

**IIT KANPUR**  
Indian Institute of Technology Kanpur

Synergizing Industry-Academia Partnership





## **PROF. MANINDRA AGRAWAL**

### **DIRECTOR**

Dear Stakeholders,

It is my pleasure to note that IIT Kanpur is participating in the India CSR Summit which is Asia's largest CSR and sustainability forum.

IIT Kanpur has a thriving ecosystem of interdisciplinary research and innovation that is not only involved in addressing fundamental scientific questions but is also engaged in developing technologies to solve pressing societal needs. Today, the institute houses several state-of-the-art research and development facilities that fuel the research endeavors of our faculty and students. CSR support from various corporates has played a significant role in fortifying the research infrastructure and initiatives at the institute thereby making the impact of R&D activities at IIT Kanpur more profound and far-reaching. Recently, the institute has established Kotak School of Sustainability on campus with CSR support from Kotak Mahindra Bank Ltd. JK Cement is contributing towards the establishment of Yadupati Singhania Super Specialty Hospital as part of Gangwal School of Medical Sciences and Technology and other corporate giants such as IBM India Pvt. Ltd., REC Foundation, HDFC Bank, and Portescap India Pvt. Ltd. are also contributing towards various initiatives under the umbrella of the Medical School. Besides these IIT Kanpur has also received CSR support from Tower Research Capital, Citibank, and several other corporates.

Events such as the India CSR Summit provide incredible opportunities for all the stakeholders with diverse ideas and backgrounds to come together for sharing and exchange of knowledge which is crucial for fostering innovation and growth. I take this opportunity to convey my best wishes for the grand success of the event.

Jai Hind!



## **PROF. AMEY KARKARE**

### **DEAN, RESOURCES AND ALUMNI**

Dear Stakeholders,

IIT Kanpur offers a dynamic and supportive environment that fosters innovation and entrepreneurship through its incubation centers, state-of-the-art research facilities, Our partnership with CSR organizations and industry partners has been instrumental

in driving impactful research and development projects that have the potential to transform industries and improve the quality of life for millions of people. By leveraging our expertise in cutting-edge technologies and interdisciplinary research, we aim to create a sustainable and inclusive future that benefits all stakeholders.

Your generous donations have not only enabled us to maintain state-of-the-art facilities and offer support to many deserving students but have also allowed us to undertake ground-breaking projects with lasting societal impact. We are deeply grateful to Kotak Mahindra Bank, Philip Morris India, NMTronics, ITC Ltd., J.K. Ferner, Citibank, HDFC, and many others who have shared our vision of a brighter future through their partnership with IIT Kanpur.

In this fast changing world, it is imperative that we continue to collaborate and innovate to address the complex challenges facing society. We invite you to join us in our mission to create a better tomorrow through cutting-edge research, innovative solutions, and impactful collaborations. Together, we can make a difference and shape a brighter future for generations to come.

We look forward to your continued support and partnership in our journey towards excellence and societal impact.

## OVERVIEW OF IIT KANPUR

IIT Kanpur is a hub of innovation and technology where academia, industry, and entrepreneurship converge. With a strong and well-established ecosystem of R&D, the verticals of the institute are distinct and yet interconnected that provide a very robust foundation for fostering academia-industry collaboration under many domains, such as health care, community welfare, sustainable energy, education, cyber security, etc.

The symbiotic relationship between academia and industry produces ground-breaking innovations that help solve real-world problems. The ecosystem of IITK provides a strong platform to ideate, innovate, and inspire. IIT Kanpur’s commitment to nurture talent and foster a culture of innovation has only resulted in producing outstanding professionals, entrepreneurs, and researchers who have made significant contributions in their fields globally.

