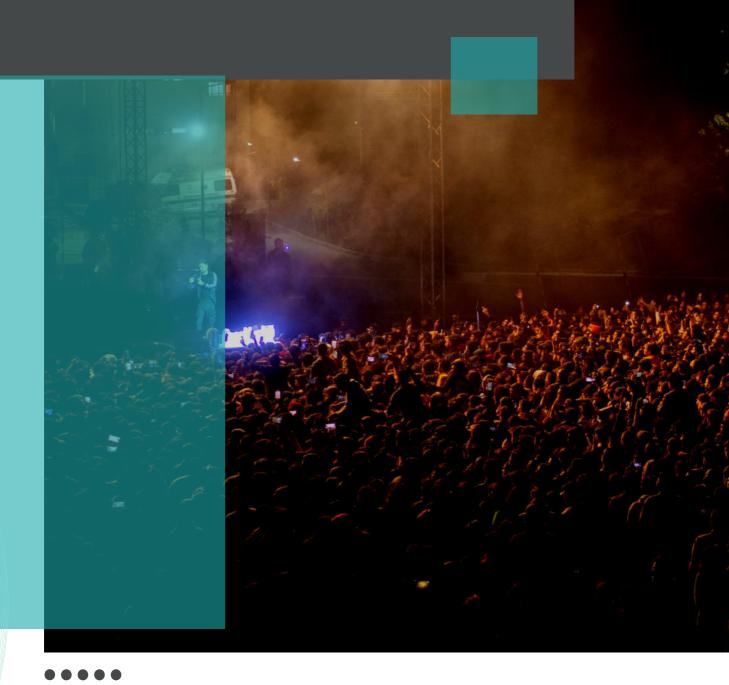
209 - B.Tech. Pre Final Year Internships

156- B.Tech. and M.Tech. Final Year Internships

#### **Roles Offered**



# **Student Matters**





# **Ecosystem for Growth**

The Institute encourages a holistic academic experience, where enriching student life balances deep intellectual explorations, fostering the development of healthy and resilient individuals capable of rising to life's challenges. The Institute provides an array of support services, from counseling and peer assistance to academic mentoring and tutoring, offering students additional help whenever needed, thereby equipping them for success in the real world. The vibrant student life and multifaceted activities on campus create a stimulating environment that promotes independent thinking and introspection, while also encouraging the students to embrace responsibility.

IIIT-Delhi ensures that students have ample opportunities to participate in Institute affairs, actively involving them in formulating and reviewing policies related to student life, services, and interests. IIIT-Delhi students significantly contribute to creating, synthesizing, and disseminating knowledge through numerous opportunities to engage in cutting-edge research.

"Never let what somebody else says distract you from your goals."

Ms. Michelle Obama

First Lady of the United States (2009-2017)

## Vibrant Student Life at IIIT-Delhi

The student life at IIIT-Delhi is known for its vibrancy and dynamic nature. The Institute fosters a stimulating academic environment that encourages research and innovation in information technology and related fields.

Beyond academics, students have access to a wide array of extracurricular activities through various clubs and societies, catering to diverse interests such as coding, robotics, entrepreneurship, literature, music, and dance. These clubs organize events, workshops, and competitions, offering students ample opportunities to pursue their passions outside of their studies.

The campus is abuzz with cultural and technical festivals that showcase the talents and skills of the students, drawing participants from other colleges and creating a lively atmosphere. Additionally, hostel life promotes a strong sense of community, where residents often organize engaging activities. The Institute's location in Delhi, India's bustling capital city, further enriches the student experience, providing access to various cultural events, historical sites, shopping centers, and entertainment options. IIIT-Delhi typically offers support services like counseling, career guidance, and health facilities to ensure the well-being of its students.

#### **B.Tech. Induction 2022**

The Induction program for the B.Tech. batch of 2022 at IIIT-Delhi was a carefully curated event that took place in the month of November 2022. It served as a significant milestone in the academic journey of the incoming students, providing them with an exciting introduction to the Institute's academic and social life.

During the program, prominent industry leaders and academic experts graced the occasion with their presence and shared their valuable insights through keynote sessions. Mr. Suvrat Bhooshan, the Founder of GAN, inspired the students with his entrepreneurial journey and valuable experiences. Prof. Pankaj Jalote, the Founding Director and Distinguished Professor at IIIT-Delhi, imparted his knowledge and wisdom, motivating the students to excel in their academic pursuits. Dr. Satish Kumar, Founder & President of AEEE and an Ex EE Ambassador & VP at Schneider Electric, shared his expertise, providing students with a glimpse of the real-world applications of their chosen fields of study. These sessions not only broadened the students' horizons but also instilled a sense of purpose and passion within them as they embarked on their academic journey.

Beyond the keynote sessions, the Induction program featured an array of exhilarating activities and engaging sessions. These activities were designed to help the incoming students get to know each other, build friendships, and foster a sense of community. Such interactions are vital in creating a supportive and inclusive campus environment, where students feel comfortable expressing themselves and collaborating with their peers.

Moreover, the Induction program served as a platform for the students to become acquainted with the campus infrastructure, academic resources, and support services available to them. Understanding the layout of the campus and knowing where to access essential resources helps students navigate their new academic environment with confidence.

#### B. Tech. Induction for Batch of 2021

In addition to the main Induction program, the Office of Student Affairs conducted a soft induction for the B.Tech batch of 2021 on 20th March 2023. This session aimed to prepare the students for the upcoming academic year. Various topics were covered, including essential information about placements and the Disciplinary Action Committee (DAC), equipping the students with the necessary knowledge and resources to thrive in their academic and professional endeavors. Overall, both the Induction program for the B.Tech batch of 2022 and the soft induction for the B.Tech batch of 2021 contributed significantly to creating a supportive and inspiring learning environment at IIIT Delhi.

#### M. Tech. Induction 2023

The Induction program for the M.Tech batch of 2023 at IIIT-Delhi took place from 30th June 2023 to 2nd July 2023, marking a significant beginning for the incoming students' academic journey. The program featured diverse sessions aimed at welcoming and orienting the new students to the Institute's academic, cultural, and social landscape.

The sessions began with a warm welcome note by the Director, accompanied by the Deans of Office of Academic Affairs, Office of Innovation Research and Development, and Registrar of IIIT-Delhi. This set the tone for the inclusive and supportive atmosphere that the Institute aims to provide for its students.

One of the highlights of the program were the keynotes delivered by distinguished speakers. Capt. Akhilesh Saxena, VP-Global Service Delivery at Tata Communications and a renowned motivational and TED Speaker, shared his inspiring journey and experiences, leaving a lasting impact on the students. Prof. Pankaj Jalote, Founding Director and Distinguished Professor at IIIT-Delhi, provided valuable insights into the Institute's rich history and the academic ethos it upholds. Mr. Zafar Iqbal, an Indian Olympic Athlete, former Indian Hockey National Team Captain and Head Coach, Arjuna Awardee, and Padma Shri Awardee, motivated the students with his remarkable achievements and sportsmanship.

The program also offered cultural enrichment through a mesmerising Kathak performance by Shri Ravi Prakash on the concluding day. This artistic expression added an aesthetic touch to the induction experience, highlighting the institute's appreciation for art and culture.

As part of the Induction Program, the students participated in a Gender Sensitization Workshop, reflecting the Institute's commitment to fostering a safe and inclusive environment for all its members. Additionally, they were introduced to the world of startups, allowing them to explore entrepreneurial opportunities and understand the relevance of innovation in today's professional landscape.

Overall, the Induction Program for the M.Tech. batch of 2023 at IIIT-Delhi provided a comprehensive and engaging platform for the incoming students to acclimate to their new academic environment, forge meaningful connections, and gain inspiration from accomplished individuals. It set the stage for a promising and enriching academic journey for the students as they embarked on their postgraduate studies at IIIT-Delhi.



#### **Student Fests**

At IIIT-Delhi, the student community thrives enthusiastically, organising two festivals that are eagerly anticipated every year. The first is the technical festival called **ESYA**. ESYA serves as a platform for students to showcase their technical prowess, innovations, and problem-solving skills. The festival encompasses a wide array of activities, including workshops, hackathons, coding competitions, robotics challenges, and technical talks by industry experts. ESYA attracts participants from within the Institute and various other colleges, making it a hub of technical brilliance and innovation.

The second major festival is **Odyssey**, a cultural extravaganza celebrated in the month of January. On the 27th and 28th of January 2023. The campus was transformed into a bustling hub of creativity and entertainment during the captivating Odyssey festival. The event showcased a diverse range of activities, catering to various interests and passions. The students were treated to the fun-filled performances by talented artists like **Gurleen Pannu, Samay Raina; and Akhil**, whose melodies resonated with the audience, leaving an indelible mark on their hearts. The dynamic duo of **Salim Sulaiman** brought their electrifying stage presence, setting the stage ablaze with their enthralling musical act, creating an unforgettable experience for everyone in attendance.

In addition to the mesmerising musical performances, Odyssey offered a plethora of other engaging activities. Dance enthusiasts flaunted their moves, artists displayed their creativity in stunning art exhibitions, and quiz aficionados tested their knowledge in intellectually stimulating quizzes. The festival also embraced the spirit of fun and fashion, with various light-hearted activities and fashion shows adding a vibrant and lively touch to the event.

Notably, Odyssey's allure extended beyond the confines of IIIT-Delhi, drawing participants from other institutions to join in the festivities. The festival's popularity resulted in massive external participation, making it an event of regional significance. The contests held during the festival further contributed to its appeal, encouraging healthy competition and rewarding excellence in various fields.

Overall, Odyssey's resounding success was a testament to the students' collective effort, dedication, and passion for organizing an event that celebrates creativity and camaraderie. The festival's all-encompassing nature, star performances, and extensive external participation exemplify the spirit of unity and inclusivity that thrives within the IIIT-Delhi community.



#### **TED**xIIITD

On the 8th of April 2023, the latest edition of TEDxIIITD was held, and it proved to be a captivating experience for all attendees. The event featured talks by exceptional speakers like Bhagyashree, an Indian actress and social worker. Bhuvan Bam, a renowned YouTuber, comedian, and musician, shared his unique journey and insights on creativity and self-expression. Atut Srivastava, an innovative technologist and entrepreneur, showcased his groundbreaking work in the field of technology and its potential to shape the future.

In addition to these remarkable speakers, TEDxIIITD also integrated engaging video talks and live presentations, creating an environment that sparked deep discussions and meaningful connections among the participants. The carefully curated lineup of speakers brought a myriad of perspectives and insights on a wide range of topics, from technology and science to arts and social issues.

In addition to hosting thought-provoking talks and inspiring discussions, TEDxIIITD went the extra mile to provide its participants with unforgettable experiences beyond the event itself. Organising enriching trips, TEDxIIITD offered students the opportunity to explore and unwind, fostering a sense of camaraderie and adventure.

