



# **INDIAN INSTITUTE OF TECHNOLOGY DELHI**

























# Quarterly NEWSLETTER

August 2022 ISSUE



# WORD FROM THE DIRECTOR

Dear Friends and Well-wishers of IIT Delhi,

I am happy to present the August 2022 Issue of the Institute newsletter to you.

This issue will give you glimpses of the achievements in the academic and research areas, alumni contribution, international and corporate relations.

Your comments and suggestions are welcome to make the next issue of the newsletter more interactive.

Warm regards,

Rangan Banerjee Director, IIT Delhi

# **News & Events**

## In Pictures - IIT Delhi Celebrates 76th Independence Day













## **News & Events**

#### NIRF India Rankings 2022

IIT Delhi achieved 2nd rank in the engineering category. In the management, the Institute moved to 4th position from the last year's 5th. In the research area also, IIT Delhi has moved up the rankings to feature among the top three institutions this year. Speaking about the NIRF India Rankings 2022, Prof Rangan Banerjee, Director, IIT Delhi, said, "We are enhancing programmes and options for our students and strengthening our research and societal impact. We are happy to see that this is reflecting on our NIRF rankings."





#### **PSL Lab Inaugurated by Union Minister Shri Piyush Goyal**

Union Minister of Textiles, Minister of Commerce and Industry, and Minister of Consumer Affairs, Food and Public Distribution, Shri Piyush Goyal inaugurated a Public Systems Lab (PSL) at IIT Delhi on August 16. The Lab will work closely with the United Nations World Food Programme to identify projects around food systems and management and innovations, particularly those that involve operations research, product development, data-based innovations & analysis, and other areas.

#### Census Data Workstation Inaugurated at IIT Delhi

The Registrar General and Census Commissioner, India, Dr. Vivek Joshi inaugurated a Census Data Workstation at the Economics Lab, Department of Humanities and Social Sciences, IIT Delhi on July 6th, 2022. Speaking on the occasion, Dr. Vivek Joshi said that the Workstation shall facilitate access to Census microdata for academicians and researchers. It will also help spread further awareness about the vast amount of data collected during the Census operations.





# Academic Outreach Day Organized for Students and Faculty of Haryana Govt. Technical Institutes

The daylong programme organised by the Institute's Academic Outreach and New Initiatives office on July 29, 2022, was attended by over 300 students and teachers and it featured talks by IIT Delhi faculty and demonstration of research works (models and prototypes) by its researchers and startups. The researchers showcased their works in the area of biomass pellet based clean combustion device, Covid-19 rapid antigen kit, development of multimodal endoscope for early-stage oral cancer screening among others. The Optica Student chapter also gave interesting demonstrations on 3D display, diffractive optics, etc.

#### **QS World University Rankings 2023**

In the QS World University Rankings 2023 announced in June, IIT Delhi featured amongst the top-200 world institutions with an improved rank of 174 amongst 1422 globally ranked institutes. Overall, the Institute improved on its 2022 performance by 11 places in the QS World University Rankings 2023. IIT Delhi stood amongst the top 12.2% of the global institutes as compared to 25.8% in 2014.



### **News & Events**

# School Students Develop Promising Prototypes at Change.Makers Summer Boot Camp

Twenty-five high schoolers (classes 11 and 12) who were selected for the boot camp received valuable guidance from IIT Delhi faculty and student mentors and used state-of-the-art facilities available at the Makerspace (a DIY Central Research Facility) to convert their impactful ideas to reality. The nine student team projects were about rehabilitation exercise monitoring, automating reuse of R.O. filtered water, aeroponics, trekker safety, quadruped terrain mapping robot, avoiding drowsiness in drivers, stretcher convertible seat in vehicles, real time text to braille translator and a rolling robot.