### WHY COLLABORATE



OVERALL



ENGINEERING



INNOVATION

#### LUSH GREEN CAMPUS

1055 ACRES

#### TOTAL STUDENTS

9500+

558+

43,000+

FACULTY STRENGTH

ALUMNI BASE

- Successful incubated tech driven projects.
- Rs. 3000 crores portfolio value creation.
- World Renowned faculty awarded with Geodel/TWAS/Bhatnagar Prize/Infosys Prize, etc.
- Legacy of 64 Years
- 20 Departments and 22 Centers of Excellence (CoE's)
- Opportunity to support and partner with Central Government of India

## ACADEMIC DEPARTMENTS

## HUMANITIES

- Humanities and Social Science

## ENGINEERING

- Aerospace
- Biological Sciences and Bioengineering
- Chemical
- Civil
- Electrical
- Material Science
- Mechanical
- Sustainable Energy
- Computer Science

## MANAGEMENT SCIENCES

- Management

## INTERDISCIPLINARY PROGRAMS

- Photonic Science and Engineering
- Nuclear Engineering and Technology

## SCIENCE

- Chemistry
- Mathematics and Statistics
- Cognitive Sciences
- Space, Planetary & Astronomical Sciences & Engineering (SPASE)
- Physics
- Earth Sciences
- Economics



## DEAN OF RESOURCES & ALUMNI AND IITK DEVELOPMENT FOUNDATION

The Dean of Resources & Alumni office plays a pivotal role in fostering connections between IITK and its alumni while actively working towards generating resources for the various initiatives and projects of the institute to serve its mission and goals. To professionalize engagement with our alumni and other stakeholders, the Institute has established IITK Development Foundation (IITK DF), a section-8 company, an extended arm of the DoRA office that engages with alumni, corporates, foundations, philanthropists and other well-wishers to raise funds.

### FUNDING OPPORTUNITIES

#### INFRASTRUCTURE

- Gangwal School of Medical Science and Technology.
- Supporting new Departments and Center.
- Funding Research Lab and Upgrade.
- Student Housing and Recreation Upgradation.

#### COMMUNITY WELFARE

- Schools within Campus (Opportunity School)
- Sikhsha Sopan
- Rozi Shiksha kendra
- Cell for Differently-abled People

#### RESEARCH & INNOVATION

- Research
- Student Entrepreneurship Program

#### STUDENT

- Scholarship
- Awards
- Travel Grants
- Sahiyog
- Career Development and Guidance Initiative