The students organised a trip to the picturesque town of Rishikesh, renowned for its spiritual aura and breathtaking natural beauty. The participants embarked on a journey that took them amidst the serene landscapes and pristine waters of the Ganges River. Additionally, TEDxIIITD organised an exhilarating trip to Adventure Island, a renowned amusement park in Delhi. Filled with thrilling rides, water attractions, and fun-filled activities, the trip brought out the inner child in every participant. The joy and excitement were palpable as students bonded over shared laughter and exhilarating experiences on the various rides. TEDxIIITD ensured that the participants not only engaged in inspiring talks but also embarked on journeys of self-discovery and connection with their peers. The spirit of TEDxIIITD extended far beyond the event's confines, creating a holistic and transformative experience for all those involved.





#### **Astra 2023**

IIIT-Delhi's Sports Council organized Astra 2023, the Institute's inaugural Annual Sports Fest, held from 24th to 26th March 2023, with the aim of promoting and nurturing a strong sports culture within the campus. Over the course of three exciting days, the event featured 15 sports for both men and women, drawing enthusiastic participation from more than 3000 students across various years, departments, and colleges. A pre-event held on 22nd March featured fun games like Fifa and Tekken, generating excitement and anticipation among the Institute community. Astra 2023 boasted a prize pool exceeding 10 lakh rupees, further fueling the competitive spirit.

The fest witnessed captivating moments of competition and camaraderie in team sports such as cricket, football, badminton, basketball, squash, swimming, volleyball, chess, e-sports, table-tennis, foosball, lawn tennis, pool, snooker, and power-lifting. The audience's enthusiastic support from the sidelines played a vital role in creating an electrifying atmosphere throughout the event.

The opening ceremony featured a torch lighting ceremony and inspiring speeches by the Institute's Director, Ranjan Bose, and Arjuna Awardee, Rajkumar Sangwan, motivating participants to excel in sports and life. To refresh and entertain the participants, an EDM night was organised on Day 2, attracting a footfall of over 2000, including participants from outside IIIT-Delhi, who grooved to the beats of DJ-Shaan.

The successful conclusion on 26th March saw a grand closing ceremony where awards and medals were presented to the winners of Astra 2023, encouraging them to continue their sports journey. The event's triumph was a testament to the relentless efforts and dedication of the Sports Council and Astra Team members, who ensured its resounding success and laid the foundation for an even more promising and exciting future for sports at IIIT-Delhi.



#### **Events of Student Clubs**

CLUBS	Activity	
Meraki	Scrap Art Workshop, Painting Workshop, Scrap Art Exhibition, Cathect	
D4rkc0de	Introductory session to familiarize students with Capture the Flag tournaments	
ACM IIITD	CodeGolf	
FooBar	ProSort Junior, ProSort, CodeClass	
Tasveer	The 1st cut, Photo-walk to Chandni Chowk, Photo-walk to Majnu Ka Tilla	
Muse	Trashion	
Women-in-Tech	Scholarships and Resume Building, Interactive session on All about MBA , Tech Journey of seniors	
BioBytes	Introduction to Web Scraping using Python and BeautifulSoup, Building and Deploying ML models	
Byld	Introduction to Web Scraping using Python and BeautifulSoup	
Salt N' Pepper	Masala Medley, Food Walk in Delhi, Food Fiesta	
Lean In	Introductory session on Open Source with Fedora's Marie Nordin	
The 65th Square	Blitz chess tournament, The Swiss Takedown,	
Évaristé	Problem of the Week (POTW), Speed Proving Tournament, Theory Talkby Dr. Manuj Mukherjee	
Finnexia	A dive into the Indian Government's Budget 2023 and the Hindenburg Report, Trading Titans	
PhiloSoc	Discussion on the trails that happened after WW II	
DesignHub IIITD	Red Bull Doodle Event	

#### **Student Welfare**

#### Hostel, Mess, and Cafeteria

IIIT-Delhi provides accommodation to students wishing to reside in the hostels. There are four hostels, two for the boys with 508 and 454 beds, respectively. The remaining two hostels for the girls have the provision of 380 and 394 beds. There are 22 married hostel accommodations available for married Ph.D. students. Each room in both the hostels has furniture needed by a student - bed, table, chair, bookshelf, cupboard, etc. The rooms are equipped with night-time air conditioning in summer and heating in winter. High-speed internet connectivity is also available in hostels.

The hostels have options of single and double-occupancy rooms, all of which are air-conditioned. Four guest rooms are available at the hostels for guests visiting the Institute. All hostel students are free to move around the campus at all times, and some of the study areas are open 24x7 for the benefit of students. To provide 24x7 medical cover for our faculty, staff, and students both staying in hostel and day scholars, the Institute has set up a health-centre along with the availability of an in-house nurse and a resident doctor on a full-time basis. Visiting Doctors are also available from Monday through Saturday.

There is a mess for the students, which functions during the working semester and breaks. A canteen also operates throughout the day and night. The Institute also has an ATM and Automatic laundry system for students, which is fully functional and available around the clock. A stationery shop, Mother Dairy outlet, DOSA Corner, and Chai Adda, for students to meet their daily needs. During the winter and summer vacations, a special mess facility runs for students who must stay in the hostels to pursue academic, sports, or cultural activities.

An external security agency has been contracted to provide security at the hostels. The services of the security personnel are monitored by the Facility Management Services team headed by the Chief Engineer. Besides, Faculty-In-Charge-Food, Student Affairs office, and Mess Committee, which has representatives from hostel committees and day scholars, also monitor the quality, taste, and hygiene of the food served in the mess. They also interact with the mess vendor to provide him with student feedback and accordingly effect changes in the weekly menu. Periodical review and inspection of the quality of food items also form part of their duties.



#### **Well-being Cell**

The Institute has a Well-being cell with two counsellors (one full-time and one part-time) and two faculty incharges helping the students. The Well-Being Cell offers free and confidential psychological support to all the students and staff members of the university. Additionally, there is an active Student Mentorship Program (SMP) which six faculty members manage, one from each department, taking care of the mentormentees and interacting with students. SMP aims to enable constructive and positive interaction, guidance, and mentorship of junior students by senior students. The student mentor is generally more experienced than the mentee and uses that experience constructively to support the first-year students' development. The role of a student mentor is to facilitate, be supportive, and contribute to the student community in general. The mentoring relationship provides an opportunity not just to the mentees but to the mentors too, to learn and grow together. In addition to the existing Well-being Cell's counselling services the Institute has started an online counselling services in collaboration with YourDost, India's first and largest online mental health and emotional wellness coach.

#### **Anti-ragging Policy**

IIIT Delhi has a zero-tolerance policy on ragging, which is a punishable offence. The Institute has formed an anti-ragging committee and anti-ragging squads. Besides, each student of the Institute and their parents or guardians must submit a combined undertaking against ragging at the time of registration, which is a mandatory process. All the officials of the Institute, students, parents and guardians of the students, members of the anti-ragging committee, and the squad need to adhere to the stipulations. This approach effectively monitors and complies with the provisions against ragging. The Institute has the following measures in place:

- Institute-level Anti-Ragging Committee
- Hostel-level Anti-Ragging Committee
- Message/Complaint Boxes near the academic area
- Undertaking from the Students and Parents
- Disciplinary action in case of violation of the above rules are:
  - Removal from hostel
  - Referring the case to the disciplinary action committee

#### **Policy Against Violence Inside/outside Campus**

Any form of violence and harassment is not tolerated at IIIT-Delhi. Reasonable steps are taken to protect students from campus violence and harassment. Thorough investigations are conducted to deal with all incidents and complaints in a fair and timely manner, respecting the privacy of all concerned as much as possible. Individuals who commit violence on campus and harassment may be subject to disciplinary action, criminal penalties, or both. Retaliation or reprisals are prohibited against any person who, in good faith, has complained under this policy.

#### **Policy of Non-discrimination**

The Institute embraces and leverages diversity in all of its forms. It complies with applicable provisions of the state law, which prohibits discrimination in employment, or in admission or access to its educational or extracurricular programs, activities, or facilities, based on caste, gender identity or expression, race, creed, color, place of birth, ancestry, ethnicity, national origin, religion, sex, sexual orientation, age, marital status, service in the armed forces, positive HIV-related blood test results, genetic information, or against qualified individuals with disabilities based on disability or any other group or characteristic as defined and to the extent protected by applicable law.

# **Women-friendly Campus**

#### **Internal Complaints Committee**

The Internal Complaints Committee (ICC) for Gender Sensitization and Complaints against Sexual Harassment has been working actively with the aim of ensuring a safe environment for all studying and working at the Institute and to address sexual harassment-related complaints.

The roles and responsibilities of the ICC are:

- To provide conciliation to settle the matter between the complainant and the respondent.
- To conduct an inquiry within the time frame (90 days) as prescribed in the Act.
- To prepare inquiry and settlement reports and submit the same to the Director.
- To ensure confidentially in conciliation proceedings, conducting an inquiry, and keeping records.
- To be easily accessible

The ICC also organises regular training sessions on gender sensitisation and the POSH act for the IIIT–Delhi staff, faculty, and students to educate the campus community with the goal to prevent sexual harassment. ICC has conducted **seven trainings/workshops** on the gender sensitization and POSH act for the ICC members, IIIT–Delhi faculty, staff, and students in year 2022–23 which are as follows:

- Session on gender sensitization Session and PoSH Act for all IIIT-Delhi faculty and senior management staff
- POSH ACT, Role of ICC committee, and processes for ICC Members only
- Gender Sensitization Session for B. Tech. New admissions
- Gender Sensitization Session for M.Tech. and PhD New admissions
- Gender Sensitization Session for all M.Tech. students
- Gender Sensitization Session for all Ph.D. students and Teaching fellows
- Gender Sensitization Session for all IIIT-Delhi staff

#### **Health Centre**

 In order to provide 24X7 medical facility for our Faculty, Staff and students staying in hostel and day scholars, the Institute has set up a Health Center at Ground Floor of the Student Center Building. Particularly for female students, a Qualified Gynaecologist {M.B.B.S, M.S., DNB, FMAS, DMAS} is available in the premises two days a week. Two qualified Female Nurses are also available from Monday to Saturday. In addition a Medical Practitioner, MBBS, M.S. (Gen. Surgery) is available in the premises six days a week from Monday to Saturday and a Resident Doctor, MBBS, is available in the Infirmary

#### **Gender Just Initiatives**

IIIT-Delhi has taken significant strides towards creating a women-friendly campus through various empowering initiatives. A regular feature at B.Tech., M. Tech., and Ph.D. induction program is a gender sensitization workshops conducted by ICC members, aimed at promoting awareness and sensitivity towards gender-related issues, fostering a culture of respect and inclusivity.

