भारतीय प्रौद्योगिकी संस्थान दिल्ली
INDIAN INSTITUTE OF TECHNOLOGY DELHI

NEWSLETTER
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INDIAN INSTITUTE OF TECHNOLOGY DELHI

Wishing you all a happy, healthy and prosperous New Year!

I take this opportunity to send a copy of the quarterly newsletter of IIT Delhi.

The newsletter highlights the major academic sessions, research work, collaborations and extra-curricular activities at the institute. It also brings into focus the news from our alumni desk.

I would welcome your comments and suggestions in making the next issue more interactive.

Warm regards,
Prof. V. Ramgopal Rao
Director,
Indian Institute of Technology Delhi

49th Annual Convocation: 2064 graduate students awarded degrees/ diploma

The 49th Annual Convocation Ceremony of Indian Institute of Technology Delhi was held on November 3, 2018.

The former Chairperson of *Thermax Limited* Ms. Anu Aga graced the occasion as the Chief Guest.

During the Convocation, 2064 graduate students were awarded degrees/diploma.

President's Gold Medal was awarded to Mr. Rajesh Kumar (B.Tech, Mechanical Engineering), Director's Gold Medal to Ms. Sanjana Garg (B.Tech, Chemical Engineering) and Dr. Shankar Dayal Sharma Gold Medal to Mr. Parikshit Pareek (M.Tech, Centre for Energy Studies).

Perfect 10 Gold Medal was awarded to four students and Institute's Silver Medal to 14 students.

Global University Employability Ranking 2018: IIT Delhi among top 100 Institutions.

Indian Institute of Technology Delhi has made it to the top 100 list of the Global University Employability Ranking 2018.

As per the latest ranking produced by French HR Consultancy Emerging and published by the United Kingdom's leading publication Times Higher Education, IIT Delhi secured a place at 53rd position, a phenomenal jump this year from a 145th rank last year.

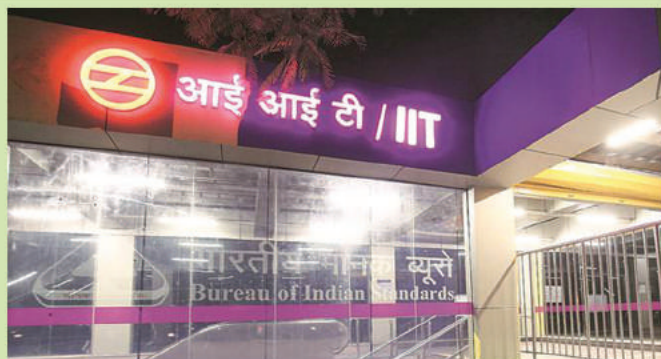## The Soumitra Dutta Chair in Artificial Intelligence

An MoU has been signed between IIT Delhi and Prof. Soumitra Dutta (a Distinguished Alumnus of IIT Delhi) & Dr. Lourdes Casanova for the constitution of "The Soumitra Dutta Chair in Artificial Intelligence" at IIT Delhi. The two academicians have pledged a support of Rs. 1 crore for the purpose.

IIT Metro station renamed as IIT- BIS

DMRC's IIT Delhi station has been renamed as IIT-Bureau of Indian Standard metro station.
Prof. Ramgopal Rao, Director, IIT Delhi while welcoming the move said, "Good for everyone. Thank the media for maintaining the pressure until this became a reality. They played a very positive role in highlighting this issue. Brand IIT belongs to the entire nation. As a county, let's own it up and protect it."

IIT Delhi joins IBM AI Horizons Network

IIT Delhi has joined the *IBM AI Horizons Network* as part of a multi-year research collaboration on artificial intelligence (AI). Today, an AI system is not trained to explain its decision making process. IBM researchers will partner with students and professors from the Department of Computer Science and Engineering at IIT Delhi to address this issue and conduct joint research to inculcate in AI systems some key traits like reasoning, comprehension and inferencing.