### MAJOR INITIATIVES

**CANCER RESEARCH**

**AI IN HEALTHCARE**

**BATTERY TECHNOLOGIES**

**UNMANNED AERIAL VEHICLES (UAVS)**

**DECARBONIZATION SOLUTIONS**

**MEDTECH DEVICES**

**NEW MATERIALS**

**DRUG DISCOVERY**

**CYBER SECURITY AND AI**

**NON-INVASIVE IMAGING**

**SEMICONDUCTORS**

**ENVIRONMENT AND  
CLIMATE CHANGE**

## RESEARCH FACILITIES



**NATIONAL WIND TUNNEL FACILITY**



**FLIGHT LABORATORY**



**NATIONAL CENTRE FOR FLEXIBLE ELECTRONICS**



**CYBER SECURITY CENTER**



**775 TR HR ENERGY STORAGE SYSTEM**



**1.3 PETAFLOPS SUPER COMPUTER (PARAM SANGANAK)**



**SOLAR PHOTOVOLTAIC POWER**



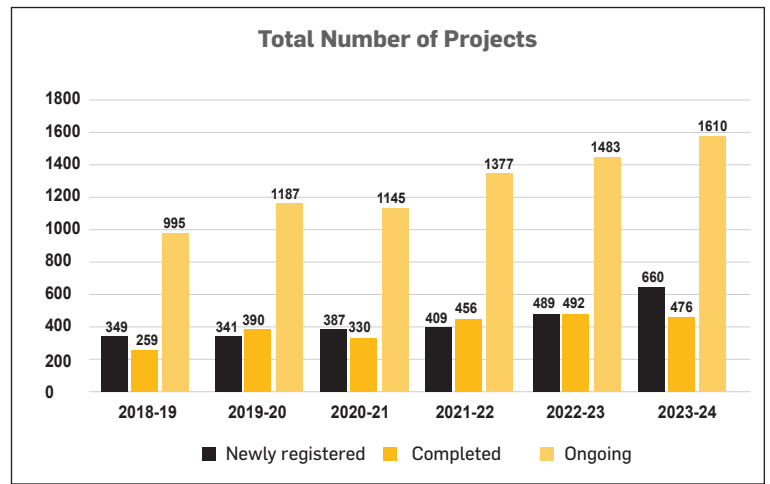
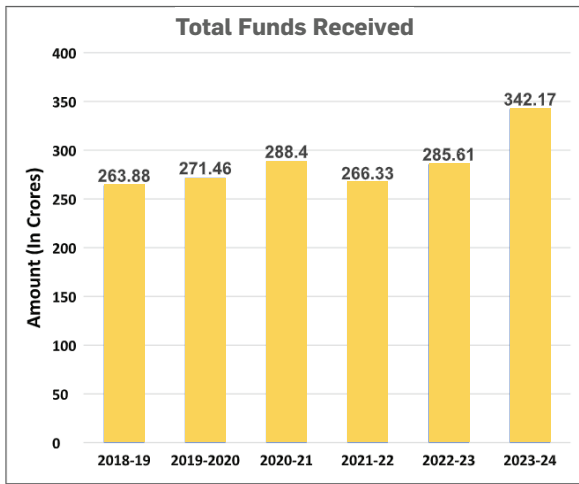
**ADVANCE CENTRE FOR MATERIAL SCIENCES**



**SMART GRID CONTROL CENTRE**

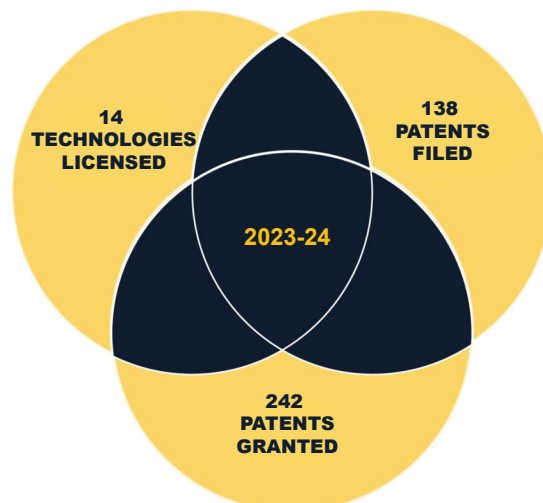
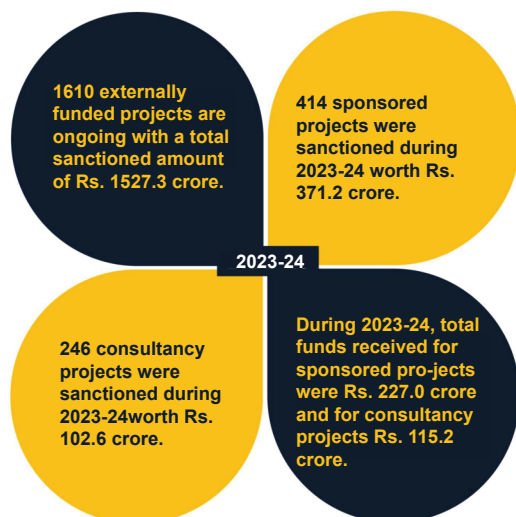
## OFFICE OF RESEARCH & DEVELOPMENT

In the ever-evolving landscape of Research and Development, IIT Kanpur has continuously strived to push the boundaries of knowledge, foster innovation, and contribute to the betterment of society. It is dedicated to developing cutting-edge technology for creating social impact by fostering successful industry-academia collaborations on technology advancements, computational research, life sciences, environmental studies, and interdisciplinary collaborations.