Furthermore, IIIT-Delhi, in collaboration with Delhi Police, organized a one-day Self-defense workshop exclusively for the girl students. With more than 30 participants, this workshop emphasized personal safety and equipped the girls with practical self-defense techniques to deal with potential threats, such as antisocial elements, stalking, harassment, and assault. The program empowered the students, by instilling a sense of confidence and self-assurance in handling challenging situations. The Institute also offers a day-care facility for young children for all employees and students.

Through these initiatives, IIIT-Delhi reaffirms its commitment to fostering a women-friendly atmosphere on campus, where all students can thrive, feel secure, and fulfill their academic potential without any barriers or fear.

#### **AKAM and G20 Initiatives**

#### An exposure visit for IIIT-Delhi students to the Attari Border, Punjab

A special visit to Amritsar, Punjab, was organised in the month of January 2023, as a joint initiative **under G20 and Azadi ka Amrit Mahotsav (AKAM)**, offering students of IIIT-Delhi a unique learning experience. The trip aimed to provide the students with an opportunity to explore places of national importance and understand the rich cultural heritage of Amritsar. Travelling by Shatabdi Express, the students reached Amritsar, brimming with excitement and curiosity.

The visit to Jallianwala Bagh evoked solemn reflections on India's past, reminding the students of the importance of cherishing freedom and democracy. The Golden Temple's serene ambience left a profound impact on their hearts, providing a moment of spiritual contemplation and inner peace.

Visiting the Attari border, the students witnessed the seamless interaction between India and Pakistan and gained insights into the complex functioning of the border area. The awe-inspiring Beating Retreat ceremony left them marvelling at the precision and grandeur of the event.

Moreover, the visit to the Partition Museum was a poignant experience, offering a moving account of India's Partition and its enduring impact on the lives of countless individuals. The students found themselves immersed in stories of resilience, courage, and unity, inspiring them to appreciate the value of harmony and peace.

Throughout the exposure visit, the collaborative efforts of G20 and AKAM resonated, fostering a sense of unity among the students. The trip proved to be a transformative journey, expanding their perspectives and enhancing their understanding of India's diverse cultural tapestry.



#### Seminar on Monetizing Opportunities for Research Ideas

The Industry Outreach Program (IOP) Office, and the Innovation, Research and Development (IRD) department at the Institute organised a workshop on 'Monetizing Opportunities for Research Ideas' to explain growth opportunities in the ongoing research work/ideas.

The workshop enabled attendees to understand and explore the possible future of research work and other ideas/projects by identifying steps to transform it into a start-up or enable a technology transfer to an industry or a start-up.



#### **Celebration of National Festivals in the Campus**



Centered around the G20 theme, our university commemorated the Republic Day and the Independence Day of India with splendid festivities. The campus was adorned with national flag, G20 standees, and G20 Photo Frame standees, thoughtfully placed throughout the university premises, filling everyone with immense joy and patriotism, as it resonated as a source of collective pride.

Prof. Ranjan Bose unfurled the national flag on these occasions. The focal point of IIIT-Delhi's Republic Day celebration is the spirited involvement of students, faculty members, and their families.

#### **Calendar with Student-Captured Moments**

At IIIT-Delhi, various events were organized to promote and acquaint students with the importance of the G20 summit.

The calendar was printed with the top six entries from the Art and Photography Event, aimed at promoting the G20 Summit. The pictures displayed in the calendar showcased the rich tapestry of Indian culture, featuring intricate architectural marvels, vibrant festivals, and diverse traditions. This visual journey through India's heritage served as a compelling backdrop to underscore the nation's role in hosting the G20 summit.



# Alumni Affairs





## **Alumni Affairs**

As graduates of the institution, alumni have a special connection with the Institute and, as a result are likely to be some of its more loyal supporters. The alumni are the flag-bearers of the Institute and essential stakeholders. An engaged alumni network allows the university to benefit from their skills and experiences which can be channelled to support next generation of students and the Institution at large.

The Office of Alumni Affairs took several initiatives during the academic year 2022-23 towards this end. In collaboration with IIIT-Delhi Alumni Association, they organised the annual alumni meet, 'Retrace 2023' both in online and offline mode. The physical alumni meet took place on Saturday, 28th January along with the Odyssey Star night.

On this day the alumni visited the campus and had fun meeting and interacting with their friends, batchmates and faculty members, and enjoyed the annual fest Odyssey as well.

On Sunday, 29th January, a virtual meetup was planned on Gather.town wherein 100+ alumni from all over the world joined and walked around in a virtual IIIT-Delhi campus to reconnect with their friends in the academic block, revisited the library, and enjoyed interacting with other alumni in the hostel common rooms.

"Nobody is bothered about an institution more than its alumni."

Mr. N. R. Narayana Murthy Founder of Infosys

# **Alumni Association**

The IIIT-Delhi Alumni Association serves as a vibrant and dynamic community, bringing together graduates from various disciplines and batches to foster lasting connections and support the growth of their alma mater. Committed to nurturing life-long relationships, the Alumni Association organizes a range of engaging events, virtual and offline meet-ups, and reunions, allowing alumni to reconnect with old friends, faculty, and the Institute. By facilitating knowledge exchange, mentorship, and industry connections, the IIIT-Delhi Alumni Association empowers the next generation of students to excel in their careers. Moreover, the association plays a pivotal role in contributing to IIIT-Delhi's progress through fundraising initiatives, scholarships, and alumni-driven programs, embodying the spirit of giving back and nurturing a strong sense of pride in being part of the IIIT-Delhi community.

#### **Office Bearers**

President



Apoorv Narang (B.Tech, Class of 2014)



Ayushi Goyal (B.Tech, Class of 2014)

Vice President



Vibhutesh Kumar Singh (M.Tech, Class of 2016) Secretary



Sanchit Saini (B.Tech, Class of 2015) Treasurer



Kuldeep Yadav (Ph.D., Class of 2014) Joint Secretary



Deepali Kishnani (B.Tech, Class of 2016) Executive Member



Manvi Goel (B.Tech, Class of 2020) Executive Member



Tanish Gupta (B.Tech, Class of 2020)



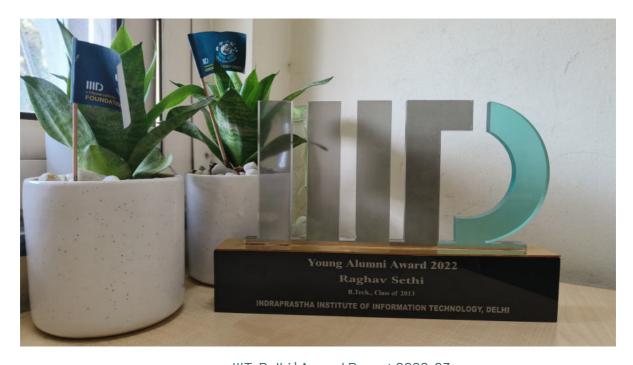
Utkarsh Gupta (B.Tech, Class of 2015) Executive Member



Vaibhav Goel
(B.Tech, Class of 2020)

Executive Member





# **Alumni Footprint**

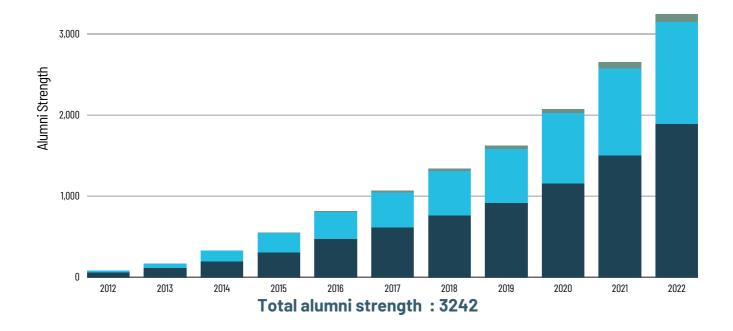
IIIT-Delhi alumni share a deep connection with the Institute, serving as our proud flag-bearers and crucial stakeholders. Their engaged network is a valuable asset, offering unwavering support to students and the institution alike. Leveraging their diverse skills and experiences, alumni contribute significantly to IIIT-Delhi's growth and development. With their global presence spanning across various countries, they strengthen the Institute's international ties, fostering opportunities for collaboration and research partnerships. Through mentorship, industry connections, and alumni-driven initiatives, they demonstrate a deep sense of gratitude and a shared vision for IIIT-Delhi's continued success. The alumni community remains an essential and vibrant part of IIIT-Delhi's journey towards academic excellence and global impact. Fig. below shows the countries where IIIT-Delhi alumni are currently based.



#### **Alumni Strength**

The Institute considers the alumni as its significant assets and ambassadors and is constantly exploring new ways of engaging with alumni worldwide. Figure below shows the rising alumni strength of the Institute over the years.

B.Tech. M.Tech. Ph.D.





# **Giving Back**

For many alumni of the Institute, "giving back" isn't just tied to offering monetary gifts to the Institute but it is their way of building a lifelong relationship with their alma mater. Whether the alumni give back through their time, funds, expertise, or professional network, the generosity has helped the Institute tremendously.

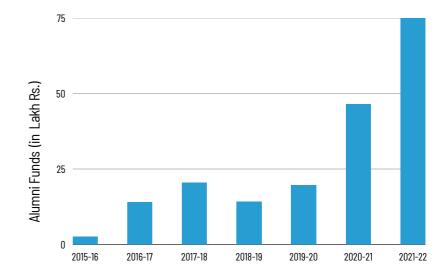
IIIT-Delhi Alumni Association donated INR 1,00,000 to Odyssey Fundraiser to support one of the biggest and the most memorable college fest of the Institute, 'Odyessy 2023'.

In 2020–21, the Office of Alumni Affairs established a corpus fund named "Alumni Legacy Fund," and the alumni and the graduating batch donated gratuitously to the fund. Various 'Alumni Talks' were organized during the academic year 2022–23, where the alumni shared their life experiences and career achievements and delivered talks on other motivational topics. Some of the talks are listed below:

TITLE	DATE	SPEAKER
Figuring out your professional calling: A serpentine road to success	10/1/2022	Raghav Sehgal, Yale University, USA
Applying for Higher Education in USA	2/10/2023	Prerna Singh, Microsoft, USA
IIITD's Shark Minds: A talk with our Shark Tank Alumni	4/6/2023	Anant Sharma, Ayush Kushwaha, Shwetank Shrey, Tweek Labs, India Mukul Chhabra, Scrap Uncle, India
Panel Discussion in RIISE 2023 on 'Pathways After IIIT-Delhi'	1/7/2023	Yashovardhan Sharma, University of Oxford, UK Nipun Batra, IIT Gandhinagar, India Ayush Verma, Deloitte, India Mukul Chhabra, ScrapUncle, India
Filing Machine Learning based patents	4/6/2023	Ishan Pandita, Microsoft, India

## **Monitory Contribution**

Over the years, the dedication and support of IIIT-Delhi alumni have played a pivotal role in shaping the Institute's growth and success. The adjacent figure shows the alumni contributions over the years.