# IITs in Delhi, Bombay and Kanpur Offer Internship and Sponsored M. Tech. Programmes to Students from Ladakh

This initiative has been launched with an idea to enhance opportunities for the students from Ladakh who are currently pursuing an undergraduate level course in STEM (Science, Technology, Engineering, Mathematics) subjects. The three IITs are offering following specific opportunities:

- i) Short-term Internships for undergraduate students (1.5 2 months duration)
- ii) Long-term Internships for undergraduate students (6 months duration)
- iii) Sponsored M. Tech. programmes (2 years duration)

#### IHFC, TIH of IIT Delhi, Celebrates 2nd Anniversary

Dr. Srivari Chandrasekhar, Secretary, DST, was chief guest at the event organised to mark the IHFC's 02nd anniversary. On this occasion, IHFC announced Call for Proposals for three new Grand Projects in areas of Autonomous Vehicles, Nano Robotics, and Block Chain for Applications in Robotics. Dr. Srivari Chandrasekhar expressed his satisfaction and delight over the association of the DST with the IHFC and how the latter has moved forward in the last 2 years on all the mandates given by the DST.





# First Batch Successfully Completes IIT Delhi's STEM Mentorship Program for High Schoolgirls

The STEM Mentorship Program was launched by the Academic Outreach and New Initiatives office at IIT Delhi in December 2021 with an aim to encourage the young schoolgirls to pursue career in science and technology. The 10 selected students were mentored and guided by the IIT Delhi faculty members over a period of seven months on varied range of project topics such as artificial photosynthesis, water reuse using nanotechnology, theoretical computer science, artificial intelligence, climate change, brain mapping and neuroscience, optics, vibrations in engineering and engineering of human joint implants.

#### ITC Inks Pact with IIT Delhi

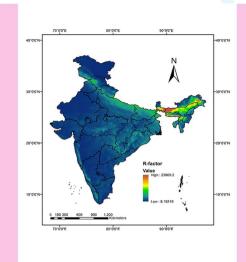
ITC Limited, one of India's leading multi-business conglomerates and a sustainability exemplar, signed an MoU with IIT Delhi to support research in identified STEM areas for accelerating India's journey towards achieving its Sustainable Development Goals. The areas which have been identified for research are energy storage, low carbon cold transportation, and plastic bio degradation to name a few and will further pave wave for more research in the areas of mutual interest.



## **Research & Innovation**

# Map Developed to Highlight Areas Prone to Rainfall-induced Erosion in India

A study conducted at Hydrosense Lab, IIT Delhi, by PhD student Ravi Raj, Prof. Manabendra Saharia, and Prof. Sumedha Chakma from the Department of Civil Engineering, has led to first pan-India assessment of rainfall erosivity over India. Using multiple national and global gridded precipitation datasets i.e., Indian Monsoon Data Assimilation and Analysis (IMDAA) at an hourly temporal scale, India Meteorological Department (IMD) on a daily scale, and the Global Climate Hazards Group Infrared Precipitation with Station data (CHIRPS) on a daily scale, the researchers have developed a high-resolution map highlighting areas prone to rainfall-induced erosion in India.



Read more- https://home.iitd.ac.in/show.php?id=130&in\_sections=Press



# Startup Develops Antimicrobial Solution That Provides Long-Lasting Protection Against Hospital-Acquired Infections

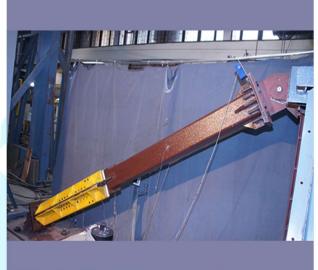
Medicfibers, a FITT, IIT Delhi incubated startup, in collaboration with AIIMS New Delhi, has developed an antimicrobial solution Viroclog® that when applied as a coating on textiles, provides long-lasting protection against HAI by reducing virus, bacteria, fungi survival on fabric. Coating the Viroclog® on textiles lowers the surface energy preventing adhesion of microbes and destroys the membrane integrity of microbes. Destruction of lipid-based membrane barrier makes the microbes inactive, thus preventing infection transmission.