Strong industry collaborations with renowned entities such as Laurus Labs, Larsen and Toubro, Shell, Qualcomm, Microsoft, Boeing, BHEL, CEAT, and BEML, offer IITK students and faculty invaluable real-world exposure and project opportunities.

IITK is equally devoted to global engagement, actively pursuing international collaborations through academic-industrial partnerships, international conferences, workshops, and research Memorandums of Understanding (MoUs). Notably, the joint degree programs with international universities further enrich the institute’s academic tapestry.

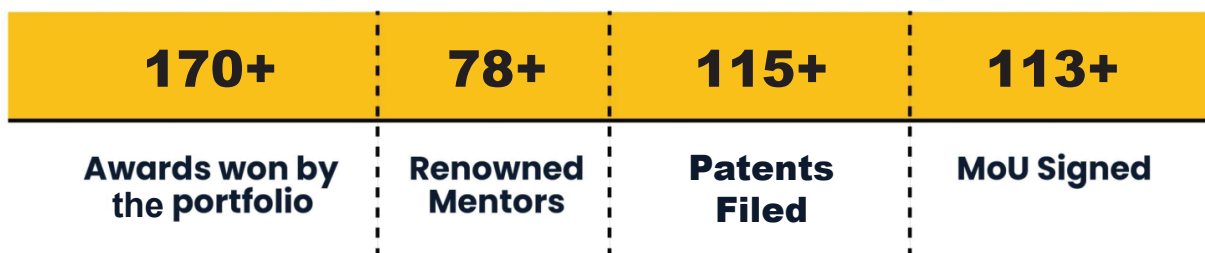
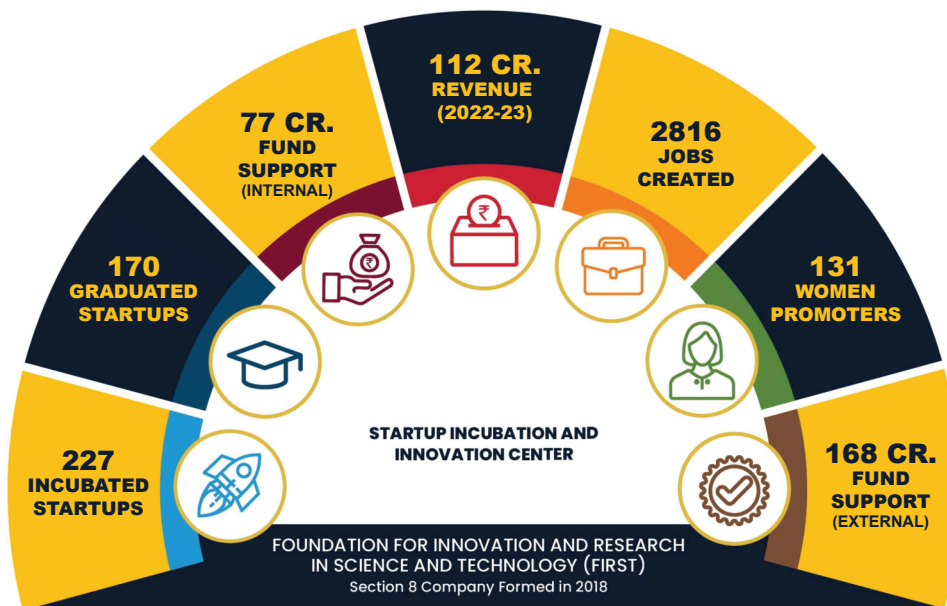




## STARTUP INCUBATION & INNOVATION CENTRE (SIIC)

The multi-disciplinary incubation ecosystem at Startup Incubation and Innovation Centre, IIT Kanpur, hones entrepreneurial talent and converts their vision into disruptive technology solutions. Over the last two decades, the incubation facility has linearly progressed from incubating to graduating over 150+ successful startup ventures in healthcare, agritech, cleantech, artificial intelligence, machine learning, and cybersecurity domains with promising impact. The robust network of cutting-edge, state-of-the-art infrastructure facilitates the journey of ideas into products that put quality at the helm of innovation.