## **Annual Alumni Meet**

IIIT-Delhi's annual alumni meet, Retrace, held in conjunction with Odyssey 2023, brought together a heartwarming reunion of graduates on a memorable Saturday. The alumni were warmly welcomed by Prof. Ranjan Bose, the Director of IIIT-Delhi, and Dr. Paro Mishra, the Associate Dean of Communication and Alumni Affairs. Their addresses proudly highlighted the Institute's notable achievements over the past year, showcasing the continued progress and excellence that IIIT-Delhi embodies.

Dr. Smriti Singh, the Faculty In-charge (Alumni), shared enlightening insights on how the generous contributions made by alumni over the years have significantly impacted the Institute community. The spirit of giving back and supporting the Institute's growth resonated with the attendees, further strengthening the bond between IIIT-Delhi and its alumni.

A stimulating brainstorming session organised by the Alumni Association offered a platform for collective ideation, where alumni collaborated on innovative ideas to further enhance the institute's progress. Following this engaging session, alumni relished the opportunity to reconnect with old friends, batchmates, juniors, and esteemed faculty members over a delightful high tea, rekindling cherished memories and forging new connections.

As the day progressed, the spirit of camaraderie soared to new heights as the alumni immersed themselves in the vibrant ambiance of Odyssey 2023, the annual cultural fest of IIIT-Delhi. The festivities of Odyssey, brimming with creative expressions, music, dance, and cultural revelry, offered an unforgettable experience that brought together the IIIT-Delhi community, old and new.

#### **Virtual meetup on Gather.town**

On January 29th, a virtual meetup on Gather.town brought together over 100 IIIT-Delhi alumni. Navigating the virtual IIIT-Delhi campus, they revisited the academic block, library, and hostel common rooms, rekindling fond memories and reconnecting with old friends.

Despite the physical distance, the meetup evoked a strong sense of togetherness, fostering a spirit of camaraderie among the alumni. The event served as a testament to the enduring bond between IIIT-Delhi and its graduates, showcasing the Institute's commitment to nurturing lifelong connections with its alumni community. The virtual meetup was a heartwarming and successful initiative that bridged the gap and united the IIIT-Delhi alumni once again.



# **Alumni Meet-ups**







# **Introducing the 'Young Alumni Awards'**

To acknowledge and celebrate their exceptional accomplishments, significant contributions to the community, and professional or academic achievements, the Office of Alumni Affairs introduced the prestigious 'Young Alumni Awards.' These awards were inaugurated this year and will be presented annually on the Institute's Foundation Day.

The deserving recipients of the inaugural 'IIIT-Delhi's Young Alumni Awards' for the year 2022:

- 1. **Anwesh Kumar Sahoo** (B.Tech ECE, Class of 2017): Anwesh is honoured for his remarkable contribution in representing and supporting the queer community through his commendable work in Tech, Art, and Design.
- 2. Apurv Mehra (Dual Degree CSE, Class of 2014): Apurv receives recognition for his outstanding professional accomplishments and dedication toward building a sustainable future through his pioneering startup, 'Three Wheels United.'
- 3. **Raghav Sethi** (B.Tech CSE, Class of 2013): Raghav is acknowledged for his significant efforts in laying the foundation of a strong alumni community at IIIT-Delhi, and for his unwavering support towards the Institute's vision and mission.

These awards symbolize the significant contributions made by our young alumni in various domains. The 'Young Alumni Awards' celebrate the legacy of excellence that IIIT-Delhi fosters, inspiring future generations of students to strive for greatness and make a positive difference in the world. The 'Young Alumni Awards' promise to be a yearly tradition, serving as a platform to celebrate and honor the exemplary contributions of our talented alumni community.







# **Quality and Process Improvement**

In recent years, universities have witnessed a significant shift in their processes and methodologies for delivering education and conducting everyday administrative affairs. Inspired by practices historically employed in manufacturing companies and the service industry, there is now a growing emphasis on adopting efficient and streamlined approaches.

At IIIT-Delhi, the Institute has proactively embraced these initiatives, leading to a notable transformation in the overall educational and work experience. This progressive approach has resulted in enhanced research output, heightened commitment to academic programs, and evident improvements in the quality and efficiency of educational delivery. By integrating innovative principles and methodologies, IIIT-Delhi continues to set a standard of excellence in higher education, ensuring its students receive cutting-edge and future-ready learning experience.

"Nothing worthwhile is ever achieved without deep thought and hard work."

Mr. J.R.D. Tata

Indian aviator, industrialist, entrepreneur and ex-chairman of Tata Group

# **Quality and Process Improvement Initiatives**

#### **Formation of Committees for Decision-making**

The Institute has adopted the practice of forming committees to make decisions. The goal of committee formation is to develop a broadly representative group that is inclusive of and yet diverse on many dimensions, including demographic and disciplinary diversity and the diversity of faculty rank, employment status, or student degree program. The committee members are crucial to accomplishing the goals through their invested engagement in relevant problem-solving.

#### **Standing Committees**

The primary purpose of standing committees at the Institute is to consider and recommend actions and propose policies in the functional areas under their jurisdictions, subject to final approval by the Director. These committees consist of faculty members, officers, RWA representatives, and students, depending on the nature of the committee. Some of the committees formed recently are the Revenue Generation Committee, the Cost Reduction Committee, the Campus Well-being Committee, the Covid Care Committee, the Committee for Onboarding Policy for Students, and the Committee on Internship and Placement Challenges due to COVID-19.

#### **Student Councils for Departments**

Student Council for departments are student groups of elected and volunteer students working together with department faculty to provide a means for student expression and assistance in departments' activities, give opportunities for student experience in leadership and encourage student / faculty / community relations.

#### **Innovation and Improvement Initiatives in Education**

The faculty members at IIIT-Delhi continue to update the curriculum with the emerging trends and implement innovative teaching methods at the Institute. The faculty used Kialo, Media Cloud (developed by researchers at MIT) as well as SNA techniques to demonstrate the point rather than simply lecture on the subject. The resources used varied from documentaries to twitter threads to media reports. The course involved a lot of critical thinking and active engagement from the class even in online mode.

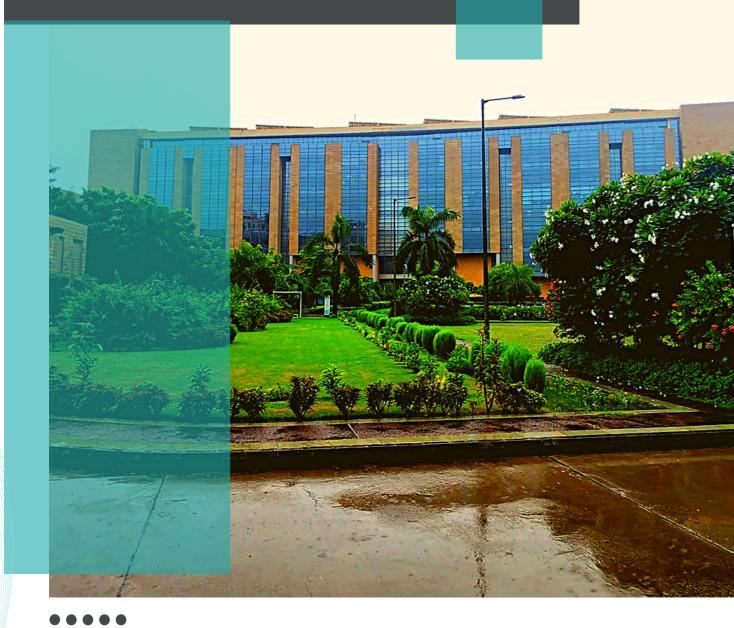
#### **Onboarding Process for Start-ups**

IIITD Innovation and Incubation Centre has augmented the process of onboarding startups to get the best startup companies associated with it and help them during the incubation period. The process involves:

- o Simplified applying process for the start-ups to be incubated at the centre
- Scrutiny of the applications received based on relevance
- Presentation before the Evaluation Committee
- Onboarding of the startup company based on the decision of the Evaluation Committee



# Infrastructure



132



## Infrastructure

IIIT-Delhi's campus infrastructure stands as a testament to its commitment to providing equal opportunities and accessibility for all. The modern and state-of-the-art facilities including, advanced classrooms, well-equipped laboratories, and dedicated research centers, create a comprehensive research and learning environment for everyone. The Wi-fi-enabled campus ensures seamless connectivity, allowing easy access to educational resources and provides operational convenience for all.

The Institute's focus on creating a welcoming and holistic atmosphere is reflected in comfortable hostel accommodations, ample sports and recreational facilities, and well equipped academic and research infrastructure. IIIT-Delhi takes pride in creating an accessible campus that accommodates individuals with diverse needs.

Embracing sustainability, the campus incorporates eco-friendly initiatives like solar power usage and waste management systems, underscoring the Institute's commitment to environmental responsibility, benefitting everyone in the IIIT-Delhi community and beyond.

IIIT-Delhi's infrastructure exemplifies its dedication to providing an inclusive, empowering, and accessible educational environment, where every student can flourish and thrive, irrespective of their background, gender, or abilities.

"When the winds of change blow, some people build walls and others build windmills."

Unknown
An ancient proverb

# **Campus Infrastructure**

IIIT-Delhi has a sprawling campus of 25 acre in Phase-III of the Okhla Industrial Area, New Delhi. The Institute has state-of-the-art infrastructure and modern facilities to conduct world-class research and teaching. The campus incorporates several green-building features. It is GRIHA-rated zero-discharge campus with sewage treatment plants, rainwater harvesting, heat pumps, and solar power plants on terraces of all new buildings.

#### **Accessibility**

The campus is located in the south Delhi region of the capital city. It is accessible through public transport with a DTC bus or by Delhi Metro, through two nearby Metro Stations - the Govindpuri Metro station and Okhla/ Harkesh Nagar Metro station. If one is coming by car or a two-wheeler, the campus can be reached through a road along the Banarsi Das Chandiwala Institute from the main Maa Ananda Mayi Ashram Marg.



# **Building Resources**

#### **Academic/Administrative Block**

The Academic/Administrative block consists of three 200-seater lecture halls, smaller classrooms, research labs, and instruction labs. The building also houses offices for staff members, and offices of the visiting faculty members. At the ground floor of the building resides a coffee shop.



#### **Library and Resource Centre Block**

An independent library and resource center is housed in a four-storied building with fully airconditioned reading and discussion spaces for members of the Institute. IIIT-Delhi Library and Information Centre provide books, e-books, Kindle books, readers, periodicals, journals, technical reports, documentaries, and many more resources for the holistic growth of the community.