Read more- https://home.iitd.ac.in/show.php?id=124&in\_sections=Press

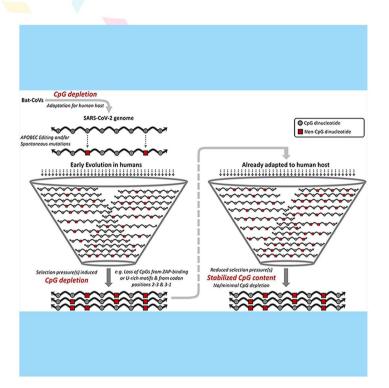
#### Low-Cost Buckling Restrained Braces Developed to Improve Earthquake Resistance of Structures

Prof. Dipti Ranjan Sahoo from the IIT Delhi's Civil Engineering Department and his student Dr. Ahmad Fayeq Ghowsi have developed low-cost super-elastic buckling-restrained braces that can give improved protection to constructions from earthquakes. These braces have several advantages, such as all-steel components, onsite fabrication and assembling process, post-earthquake inspection, and easy replacement. The earthquake resistance of civil structures is often improved by using seismic force-resisting systems or vibration control devices. Buckling-restrained braces are the special structural elements that serve both purposes.





## **Research & Innovation**



# IIT Delhi Study Reveals Mechanisms Driving SARS-CoV-2 Evolution in Humans

A team of IIT Delhi researchers have discovered the existence of temporal variations in selection pressures during SARS-CoV-2 evolution and adaptation to the human host. CpG (or CG; i.e. a cytosine followed by a guanine) numbers in virus genomes has been linked to host-switching, efficiency of virus replication, immune evasion and the ability of a virus to cause disease. The team led by Prof. Vivekanandan Perumal from the Kusuma School of Biological Sciences analyzed over 1.4 million full-length SARS-CoV-2 sequences from across the world. They found that the rate of CpG depletion from SARS-CoV-2 genomes rapidly decreases after the first few months of evolution in humans. Furthermore, most SARS-CoV-2 variants of concern had lower CpG content.

#### Read more-

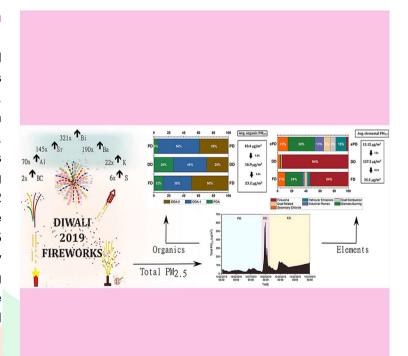
https://home.iitd.ac.in/show.php?id=116&in\_sections=Press

# Biomass Burning Drives Poor Air Quality in Delhi Post Diwali, Not Fireworks: Study

IIT Delhi researchers in a study have found that the metal content in PM2.5 levels rose by 1100%, and the fireworks alone accounted for 95% of the metal PM2.5 during Diwali. "However, the impact of the fireworks plummets within around 12 hours following Diwali", says Chirag Manchanda, the lead author of this study. They found that biomass burning-related emissions rise steeply in the days following Diwali, with average levels almost rising by order of ~2 compared to the pre-Diwali concentration. Also, the source apportionment results pertaining to the organic PM2.5 indicate a significant rise in both primary and secondary organic pollutants in the days following Diwali, suggesting the role of biomass-burning related emissions in the increase of primary organic emissions and, in turn, their aged products following the Diwali festival.

#### Read more-

https://home.iitd.ac.in/show.php?id=115&in\_sections=Press



# **Industrial Research and Development**



#### Sponsored Projects & Consultancy Jobs Undertaken Through IRD Unit During April-June 2022

- 51 Sponsored Projects with a total sanctioned value of INR 28.72 Cr
- 93 Consultancy Jobs with a total sanctioned value of INR 5.69 Cr