### DOMAINS



## CYBERSECURITY AND CYBERSECURITY FOR CYBER PHYSICAL SYSTEMS INNOVATION HUB (C3i HUB)

C3iHub is a Technology Innovation Hub at IIT Kanpur funded by the Department of Science and Technology, Government of India, under the National Mission of Interdisciplinary Cyber-Physical Systems (NM-ICPS). From analysing security vulnerabilities and developing tools to address them at various levels of critical cyber-physical system architectures, to nucleating start-ups developing such tools at scale, to partnering with industries for co-development and transfer of technologies, to training the next generation of cybersecurity researchers, C3iHub works on every level that facilitates country's adoption and advancement of cyber-physical systems.

### HIGHLIGHTS

Security Operation Centers at NHAI, IPA, BIT-Mesra	Security Audit NHAI, IPA, SAIL	Blockchain Technology Based TDR with Kanpur Development Authority	RnD Projects on critical Sectors
Partnerships: 5+ International Collaborations	Financial and Technical Support : 50+ Startups and 50+ R&D Projects	Cybersecurity skilling program - 10,000+ Students Enrolled	Cyber Investigation Tool for Cyberabad Police

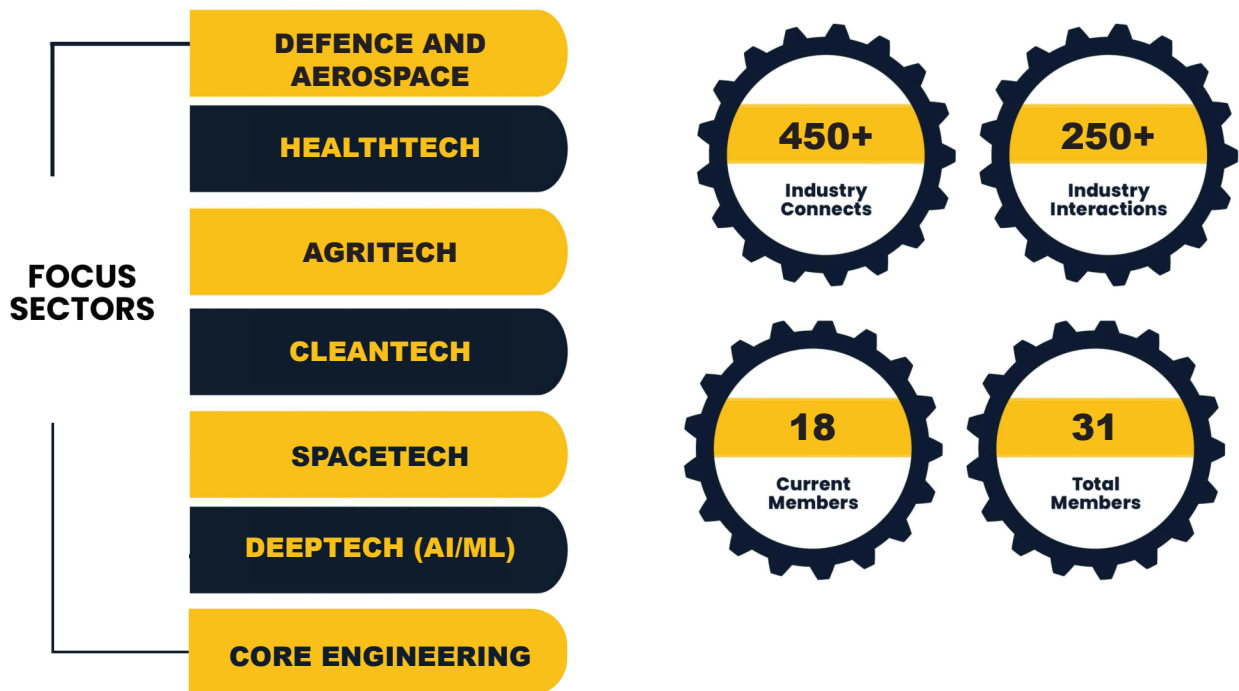
### ACHIEVEMENTS



## IIT KANPUR RESEARCH & TECHNOLOGY PARK FOUNDATION

Technopark@iitk is not-for-profit Section 8 company registered on 7th February 2019, working towards accelerating & strengthening industry-academia for development of indigenous cutting-edge technologies.

Technopark aims to foster Industry-IIT Kanpur collaboration by promoting co-development of cutting-edge technologies in line with the national priorities by leveraging the core competence of IIT Kanpur. It focuses on strengthening industry-student engagement, and identify potential technologies developed at IITK for lab-to-market transition.