#### **Dining Block with Student Activity Centre**

A separate dining-cum-student activity centre is located in a four-storied building with food and utility outlets. There is also a Health Centre with a visiting doctor and a nurse. The building is also equipped with a laundry facility on the ground floor, and a mess facility on two subsequent floors. It also has a floor reserved for student and club activities.



#### **Boys and Girls Hostel Blocks**

The total capacity of the hostels is 1758 students, including 774 girls, 962 boys, and 22 studio apartments for married students. Single and double well-furnished rooms are provided to the students with night-time airconditioning. The ground floor of the building is reserved for command rooms and a hangout area for the students.



#### Research & Development Block (R&D)

The Institute has developed an ultra-modern, GRIHA 4-star rated green building, Research & Development Block. It is an eight-storied building facility with four 100-seater lecture halls, 58 labs, 116 faculty rooms, 24 discussion rooms, seven meeting rooms, Board and Senate room, and Director and Dean offices. The R&D building also accommodates research labs and workspaces for PG and Ph.D. students. A wellmanicured tech garden and open-air amphitheater welcomes the visitors as they approach the block.



#### Lecture Hall Complex (LHC)

The LHC is another GRIHA 4-star rated building comprising a six-storied facility, with one 500-seater and two 300 seaters state of the Aart, stepped lecture theatres, 9 Classrooms of various capacities, 13 instruction labs, Computational Biology labs, Electronics labs, meeting rooms, and 12 Interview rooms. The office of Training and Placement, Industry Outreach Centre, and The Incubation Centre also operate from LHC.



#### **Sports Block**

A well-equipped Sports Block comprising four storied building facilities with a covered indoor half olympic size swimming pool, an indoor badminton court, two indoor squash courts, gymnasium, multipurpose hall, and yoga rooms. It also houses a faculty transit accommodation/guest house facility with 16 well-furnished rooms, a dining lounge, and a shared kitchen on the second floor. The building faces the football/multipurpose field.



#### **Faculty Residences**

Two towers for faculty residences comprising 74 flats for faculty have been provided on campus. The building also has an indoor parking facility, a community hall for small celebrations, day care, and a green play area for kids.



# **Inclusive Campus**

#### **Gender-Just Campus**

IIIT-Delhi is committed to be a gender-just campus that strives to create an inclusive and welcoming environment for everyone regardless of their gender identity. The Institute has implemented various policies and measures to ensure that all members of the community feel safe and respected, including gender-neutral washrooms, gender sensitization workshops, Internal Complaints Committee and strict guidelines against any form of gender-based discrimination.



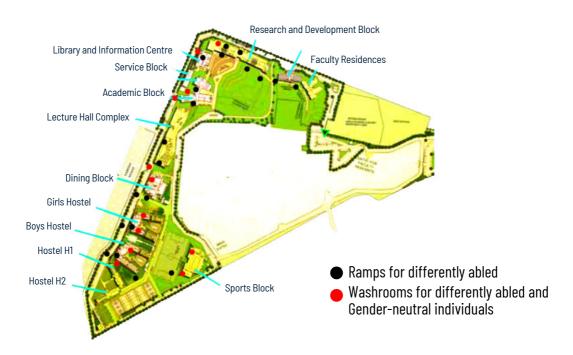


#### **Equal opportunity Initiatives**

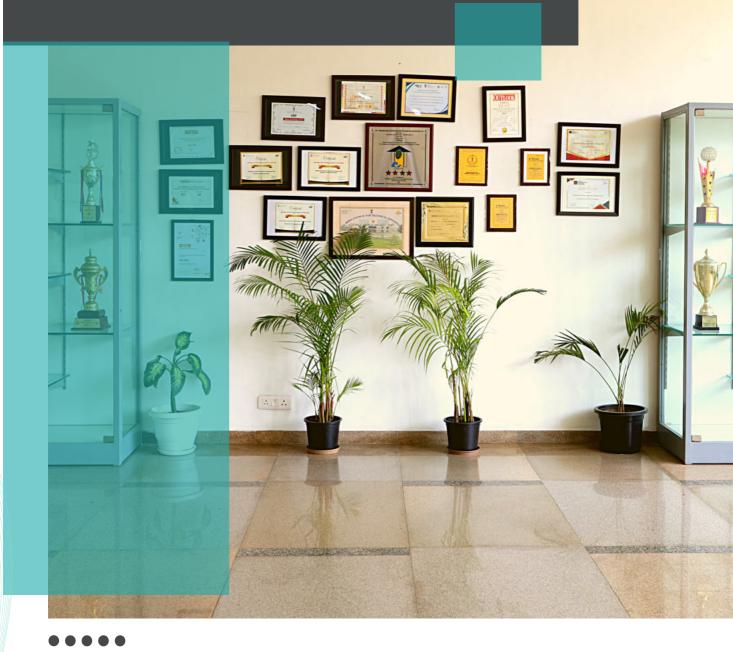
GENDER SENSITIZATION FINANCIAL SUPPORT

GRIEVANCE REDRESSAL INTERNAL COMPLAINTS COMMITTEE

#### **Accessible Infrastructure**



# IIIT-Delhi Rankings



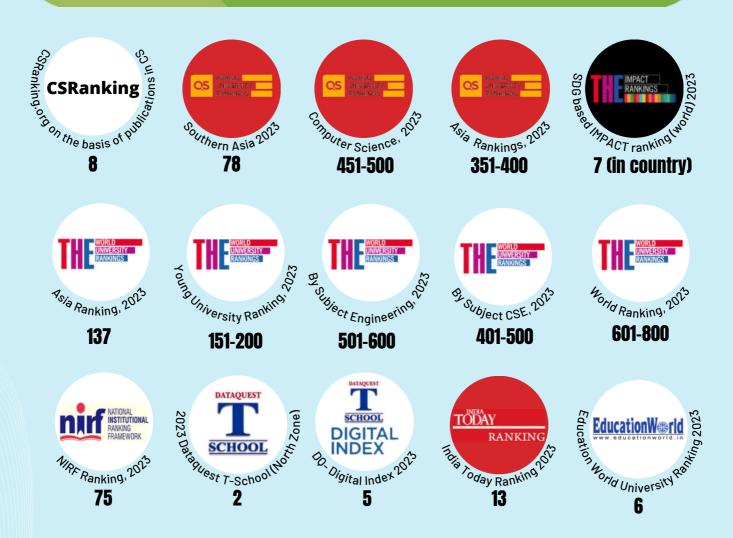
138

# **Institute Ranking**

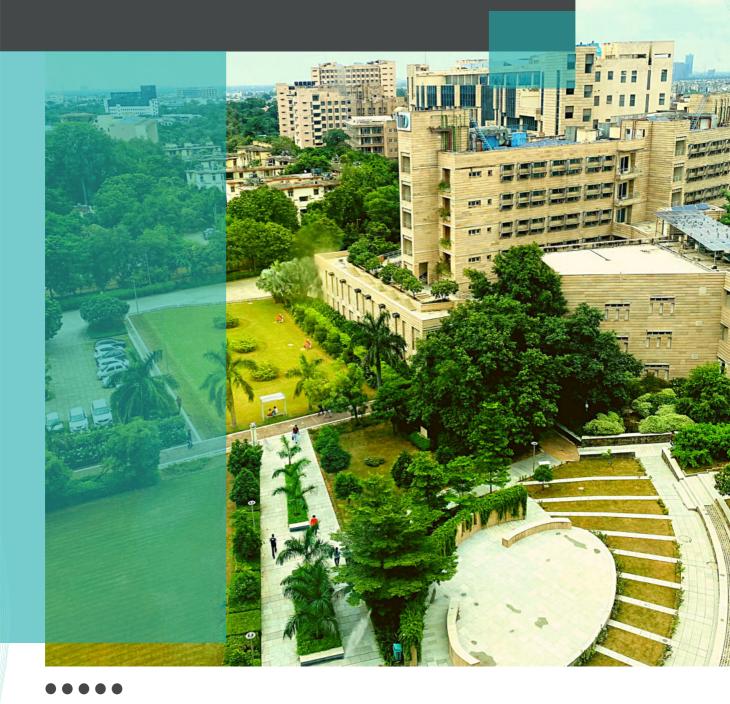
IIIT-Delhi has consistently earned accolades and recognition for its excellence in education and research. The Institute has secured a prominent position in various national and international rankings, reaffirming its stature as a premier technical institution. The dedication of faculty, outstanding research contributions, and innovative teaching methodologies have been acknowledged through numerous awards and honors received by IIIT-Delhi. These achievements reflect the unwavering commitment of the Institute in providing a world-class learning environment and fostering a culture of academic excellence.



Awarded University of the Year (10 to 30 years) in the 8th FICCI Higher Education Excellence Awards 2022

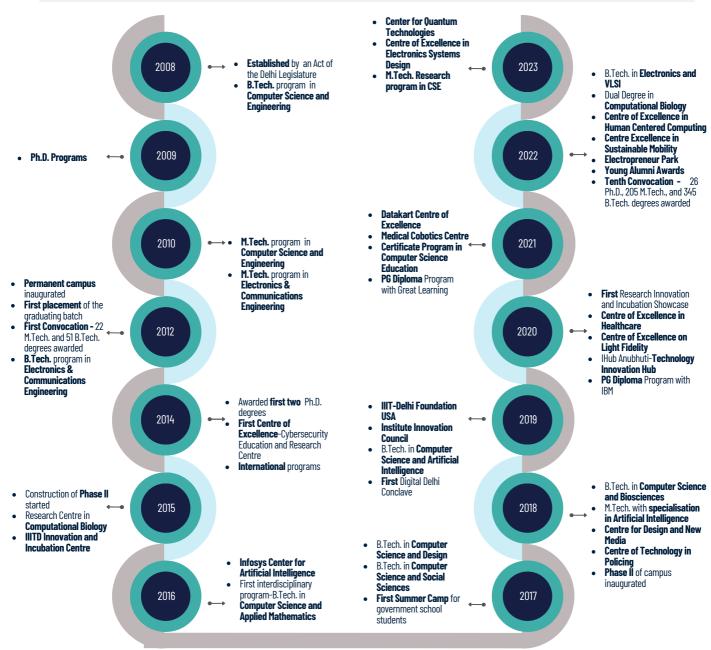


# Fifteen Years of IIIT-Delhi



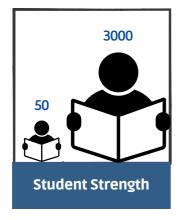
IIIT-Delhi | Annual Report 2022-23

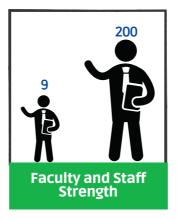
# **The Journey**



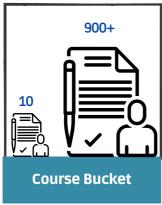


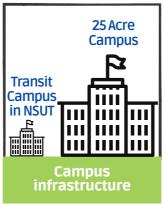
# The Growth from 2008 to 2023





















# **Impact**

Alumni presence in

# >150 Cities >250 Companies

#### 10000+

People are using ChartR daily for buying ticket in DTC and Cluster buses

Pioneer in offering credits for

## Community Service

## 62+ Start-ups

in last three years

## 401-600 in the world

in Gender Equality as per the THE Impact Ranking (SDG based) 21-22

# University of the year

by FICCI Higher Education excellence awards 2022 in the catergory for university between the age of 10-30 years

# 98% Placement Record

in domain specific organizations

Consultancy provided to

## 100+

**Government Projects** 

#### 2500+

Students supported with financial aid

# Meaningful and Impactful Research

**Technology Innovation Hub** 

on Cognitive Computing and Social Sensing

for Interdisciplinary Cyber-Physical Systems

#### 10+

**ZERO** 

**Discharge** 

Campus

Alumni start ups, 2 of which featured in Shark Tank India

# Seven Summer Camps

for government school students, benefiting >1000 young students

## **DRIIV**

Project with GOI

### Indefatigable for

## Sustainable Development Goals

#### **Guinness World Record**

for largest camera traps to map wild life

# **Electronics Design Village**

to be established with EPIC foundation

## #4 in the country

in Industry Innovation and Infrastructure as per the THE Impact Ranking (SDG based) 21-22 Compliance with

# National Education Policy 2020

Pioneer in

# Interdisciplinary Degrees

offering six interdisciplinary B.Tech. programs

## **Electropreneur Park**

to promote innovation and create startups in the space of electronic design and fabrication.