# High Value Sponsored Projects (with a sanctioned value of INR 1 Cr and above) Undertaken During April-June 2022

- Development of multifunctional structural geotextiles using textile wastes and hybrid fabrics (Sponsoring Agency- National Technical Textiles Mission, Ministry of Textiles; Sanctioned Funds- Rs 5.98 Cr)
- Artificial Intelligence-based Pulse Compression Favorable Coded Excited Thermal Wave Imaging Technique for Non-destructive Testing and Evaluation of Materials and Components for Defence Application (Sponsoring Agency- DRDO, Ministry of Defence; Sanctioned Funds- Rs 1.80 Cr)
- Development of High Efficiency Motors and Controllers for EVs for Indian Driving Conditions (Sponsoring Agency- Ministry
  of Electronics and Information Technology; Sanctioned Funds- Rs 1.45 Cr)
- Thermal energy storage technologies for commercial buildings for enhanced energy efficiency and resiliency (Sponsoring Agency- ITC Limited, India; Sanctioned Funds- Rs 1.37 Cr)
- Knitting for Composite Preform Developments using Technical Yarns (Sponsoring Agency- National Technical Textiles
   Mission, Ministry of Textiles; Sanctioned Funds- Rs 1.21 Cr)
- Carbon Fiber-Based Functional Electrode Materials for Energy Storage Applications (Sponsoring Agency- National Technical Textiles Mission, Ministry of Textiles; Sanctioned Funds- Rs 1.10 Cr)
- Development of patient-specific additively manufactured mandibular implants with biotechnology-inspired functional lattice structures (Sponsoring Agency- Indo-German Science & Technology Centre; Sanctioned Funds- Rs 1.10 Cr)
- Plastic biodegradation using microbial consortia and engineered micro-organisms & enzymes with focus on Polyethylene (PE) and Polypropylene (PP) (Sponsoring Agency- ITC Limited, India; Sanctioned Funds- Rs 1 Cr)

# **Industrial Research and Development**

Following collaborative research projects with international institutions have been initiated under Multi-institution Faculty Interdisciplinary Research Project (MFIRP) mode:

• **New Zealand Centre:** Ten joint projects initiated for support in the research areas of Ammonia for spark-ignition engines, Low-cost & sustainable constructions, Magnetically steered plasma thruster, AI- based approach for BIM, Health Management of Wind Turbine Power Train, Drone Swarms for Precision Agriculture and Wildlife Conservation, Discovering and understanding the role of novel long non-coding RNA in colorectal cancer, Identifying novel biomarkers and therapeutic targets to treat aggressive meningioma, Understanding exit choice behaviour at Metro stations using virtual reality, and Quantum transport for new quantum devices.



#### The Hebrew University of Jerusalem, Israel (HUJI)

Five joint projects for support in the research areas of Scaffold for Wound Healing, Health of Sodium Sulphur Battery, Border Shrines and Politics of the States, Mitigation of Drought Stress, and Analyzing Deep Neural Networks have been initiated.



#### Delft University of Technology (TUD)

Four joint projects for the support in the research areas of Mu-robot for Lunar Exploration, Climate-policy models to include social equity, Biogas-SOFC system for decentralized green hydrogen and power production, and Design of water desalination and water purification unit have been initiated.

#### New Calls for Multi-institution Faculty Interdisciplinary Research Project (MFIRP)

The call has been announced for inviting research proposals under MFIRP with the following institutions:

- · All India Institute of Medical Sciences (AIIMS), New Delhi
- · University of Waterloo, Canada

**Memorandum of Understanding:** IIT Delhi signed an MoU with the University at Buffalo (UB), USA on May 17, 2022, for academic and research collaboration.

#### **Review Meeting of Existing IRD Schemes**

#### IRD Student Startup Action and Discover & Learn (1-2-3-4)

IRD Student Startup Action and Discover & Learn (1-2-3-4) review meeting with Prof Rangan Banerjee, Director, IIT Delhi and other experts was held on 17 June 2022. A team of 17 students presented the progress in their projects in the form of poster presentations in the research areas of Energy efficient systems, Semiconductors, Electric vehicles, Semantic tagging of video sequences, Cognitive Science, Bioreactor, Quantum technology, Vitamin D on Virus genomes, measuring Automobile Pollution, AI, etc. Their idea and leads were highly appreciated.



- Following Centres for Excellence (CoE) instituted at IIT Delhi through IRD Unit were reviewed:
- i) Arun Duggal Centre of Excellence for Research in Climate Change and Air Pollution (CERCA)
- ii) Sumant Sinha ReNew Power CoE for Energy and Environment
- The Grand Challenge (GC) Projects implemented through the IRD were reviewed on 6th June 2022 by external experts.