## OUR INDUSTRY PARTNERS



## INDUSTRY PARTNER TESTIMONIALS

**DR. A. S. PRASAD**



**GM, Integrated Rack Solutions**

“ Vertiv takes pride in associating with IIT Kanpur and Siksha Sopan for making a difference in life of underprivileged in the country through our CSR initiative. Education, Sustainability and Energy are themes for Vertiv for our CSR funding and we look forward to partnership with IIT Kanpur for further work in all these tracks.

**MR. RAFIQ SOMANI**



**Area VP India & ASEAN Sales**

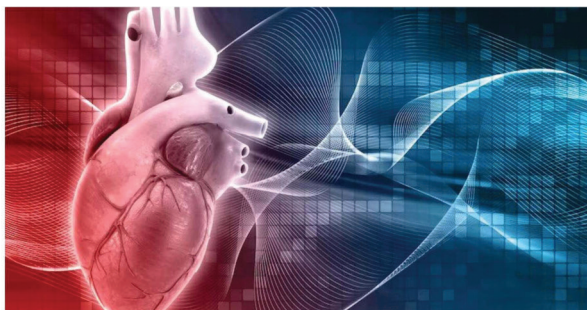
“ IIT Kanpur’s unwavering focus on social responsibility, deep understanding of the community’s needs, and commitment to creating meaningful change have been invaluable in propelling our collaborative journey for CSR activities. Through CSR funding, Ansys has enabled the IITK team to promote and drive systematic and thorough research among postgraduate students in the domains of science, technology, engineering and medicine aimed at promoting Sustainable Development Goals.

# MAJOR PROJECTS



**GANGWAL SCHOOL OF MEDICAL SCIENCES AND TECHNOLOGY**

Major Donors



**HRIDYANTRA**



**KOTAK SCHOOL OF SUSTAINABILITY**

Major Donors  **Portescap**

MAJOR DONOR **KOTAK MAHINDRA BANK LIMITED**



**LARGE SCALE MULTI-CITY DENSE URBAN IOT REAL TIME AIR QUALITY**



**RENEWABLE ENERGY GENERATION THROUGH INSTALLATION OF 200KW SOLAR PANELS**

MAJOR DONOR  **ERICSSON**

MAJOR DONOR  **AIA Engineering Limited**

## MAJOR INNOVATIONS



**NATIONAL BLOCK CHAIN FOR E-GOVERNANCE**



**ANTI - COUNTERFEITING TECHNOLOGY**



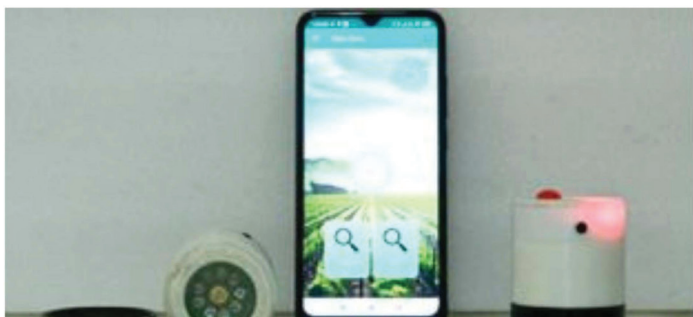
IIT Kanpur incubated startups  
Kritsnam Technologies and Earthface Analytics present