# Over 500 Collaborators

across the globe

## Over 280 Students

opted for higher education in best institutions across the globe

## **5000+ Professional services**

rendered by the faculty as editor, organizers, resource person and more

# **Internal Grand Challenges Program**

to give impetus to specific research areas

# nges Program Med

# Professor of Practice

position

#### India's first

# **Medical Cobotics Centre**

# **Digital Delhi Conclave**

an annual convention to discuss the problems of the city, with experts and policy makers

# Two PG Diploma

programs for working professionals

## IIIT-Delhi | Annual Report 2022-23

# Faculty and Officers

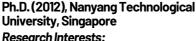
As on 31st July 2023



# Regular Faculty



A V Subramanyam Associate Professor (ECE, CSE) subramanyam@iiitd.ac.in



Information Forensics and Security, Multimedia Signal Processing, Visual Surveillance and Deep Learnina.



Ph.D. (2018), King's College London, Research Interests: Governance, Public Participation, Social

Movements, Civic Media and Journalism

Ph.D. (2017), Georgia Institute of

Technology, Atlanta, USA

Research Interests:

**Aasim Khan** Head & Assistant Professor (SSH) aasim@iiitd.ac.in



**Δbhiiit Mitra** Assistant Professor (ECE) abhijit@iiitd.ac.in

Ph.D. (2017), IIT Delhi, India Research Interests:

Multi-band Optical Networks, Space Division Multiplexing, Quantum Key Distribution



**Aman Parnami** Assistant Professor (HCD) aman@iiitd.ac.in



Wearable Computing, Design Research, Education Technology



Ph.D. (2003), IIT Delhi, India Research Interests: Digital Communications, Wireless and Optical communications, Optical Networks

**Anand Srivastava** Professor (ECE) anand@iiitd.ac.in



**Angshul Majumdar** Professor (ECE, CSE) angshul@iiitd.ac.in



Sparse Recovery, Low-rank matrix completion, Medical Imaging, Biomedical Signal Processing, Hyper-spectral Imaging, Collaborative Filtering



Ph.D. (2019), IIT Guwahati, India Research Interests: AR/VR, The Metaverse, Tangible User Interfaces

**Anmol Srivastava** Assistant Professor (HCD) anmol@iiitd.ac.in



**Anubha Gupta** Professor (ECE)

anubha@iiitd.ac.in

Ph.D. (2006), IIT Delhi, India Research Interests:

Applications of Wavelet Transforms, Machine (Deep) Learning, and Compressed Sensing, Sparse Reconstruction, fMRI/EEG/MRI/DTI Signal and Image Processing, Genomics Signal Processing, Signal Processing for Communication Engineering, and RF Energy Harvesting



**Anuj Grover** Associate Professor (ECE) anuj@iiitd.ac.in

Ph.D. (2015), IIT Delhi, India **Research Interests:** 

Ultra Low Power In-Memory Compute for edge computing and machine learning applications; safety and security in hardware; and Error resilient energy efficient systems



Anuradha Sharma Professor (Math) anuradha@iiitd.ac.in

Ph.D. (2006), Panjab University,

#### Research Interests:

Algebraic Coding Theory, Number Theory and Algebra



Arani Bhattacharya Assistant Professor (CSE, ECE) arani@iiitd.ac.in

Ph.D. (2019), Stony Brook University, USA

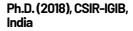
#### Research Interests:

Low latency compute and machine learning services, video streaming and physical layer of wireless networks



**Arjun Ray** Assistant Professor (CB)

arjun@iiitd.ac.in



#### **Research Interests:**

Deciphering the mechanism of CRISPR-Cas9, Elucidating molecular interactions in the reverse cholesterol pathway, structural genomic problems



Arun Balaji Buduru Assistant Professor (CSE, HCD) arunb@iiitd.ac.in

Ph.D. (2016), Arizona State University, USA

#### Research Interests:

Cyber security, reinforcement learning and stochastic planning



**Ashish Kumar Pandey** Assistant Professor (Math) ashish.pandey@iiitd.ac.in

Ph.D. (2018), The University of Illinois at Urbana-Champaign, USA

Research Interests: Partial Differential Equations (PDEs)



**Bapi Chatteriee** Assistant Professor (CSE)

bapi@iiitd.ac.in

Ph.D. (2018), Chalmers University of Technology, Sweden

#### Research Interests:

Distributed Machine Learning, Concurrent Data Structures, Neural Architecture Search, Learned Index Structures



Chanekar Prasad Vilas Assistant Professor (ECE)

prasad@iiitd.ac.in

Ph.D. (2018), University of Maryland, **USA** 

Research Interests: Kinematics, Dynamics, Control and optimization of large-scale engineering systems with applications to system codesign, Robotics, Renewable Énergy Systems, Power Networks,

Neuroscience



Debajyoti Bera Associate Professor (CSE) dbera@iiitd.ac.in

Ph.D. (2009), Boston University, USA

#### Research Interests:

Algorithms, Complexity Theory, Quantum Computing



Debarka Sengupta (CB, CSE)

Ph.D. (2014), Jadavpur University, India Research Interests: Applied machine learning and genomics

Associate Professor debarka@iiitd.ac.in



**Debidas Kundu** Assistant Professor (ECE) debidas@iiitd.ac.in

Ph.D. (2018), IIT Kharagpur, India

#### Research Interests:

Analytical techniques for surface electromagnetics, metamaterial and metasurface, reconfigurable intelligent surface, reflectarray, scattering and polarization control of the electromagnetic wave.



**Debika Baneriee** Assistant Professor (Math) debika@iiitd.ac.in

Ph.D. (2017), Harish-Chandra Research Institute, India Research Interests: Analytic and Probabilistic Number Theory



Deepak Prince Assistant Professor (SSH) deepak@iiitd.ac.in

#### Ph.D. (2022), Shiv Nadar University, India

#### Research Interests:

Anthropology of technology, screens and interfaces, political anthropology, violence and public

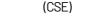


**Dhruy Kumar** Assistant Professor (CSE)

Research Interests:

Systems for AI, AI for Systems, Privacy and Security in AI, Technology Education for the Common People

Ph.D. (2022), University of Minnesota,



dhruv.kumar@iiitd.ac.in



Diptapriyo Majumdar Assistant Professor (CSE) diptapriyo@iiitd.ac.in

#### Ph.D. (2018), The Institute of Mathematical Sciences, India

#### Research Interests:

Parameterized Complexity, Graph Algorithms, FPT algorithms for problems arising in access control



**Donghoon Chang** Associate Professor (CSE, Math) donghoon@iiitd.ac.in



Ph.D. (2008), Korea University, Korea Research Interests: Cryptography, Cryptanalysis, Cyber Security, Information Theory



G.P.S. Raghava Professor (CB) raghava@iiitd.ac.in

#### Ph.D. (1996), Institute of Microbial Technology, India Research Interests:

Bioinformatics Application on Protein Modelling/Engineering, Genomics and Informatics Solutions for integrating Biology (GENESIS), Integrative approach for designing biomolecules for cancer therapy, Application of bioinformatics in System Biology



**Ganesh Bagler** Professor (CB) bagler@iiitd.ac.in

Ph.D. (2007), CSIR-Hyderabad, India Research Interests:

Complex Systems, Computational Biology, Complex Networks, Bioinformatics, Modeling and analysis of biological data



Gaurav Ahuja Associate Professor (CB) gaurav.ahuja@iiitd.ac.in

#### Ph.D. (2015), University of Cologne, Germany

#### Research Interests:

Identification, deorphanization and characterization of ectopically expressed GPCRS



**Gauray Arora** Associate Professor (SSH) gaurav@iiitd.ac.in

#### Ph.D. (2017), Iowa State University, USA

#### Research Interests:

Natural Resource & Agricultural Economics, Ecological Economics, Applied Econometrics, Industrial Organization, Applied Game Theory, Spatial Analyses, Remote Sensing



**Gayatri Nair** Assistant Professor (SSH) gayatri@iiitd.ac.in

#### Ph.D. (2016), Jawaharlal Nehru University, India

#### Research Interests:

Urban informal labour and livelihood patterns with an emphasis on the question of technology, caste and gender



J. V. Meenakshi Professor (SSH) meena@iiitd.ac.in

#### Ph.D. (1991), Cornell University, USA

#### Research Interests:

Economics of food, nutrition and health, Agricultural and water markets, irrigation and price policy, Causal evaluation of policies and interventions



Jainendra Shukla Assistant Professor (CSE, HCD) jainendra@iiitd.ac.in

#### Ph.D. (2018), Universitat Rovira i Virgili (URV), Spain

#### Research Interests:

Human-Robot Interaction, Affective Computing and Machine Learning



Jaspreet Kaur Dhanjal Assistant Professor (CB) jaspreet@iiitd.ac.in



discovery



Kalpana Shankhwar Assistant Professor (HCD) kalpana@iiitd.ac.in

# Ph.D. (2022), National Taiwan University, Taiwan

#### Research Interests:

Fundamental and industrial applications of extended reality (XR), Haptic technologies in manual milling operations and welding systems



Kaushik Kalyanaraman Assistant Professor (Math) kaushik@iiitd.ac.in

Ph.D. (2015), University of Illinois at Urbana-Champaign, USA Research Interests:

Applied and Computational Analysis, Geometry and Topology



**Kiriti Kanjilal** Assistant Professor (SSH) kanjilal@iiitd.ac.in

#### Ph.D. (2018), Washington State University, USA Research Interests:

Microeconomics, game theory, industrial organization, environmental economics and behavioral economics



Koteswar Rao Jerripothula Assistant Professor (CSE) koteswar@iiitd.ac.in

#### Ph.D. (2017), Nanyang Technological University, Singapore

#### Research Interests:

Computer Vision, Image Processing, Multimedia Systems, Machine Learning and Artificial Intelligence



Manohar Kumar
Assistant Professor
(SSH)
manohar.kumar@iiitd.ac.in

# Ph.D. (2013), LUISS University, Rome

#### Research Interests:

Moral and Political Philosophy, Digital dissent, digital citizenship, whistleblowing, civil disobedience, democratic secrecy, and epistemic injustice



Manuj Mukherjee Assistant Professor (ECE) manuj@iiitd.ac.in

# Ph.D. (2017), IISc Bengaluru, India

#### Research Interests:

Information Theory, Multiparty interactive communication, Interactive coding



Md. Shad Akhtar Assistant Professor (CSE) shad.akhtar@ijitd.ac.in

#### Ph.D. (2019), IIT Patna, India

#### Research Interests:

Sentiment and Emotion Analysis in the Natural Language Processing domain, Dialog Management and Multimodal Analysis



Monika Arora Assistant Professor (Math) monika@iiitd.ac.in

#### Ph.D. (2018), Old Dominion University, Virginia, USA Research Interests:

Count data and statistical modeling



Mrinmoy Chakrabarty
Assistant Professor
(SSH)
mrinmoy@iiitd.ac.in

#### Ph.D. (2017), Osaka University, Japan

#### Research Interests:

Affective Cognitive Neuroscience, Visual-Spatial Cognition, Autism Spectrum Disorders, Learning-Memory



Mukesh Mohania
Professor
(CSE)
mukesh@iiitd.ac.in

Ph.D. (1995), IIT Bombay, India

#### Research Interests:

Information Integration, Master Data Management, AI based entity analytics, Big data analytics and applications, and Blockchain data management



Mukulika Maity Assistant Professor (CSE) mukulika@iiitd.ac.in

Ph.D. (2016), IIT Bombay, India

#### Research Interests:

Wireless Networks, Mobile Computing and Systems



N. Arul Murugan
Associate Professor
(CB)
arul.murugan@iiitd.ac.in

Ph.D. (2005), IISc Bengaluru, India

#### Research Interests:

ML and DL approaches for Druggability prediction, QM fragmentation based approaches for Druggability prediction, Parallel virtual screening in HPCs and GPUs for accelerated drugs discovery, Flexible docking assisted Drugs discovery, Atomistic simulation of virus-host cell interaction



Nabanita Ray Assistant Professor (Math) nabanita@iiitd.ac.in

#### Ph.D. (2020), The Institute of Mathematical Sciences, India Research Interests:

Positivity problems in Algebraic, Geometry, Moduli problems of vector bundles over projective varieties, Moduli problem of co-dimension one cycles



Nishad Patnaik Assistant Professor (SSH) nishad@iiitd.ac.in

Ph.D. (2013), NSSR, USA Research Interests:

Kantian transcendental Idealism, Husserlian phenomenology, Social and Political Philosophy



**Ojaswa Sharma** Associate Professor (CSE, Math) ojaswa@iiitd.ac.in

# Ph.D. (2010), Technical University of Denmark, Denmark

#### Research Interests:

Computer graphics and geometry with focus on Virtual and Mixed reality (VR/MR), volume rendering, 3D reconstruction, and high performance computing on GPU.



Pankaj Jalote Distinguished Professor (CSE) jalote@iiitd.ac.in

Ph.D. (1985), University of Illinois at Urbana Champaign, USA

#### Research Interests:

Software quality, process improvement, Higher Education in India



Paro Mishra
Assistant Professor
(SSH)
paro.mishra@iiitd.ac.in

#### Ph.D. (2017), IIT Delhi, India Research Interests:

Gender and Technology, NRTs, Digital Technologies, Demographic Anthropology, Intimate Relations, Migration and Transnationalism



Piyus Kedia Assistant Professor (CSE) piyus@iiitd.ac.in

#### Ph.D. (2018), IIT Delhi, India Research Interests:

System security, safe languages, virtualization and dynamic/static techniques to build systems



**Prahllad Deb**Assistant Professor
(Math)
prahllad@iiitd.ac.in

# Ph.D. (2020), IISER Kolkata, India

#### Research Interests:

Free noncommutative (NC for short) function theory, Homogeneous Cowen-Douglas operators and differential geometry



Praveen Priyadarshi Assistant Professor (SSH) praveen@iiitd.ac.in

#### Ph.D. (2018), London School of Economics and Political Science, UK Research Interests:

Distinctiveness of everyday political practices in new urban spaces



Pravesh Biyani Associate Professor (ECE) praveshb@iiitd.ac.in

Ph.D. (2012), IIT Delhi, India Research Interests:

Optimisation for signal processing and communications, machine learning, and transportation.



Pushpendra Singh Professor (CSE) psingh@iiitd.ac.in

Ph.D. (2004), Inria-Rennes, University de Rennes 1, France Research Interests: Mobile Systems and Applications,

Middleware, ICT for Development



Rajiv Raman Associate Professor (CSE, Math) rajiv@iiitd.ac.in

Ph.D. (2007), University of Iowa, USA

#### Research Interests:

Algorithms, Combinatorial Optimization, Graph Theory, discrete and computational geometry



Rajiv Ratn Shah Assistant Professor (CSE, HCD) rajivratn@iiitd.ac.in

# Ph.D. (2017), National University of Singapore, Singapore Research Interests:

Multimodal semantic and sentiment analysis of user-generated social media content



Ram Krishna Ghosh Assistant Professor (ECE) rkghosh@iiitd.ac.in

#### Ph.D. (2013), IISc Bengaluru, India

#### Research Interests:

Computational nanoelectronics, spintronics, quantum transport simulation, device modeling, materials modeling, and multiscale modeling



Ranjan Bose
Director and Professor
(ECE)
bose@iiitd.ac.in

#### Ph.D. (1995), University of Pennsylvania, Philadelphia, USA

#### Research Interests:

Secure communications, coding theory, 5G security, wireless security, physical layer security and broadband wireless access



Ranjitha Prasad Assistant Professor (ECE) ranjitha@iiitd.ac.in

# Ph.D. (2015), IISc Bengaluru, India

#### Research Interests:

Causal Inference, Survival analysis, and sparsity in Bayesian neural networks



Richa Gupta
Assistant Professor
(HCD)
richa.gupta@iiitd.ac.in

#### Ph.D. (2020), IIT Delhi, India Research Interests:

Perceptual foundations of Design, Inclusive Design and Accessibility, Product Design & Modern Prototyping



Rinku Shah Assistant Professor (CSE) rinku@iiitd.ac.in

# Ph.D. (2021), IIT Bombay, India

#### Research Interests:

Software-Defined Networking, Data plane programming, 4G/5G mobile networks



Saket Anand
Associate Professor
(CSE, ECE)
anands@iiitd.ac.in



#### Research Interests:

Geometric Computer Vision, Semisupervised learning, Robust methods, Scene understanding



Sambuddho Chakravarty
Associate Professor
(CSE)
sambuddho@iiitd.ac.in

Ph.D. (2014), Columbia University, USA

#### Research Interests:

Network Anonymity and Privacy, Network Censorship and Anti-Censorship, Network and Systems Security



Samrith Ram Associate Professor (Math) samrith@iiitd.ac.in

Ph.D. (2012), IIT Bombay, India

#### Research Interests:

Finite Fields and Combinatorics



Sanat K Biswas Assistant Professor (ECE) sanat@iiitd.ac.in

# Ph.D. (2017), University of New South Wales, Australia Research Interests:

Space vehicle guidance, navigation and control, orbit determination, GNSS-based navigation, non-linear dynamics and estimation algorithms



Sanjit Krishnan Kaul Professor (ECE) skkaul@iiitd.ac.in

Ph.D. (2011), Rutgers University, USA

#### Research Interests:

Age-of-Information, Networking for Cyber Physical Systems, Networks of Autonomous Vehicles, and Autonomous Driving



Sankha S Basu Assistant Professor (Math) sankha@iiitd.ac.in

#### Ph.D. (2013), The Pennsylvania State University, USA Research Interests:

Mathematical Logic - intuitionistic logic and paraconsistent logics



Sarthok Sircar Associate Professor (Math) sarthok@iiitd.ac.in

#### Ph.D. (2009), University of South Carolina, USA

#### Research Interests:

Developing multiscale models and robust numerical algorithms for complex systems



Satish Kumar Pandey Assistant Professor (Math) satish@iiitd.ac.in

#### Ph.D. (2018), University of Waterloo, Canada

#### Research Interests:

Functional Analysis, Operator Theory, Operator Algebras



Sayak Bhattacharya Assistant Professor (ECE) sayak@iiitd.ac.in

# Ph.D. (2016), IIT Delhi, India Research Interests: Illtrg, thin and high office

Ultra-thin and high-efficiency photovoltaics, Strong light-matter interaction in photonic crystals



Sayan Basu Roy Assistant Professor (ECE) sayan@iiitd.ac.in

#### Ph.D. (2019), IIT Delhi, India

#### Research Interests:

Adaptive control for uncertain switched systems, online approximate optimal control using reinforcement learning based solutions, adaptive backstepping control



Shobha Sundar Ram Associate Professor (ECE) shobha@iiitd.ac.in

#### Ph.D. (2009), University of Texas at Austin, USA

#### Research Interests:

Conceptualize Model Design and Test Electromagnetic Sensors for Following Applications - Through-wall radar sensing of humans, EMI based sensing of energy consumption in buildings, On-chip wireless interconnects



Smriti Singh Assistant Professor (SSH) smriti@iiitd.ac.in

#### Ph.D. (2017), Jawaharlal Nehru University, India Research Interests:

Social Class, Gender, Urban Space and Community, Neo-Urban, Spatial Sociology, Virtual Community and Solidarity, Digital Childhood and **Parenting** 



**Sneh Saurabh** Associate Professor (ECE) sneh@iiitd.ac.in

Ph.D. (2012), IIT Delhi, India

#### Research Interests:

Nanoelectronics, Exploratory Electronic Devices, Energy-Efficient Systems, VLSI Design and Verification and CAD for VLSI