# **Awards & Excellence**



Prof. Mausam
Yardi School of Artificial Intelligence



Received ACL 2022 NLP 10-year
Test of Time Award

Selected for IEI-IEEE Award for Engineering
Excellence 2021



Prof. N M Anoop Krishnan
Department of Civil Engineering &
Yardi School of Artificial Intelligence

Prof. V K Vijay
Centre for Rural Development and
Technology



Awarded W A Weyl International Glass Science Award 2022

Nominated as a member on Academic Committee of INA, Ezhimala



Prof. Dipti Ranjan Sahoo
Department of Civil Engineering

Invited to join as a member of the International Editorial Board of the International Journal of Steel Structures (IJOSS)

# **INSTITUTE AWARDS 2021**



## **Lifetime Award 2021**

Name of the Employee	Department/Section/Unit	
Mr. Suresh Kumar Gohar (Assistant Registrar)	Academics	
Ms. Anita Mohan Das (Staff Nurse)	Hospital	

## **Outstanding Employee Award 2021**

Name of the Employee	Department/Section/Unit
Mr. N. Bhaskar (Deputy Registrar)	Office of Director

# Sansthan Award 2021

Name of the Employee	Department/Section/Unit
Mr. Chandrama Sharma (Junior Technical Superintendent)	Central Workshop
Mr. Dhirender Rana (Junior Assistant)	Student Affairs
Ms. Jyoti Grover (Superintendent)	Office of Dean R&D
Ms. K B Kalyani (Assistant Caretaker)	Student Affairs
Mr. Mohit Vij (Assistant Mess Manager)	Student Affairs
Mr. Murli Hindwani (Junior Superintendent)	Registrar Secretariat
Ms. Neelam Sindhwani (Superintendent)	Humanities & Social Sciences
Mr. Rahul Bourai (Junior Assistant)	Office of Dy Director (S&P)
Mr. Ramesh Chander (Attendant)	Office of Career Services
Mr. Sandeep Arora (Senior Assistant)	Electrical Engineering
Ms. Sharanpreet Kaur Dhiman (Senior Assistant)	Establishment-II
Mr. Sujith S (Junior Technical Superintendent)	Physics
Ms. Tajinder Kaur (Junior Superintendent)	Office of Dean Academics

# Sh. Ram Rishi Singh & Smt. Malti Singh Memorial Staff Cash Award 2021

Name of the Employee	Department/Section/Unit	
Ms. Usha Devi N. (Technical Superintendent)	Electrical Engineering	
Mr. Phool Chand Saini (Junior Lab Assistant)	Hospital	

## INTERNATIONAL PROGRAMMES

## Fireside Chat with Brian Armstrong, CEO & Co-founder, Coinbase

A Fireside Chat was organized on April 4th, 2022, with the CEO & Co-founder of Coinbase, Brian Armstrong at IIT Delhi. In conversation with him were Prof. Subhashis Banerjee and Prof. Subodh Sharma from the Department of Computer Science and Engineering. The dialogue mainly focused on the future of cryptocurrency in India and other countries, it's comparison with commodities like gold and the technology behind cryptocurrency.



#### International Meetings

- Meeting with Ms. Anastasia A. Kolesnikova, Head of the Department of International Programs, Moscow Polytechnic University April 01, 2022
- Prof. Michael Wesley, Deputy Vice Chancellor International, University of Melbourne April 05, 2022.
- H. E. David Puig, Ambassador of Dominican Republic to India April 25, 2022
- Mr. Zunaid Λhmed Palak, Hon'ble ICT Minister of Bangladesh Λpril 26, 2022.
- Durham University May 04, 2022
- Duy Tan University May 06, 2022
- Delegation headed by Dr. Didier Raboisson, Attache for Scientific Cooperation, Embassy of France in India May 09, 2022.
- Delegation headed by Ms. Veena Reddy, Mission Director USAID (US Embassy) June 02, 2022.
- Delegation from Vrije Universiteit Amsterdam, Netherland- June 09, 2022
- Delegation headed by Mrs Audrène Eloit, Head of University and Scientific Partnerships
   (Europe/North America/Asia-Oceania), Ministry of Foreign Affairs, France June 29, 2022