**PADMAVATI**

**SMART WATER QUALITY TESTING DEVICE**



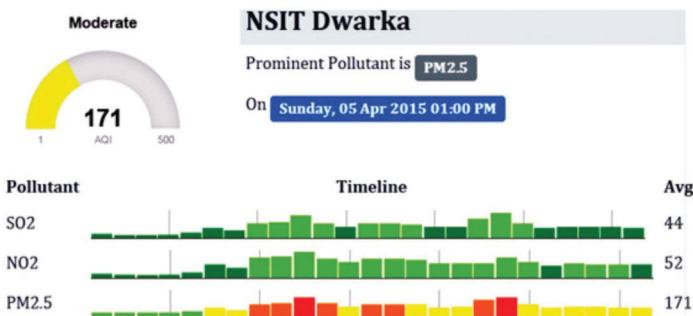
**PM1 IMPACTOR BASED SAMPLER**



**BHU PARIKSHAN SOIL TESTING DEVICE**



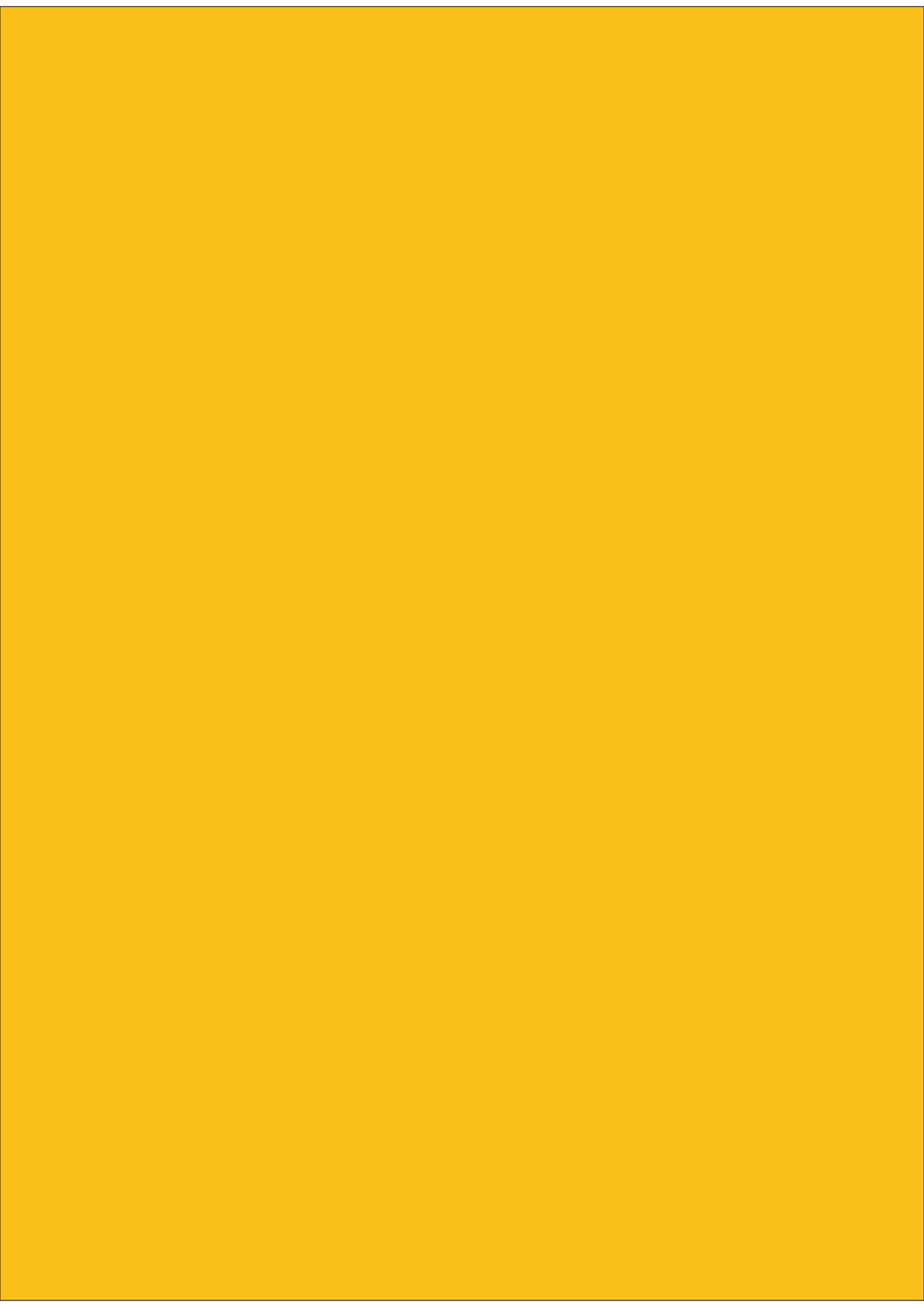
**TOUCH SENSITIVE WATCH FOR BLIND AND VISUALLY IMPAIRED**

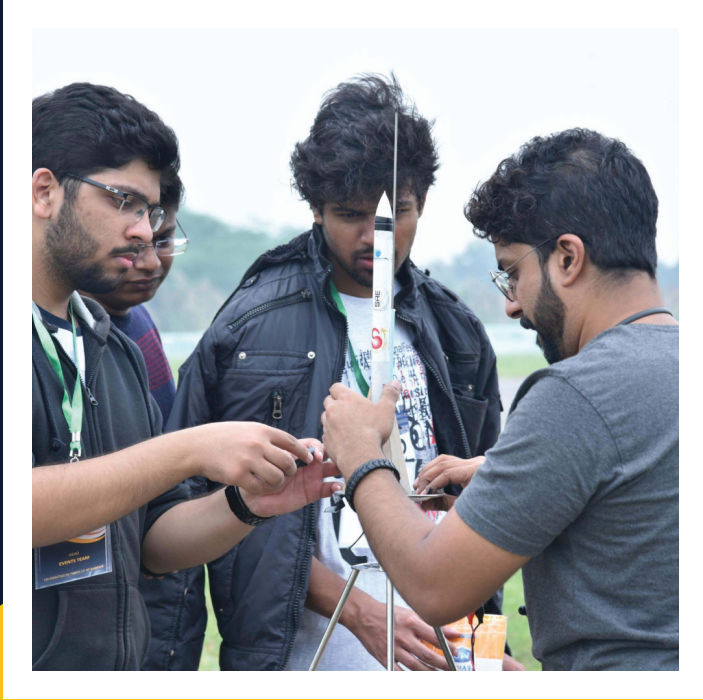


**NATIONAL AIR QUALITY INDEX**



**ARTIFICIAL SKIN FROM BOUGAINVILLEA**





# IIT KANPUR

Indian Institute of Technology Kanpur

## HOW TO COLLABORATE?

### IIT KANPUR DEVELOPMENT FOUNDATION (IITK DF)

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✉ [rajatsharma@iitkdf.org](mailto:rajatsharma@iitkdf.org) [pooja@iitkdf.org](mailto:pooja@iitkdf.org)

### DEAN OF RESOURCES AND ALUMNI OFFICE

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