**Sneha Chaubey** Assistant Professor (Math) sneha@iiitd.ac.in

#### Ph.D. (2017), University of Illinois at Urbana-Champaign (ÚIUC), USA Research Interests:

Number theory and its interactions with geometry and dynamics



Soibam Haripriya Assistant Professor (SSH) soibam@iiitd.ac.in

# Ph.D. (2016), University of Delhi,

#### Research Interests:

Gender, Violence, Northeast India, Poetry and Fiction in Ethnography of Violence, Digital Ethnography



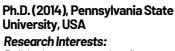
Sonia Baloni Rav Assistant Professor (SSH) sonia@iiitd.ac.in

#### Ph.D. (2012), Georg August University, Goettingen, Germany Research Interests:

Role of attention in visual processing, studying mechanisms of emotion and motion perception



Souvik Dutta Assistant Professor (SSH) souvik@iiitd.ac.in



Political economy, microfinance and economics of digital marketing



Sriram K Associate Professor (CB) sriramk@iiitd.ac.in

#### Ph.D. (2004), IIT Madras, India Research Interests:

Systems biology, Cell division cycle, Circadian rhythms, Computational cognitive neuroscience



Subhashree Mohapatra Assistant Professor (Math) subhashree@iiitd.ac.in

#### Ph.D. (2013), IIT Kanpur, India

#### Research Interests:

High order schemes for numerical solution of partial differential equations, Optimal control theory, Parallel implementation of computational fluid dynamics related problems



Sujay Deb Professor (ECE, CSE) sdeb@iiitd.ac.in

#### Ph.D. (2012), Washington State University, USA Research Interests:

Multi-core processor architectures, Wireless network on-chip, Emerging interconnection technologies for multicore chips



Sumit J Darak
Associate Professor
(ECE)
sumit@iiitd.ac.in

# Ph.D. (2013), Nanyang Technological University, Singapore Research Interests:

Intelligent, Reconfigurable and Selfsustainable wireless radio, Machine learning for wireless networks, Algorithms to architectures



Supratim Shit
Assistant Professor
(CSE)
supratim@iiitd.ac.in

# Ph.D. (2021), IIT Gandhinagar, India

Research Interests: Randomized Algorithms, Randomized Numerical Linear & Multilinear Algebra, Theoretical & Practical aspects of ML/DL models



Syamantak Das
Assistant Professor
(CSE)
syamantak@iiitd.ac.in

Ph.D. (2015), IIT Delhi, India Research Interests:

Intersection of theoretical computer science and discrete optimization



Tammam Tillo
Professor
(ECE)
tammam@iiitd.ac.in

Ph.D. (2005), Politecnico di Torino, Italy

**Research Interests:**Convolutional Neural Networks for some image processing tasks



**Tanmoy Chakraborty**Assistant Professor
(CSE)
tanmoy@iiitd.ac.in

Ph.D. (2015), IIT Kharagpur, India

Research Interests:

Network Science, Data Mining and Datadriven Cybersecurity, Natural Language Processing



Tarini Shankar Ghosh Assistant Professor (CB) tarini.ghosh@iiitd.ac.in

Ph.D. (2014), University of Hyderabad, India

Research Interests:

Integrated multi-OMICs, metagenome informatics, machine learning and statistical learning



**Tavpritesh Sethi**Associate Professor
(CB)

tavpriteshsethi@iiitd.ac.in

Ph.D. (2014), CSIR-IGIB, New Delhi, India

Research Interests:

Big-data for clinical decision support, machine learning for critical care and community medicine, human physiology and Teaching Interests are Statistical, complex networks and machine learning modelling for medicine and biology, human physiology



V. Raghava Mutharaju
Assistant Professor
(CSE)
raghava.mutharaju@iiitd.ac.in

Ph.D. (2016), Wright State University, Dayton, USA

Research Interests:

Knowledge Graphs/Semantic Web, Ontology modeling and reasoning, Linked Data, Big Data



Venkata Ratnadeep Suri Assistant Professor (SSH) ratan.suri@iiitd.ac.in

Ph.D. (2013), Indiana University, Bloomington, USA Research Interests:

ICTs and Society, Information Literacy, Data Literacy, E-Health, M-health, Social media for Health, ICTs and Health behavior, ICTs and Development



Vibhor Kumar Associate Professor (CB) vibhor@iiitd.ac.in

# Ph.D. (2007), Helsinki University of Technology, Finland Research Interests:

Genomics, Computational Biology and Statistical Signal Processing



Vikram Goyal
Professor
(CSE)
vikram@iiitd.ac.in

#### Ph.D. (2009), IIT Delhi, India

Research Interests:

Data Mining, Databases, Spatial Data Analytics



Vinayak Abrol Assistant Professor (CSE) abrol@iiitd.ac.in

Ph.D. (2018), IIT Mandi, India Research Interests:

Acoustic modelling and coding, voice biometrics, pathological speech and audio categorization



Vivek Bohara
Professor
(ECE)
vivek.b@iiitd.ac.in

#### Ph.D. (2011), Nanyang Technological University, Singapore Research Interests:

Device-to-device communication, Visible Light Communication, Hybrid VLC-RF architecture, Proof-of-concept testbeds and experimental validation



Vivek Kumar Assistant Professor (CSE) vivekk@iiitd.ac.in

Ph.D. (2014), Australian National University, Australia Research Interests: Parallel programming models and runtime systems

## **Professor of Practice**



**Angshu Das**B.Tech. (Electrical
Engineering), IIT Kanpur,
India



**Pankaj Vajpayee** MBA-Finance, University of Delhi , India



**Dhurjati Majumdar** M Sc, Physiology, University of Calcutta, India

# **Visiting Faculty**



Aman Samuel MBA (2016), University of Madras, MCA (2004), IGNOU, India



Amlan Chakrabarti Ph.D.(2010), University of Calcutta India



**Anoop Ratn**MFA(2020), Teerthanker
Mahaveer University,
India



Anupam Saronwala Master's in Computer Engineering (1981), Syracuse University, USA



**Bijendra Nath Jain** Ph.D. (1975), SUNY, Stony Brook, USA



**D. K. Sharma**Ph.D. (1977), University of Delhi, India



**Jyoti Sharma**Business Management (1992), IIM Bangalore, India



Payel C Mukherjee Ph.D. (2016), IIT Gandhinagar, India



**Samaresh Chatterji** Ph.D. (1979), Wayne State University, USA



**Sonal Keshwani** Ph.D. (2018), IISc Bangalore, India



**Subhajit Ghosechowdhury** Ph.D. (1997), Purdue University, USA

# ADMINISTRATIVE OFFICERS



**Dr. Deepika Bhaskar** Registrar



**Kapil Chawla**Controller of Finance



Rashmil Mishra General Manager (Placements, Corporate Relations & IOP)



**Sanjay Roy**Chief Engineer cum Estate
Officer

**Aakash Gupta** Junior Manager (Academics)

Adeela Sughra Junior Manager (Accounts)

**Anurag Tyagi**Deputy Manager
(Civil)

**Binu Ann Joseph** Junior Manager (HCD)

Harsh Gupta
Junior Manager
(Accounts)

**Khagendra Joshi** Junior Research Engineer

**Nilesh Kumar Dixit** Junior Research Engineer

**Priti Patwal** Assistant Manager (CSE)

**Risha Lal** Assistant Manager (Maths)

Sarika
Junior Manager
(Admin & Accounts)

**Tapan Kumar** Junior Manager (Industry Outreach Program) **Abhijeet Mishra** Junior Research

Engineer

**Ajay Kumar** Deputy Manager (Store & Purchase)

**Ashish Aggarwal**Junior Manager
(Academics)

**Deepali Gupta** Junior Manager (Alumni Relationship)

**Imran Khan** Junior Manager (IRD)

**Khushpinder Pal Sharma** Counselling Psychologist

**Nisha Narwal** Assistant Manager (Academics)

Priya Khandelwal Junior Manager (Accounts)

**Rubina Thakur** Junior Manager (SSH)

**Shipra Jain** Junior Manager (CB)

**Umesh** Deputy Manager (Electrical) **Abhinay Saxena** Sr. Manager(IT)

Alok Nikhil Jha Sr. Manager (Office of Planning and Resource Generation)

**Ashutosh Brahma**Manager
(Academics)

**Dr. Rahul Gupta** Research Engineer

**Jagadanand Dwivedi** Junior Manager (Student Affairs)

> **Mohit Kumar** Junior Manager (Academics)

**Pallavi Kaushik**Deputy Manager
(Corporate Communication)

Rahul Verma Assistant Manager (System Admin & Networking)

> **Sana Ali Naqvi** Junior Research Engineer

> > Shishir Jain Manager (Accounts)

Varsha
Junior Manager
(Accounts)

**Abhishek Kumar** Junior Research Engineer

**Ankit Agarwal** Web Manager

**Atul Sharma** Junior Manager (HR)

**Dr. Ravi Bhasin**Manager
(Student Affairs)

KPSingh Consultant (Academics)

**Nayana Samuel** Assistant Manager

Parikshita Behera
Junior Manager (Library &
Information Centre)

Rajendra Singh Manager (Library & Information Service)

> **Sanjay Chauhan** Junior Manager (Placement)

**Sonal Garg**Junior Manager
(Student Affairs)

Vinod Kumar Manager (Director Secretariat & HR) Adarsh Kumar Agarwal Junior Manager (System Admin & Networking)

**Anshu Dureja**Deputy Manager
(Academics)

**Bhawani Shah** Assistant Manager (System Admin & Networking)

> **Gursevak Singh** Assistant Manager (HR)

**Kapil Dev Garg** Finance Manager (IRD)

**Nidhi Yadav** Junior Manager (Store & Purchase)

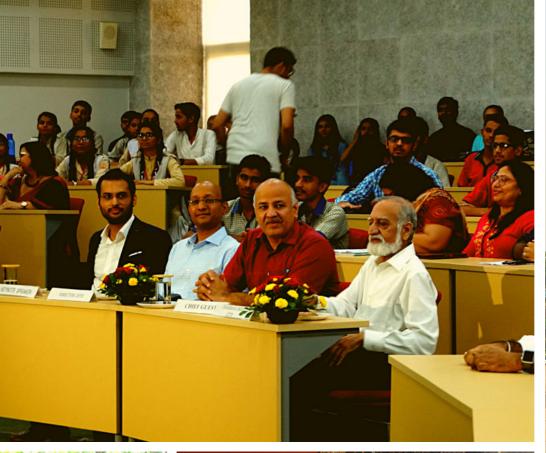
**Prachi Mukherjee** Assistant Manager (Academics)

**Raju Biswas** Junior Manager (Academics)

**Sanjna Khosla** Assistant Manager (ECE)

**Sudhanshu Tamta** Junior Manager (Academics)

**Yogesh Sangwan** Junior Manager (System Admin & Networking)



























Indraprastha Institute of Information Technology Delhi Okhla Industrial Estate, Phase III (Near Govind Puri Metro Station) New Delhi, India - 110020 Email: <u>info@iiitd.ac.in</u>