#### Memorandum of Understanding (MoUs):

- MoU Signed with Swinburne University of Technology, Australia April 07, 2022
- University of Exeter, UK June 06, 2022

# **Corporate Relations**

- Know Dis Data Science LLP has signed a consultancy agreement with Prof. Mausam, Department of Computer Science and Engineering, on Knowledge Graph Embedding and Recommender Systems.
- Shriram Automall Ltd. has inked a pact with IIT Delhi to enhance pre-owned vehicle valuation platform. Through this exclusive agreement, Prof. Mausam and Prof. Sayan Ranu (Department of Computer Science and Engineering) will provide expertise to improve the accuracy of ThePriceX.



(Picture: MoU signing with Shriram Automall Ltd.)

Krishna Maruti Ltd. has signed an MoU with IIT Delhi for Light Weight RM and Weld process study. To discuss the project, Prof. Abhishek Das, Department of Mechanical Engineering and Prof. Ayan Bhowmik, Department of Material Science and Engineering visited their facility in Noida.



(Picture: Visit to Krishna Maruti facility in Noida)

- ➤ IIT Delhi faculty Prof. Sayan Ranu and Prof. Amitabha Bagchi (Department of Computer Science and Engineering) have signed a consultancy project with Jubilant Foodworks Ltd., in the field of 'Algorithmic aspects of driver unbundling' with a funding of Rs. 74.6 lakhs.
- Agreement signed between Athena Power Tech LLP and IIT Delhi led by Prof. Brejesh Lall, Department of Electrical Engineering, for a research project on Design of a Magnetic Tomography Method (MTM) based Measurement System.

## **Alumni Relations**

#### Rendezvous with Alumni

IIT Delhi organised alumni meets in Bengaluru and Mumbai on 18th and 25th June respectively. Both meets were very well received and proved to be a great opportunity to obtain inputs from the alumni, which will help in arriving at a shared common vision for the Institute. During the meets, presentations were given by the Institute Director, Prof Rangan Banerjee and Dean, Alumni Relations, Prof P.V. Madhusudhan Rao covering the past, present and future of IIT Delhi. Goals and initiatives undertaken by the IIT Delhi Endowment Fund were also discussed. Alumni Mr. Sandeep Singhal, Managing Director, WestBridge Capital hosted the Bangalore meet and Mr. Vikram Gupta, Founder & Managing Partner of IvyCap Ventures hosted the meet in Mumbai.



#### **Shraman Foundation Scholarship**

The Shraman Foundation has offered scholarships to 64 bright and indigent IIT Delhi students. The scholarships were presented to the students by Dr. Vinay Jain, founder of Shraman Foundation on June 15, 2022. Dr. Jain is a medical oncologist based in the USA and has supported thousands of students in India and the USA to pursue their educational aspirations.

#### Generous Contribution by Mr. Navin Chaddha

Alumnus Mr. Navin Chaddha (Electrical Engineering, 1992 Batch), Managing Director, Mayfield Fund has generously contributed to IIT Delhi Endowment for a pioneering student support language program. Mr. Chaddha stated, "I am a big believer in the power of education to transform lives. It's crucial to ensure that students of all backgrounds are equipped with the skills and knowledge they need to succeed at IIT, including learning and mastering English, so they can grow into the leaders of tomorrow".



# **Alumni Relations**

#### IIT Delhi Alumni Pledge to Contribute to Endowment Fund

IIT Delhi Alumni Ms. Parul and Mr. Alok Mittal have joined the league of IIT Delhi Endowment Fund founders with their pledge to make a significant contribution to the Endowment Fund over the next 5 years. Parul is a 1995 batch Electrical Engineering graduate and Alok is a 1994 batch Computer Science graduate. The Fund's mission is to contribute to India and the world through excellence in scientific and technical education and research; to serve as a valuable resource for industry and society; and to remain a source of pride for all Indians.



Newly Instituted Scholarships/Fellowships (April-June 2022)		
Scholarship Title	Donor Name	Area
Nand Lal Memorial Scholarship	Share and Care Foundation	1st and 2nd year UG students of BTech/Dual degree program
Parshotam Radhakishin Rajani	Jyoti Parshotam Rajani	Female student of BTech/ Dual degree program of Electrical Engineering Department
Shraman Foundation	Shraman Foundation	BTech/Dual, B.Des degree program
Winnie Sun Merit Cum Need	Lotus Petal Foundation	Providing financial assistance to a meritorious UG girl student (BTech Programme) from financially challenged background
1992 Batch Memorial	1992 Batch	BTech/Dual degree program students with the lowest family income
Chandruka Doctoral Fellowship	Mr. Umesh Kumar	For registered PhD candidates in CS&E Department

Newly Instituted Awards (April-June 2022)		
Award Title	Donor Name	Area
Prof. K C Iyer Excellence Award	A K Prasanna Parvathi	For graduating BTech/ Dual
,		degree student in Civil
		Engineering Department

Others (April-June 2022)		
Award Title	Donor Name	Area
Prof. Amiya Basu Al Travel Grant	Prof. Amiya Basu	To provide travel grants to
		PhD scholars in the School of
		Artificial Intelligence
British Council English Language Program		BTech/Dual degree program
	Mr. Nav <mark>in Ch</mark> addha	who requires to learn English
		language

## **CONTINUING EDUCATION PROGRAMME**

The Continuing Education Programme (CEP) Unit of IIT Delhi is a statutory body for conducting Certificate Programmes and Issuing certificates. The CEP Unit is committed to the cause of making quality education accessible to all and in this endeavor, launched various online as well as on-campus Certificate Programmes.



#### Certificate Programmes Launched/Notified Between April-June 2022 under the CEP

SI.No	Programme Title (Department/School/Centre)	Sponsored/ Open Participation
1	Certificate Programme in Machine Learning and Deep Learning (EE)	Open Participation (Online)
2	Certificate Programme in Project Management (DMS)	Open Participation (Online)
3	Executive Management Programme on Strategic Thinking and Digital Transformation with Emerging Technologies (DMS)	Open Participation (On Campus)
4	Executive Programme for Advanced Product Management (DMS)	Open Participation (Online)
5	IFLLP in French, German, Spanish, Japanese and Chinese (HUSS)	Open Participation (On Campus)
6	Operation Management and Analytics (DMS)	Open Participation (Online)
7	Paper/Paperboard for Packaging of Liquid Items - Trends, Prospects and Way Forward (CRDT)	Open Participation (On Campus)
8	Start-up Boot Camp (DMS)	Open Participation (On Campus)
9	Training on Basic Patch-clamp Electrophysiology (for Spinco Biotech Private Limited) (KSBS)	Sponsored (On Campus)
10	Training Programme on Energy Storage Systems Energy Science and Engineering (for Power Grid India Limited) (DES)	Sponsored (On Campus)

#### Other Initiatives Supported by the CEP

- Under Summer Faculty Research Programme (SFRF) 2022, IIT Delhi invited faculty fellows from various engineering and science institutes and colleges other than IIT Delhi to come and spend the summer (May-July) for pursuing research under the guidance of IIT Delhi faculty mentors. This time 98 faculty fellows joined 59 IIT Delhi faculty members from 20 academic units.
- IIT Delhi is also supporting the prestigious programme of Indian Technical and Economic Cooperation (ITEC) initiative of the Ministry of External Affairs (MEA), Government of India. Under this initiative the MEA has sanctioned following two programmes:

SI.No	Programme Title (Department/School/Centre)	Sponsored/ Open Participation
1	e-ITEC Programme on "Environmental Risk Assessment" (CARE)	Sponsored By MEA (Online)
2	e-ITEC Programme on "Emerging Contaminants & Water Reuse" (CARE)	Sponsored By MEA (Online)