State of the art Green Data Centre inaugurated

A state of the art Green Data Centre has been inaugurated by Dr. Renu Swarup, Secretary, Department of Biotechnology, Govt. of India and Prof. V. Ramgopal Rao, Director, IIT Delhi at SCFBio, IIT Delhi. The machine, which has been hosted inside the Data Centre is based on Liquid Immersion Cooling system (LICS) developed by *Fujitsu Japan* and is first of its kind in Asia outside Japan. A web portal on Bioactivity Information of Indian Medicinal Plants has also been launched.

IIT Delhi starts its journey towards becoming a Zero Solid Waste campus

A recent audit has shown that IIT Delhi campus generates about 3000 kg of wet waste, 2000 kg of dry waste and 1000 kg of horticulture waste per day.

In order to reduce the pressure on environment, IIT Delhi has recently tied up with Chintan - an Environmental Research and Action Group, to start recycling this solid waste, as the first step towards becoming a Zero Solid Waste (ZSW) campus.

The initiative has become effective from 1st of November 2018.

IIT Delhi organises conference 'Towards Clean Air in Delhi'

IIT Delhi's Center of Excellence for Research on Clean Air (CERCA) organised its first conference to review the research work with Shri SP Singh Parihar, Chairman, Central Pollution Control Board (CPCB) as the Chief Guest. CERCA is looking at the problem of air pollution through pollution data trends, modeling, technology solutions and policy issues.

Prof. Amit Kumar, Jaswinder and Tarvinder Chadha Chair Professor in the Department of Computer Science and Engineering, has been chosen for the prestigious Shanti Swarup Bhatnagar Prize for Science and Technology 2018 by the CSIR in the Mathematical Sciences category.

Prof. S K Khare, Department of Chemistry, has been awarded Malaviya Memorial Award (Sr. Faculty) 2017, instituted by Biotech Research Society, India (BRSI) for his research contributions in the area of Microbial and Enzyme Technology, in a ceremony held at CSIR-IICT, Hyderabad.

Prof. D Sundar, Department of Biochemical Engg & Biotechnology, has been elected as a Fellow of the "Biotech Research Society of India (BRSI)"

Prof. Bipin Kumar, Department of Textile Technology, has been selected for the "IEI Young Engineers Award 2018-19" in Textile Engineering discipline.

Prof. Manan Suri, Department Electrical Engineering, IIT Delhi, has been honored with IEEE EDS Early Career Award by IEEE Electron Devices Society (EDS), USA during the 64th IEEE IEDM Conference at San Francisco, USA.

Research paper published in Nature Communications

A research paper, "Discovery of Rare Cells from Voluminous Single Cell Expression Data", co-authored by Prof. Jayadeva (EE Department, IIT Delhi), Aashi Jindal, Prashant Gupta (Ph.D students at IIT Delhi), and Prof. Debarka Sengupta (CCB, IIIT Delhi), has been published in the leading international journal Nature Communications.

Sensor built to avert elephant deaths on railway tracks

Prof. Subrat Kar, Electrical Engineering Department, has built a sensor to prevent the untimely death of elephants on railway tracks. When fitted to railway tracks, the sensors would track visuals, movement, sound, lights and other parameters before corroborating the inputs and feeding them into an automated algorithm. The algorithm would then decide if an elephant or a herd was near the tracks. A message would be sent to the nearest station master and the driver of trains about to pass through the area.

SAMARTH's innovators win James Dyson Award

Amit Kumar and Rituparna Guha, Masters of Design students at IIT Delhi, received James Dyson Award for their innovative creation -SAMARTH, and were felicitated with INR 170,000 as prize money. SAMARTH is an assistive mechanism, which provides an easy, safe and convenient way of shifting wheelchair users from wheelchairs to other mediums, and eases the life of caregivers as well as the users themselves.

B. Tech 3rd year student develops module to make homes smart

Pranjal Kacholia, a B.Tech 3rd year student (Chemical Engineering), has developed a low cost hardware module called Eden which when installed behind the switchboards of your house, makes all your electrical appliances (like Lights, fans, ACs, Geysers etc.) mobile-enabled.

It connects to your home router so that you can control all your appliances via smartphone from anywhere around the world. The module works even with your existing appliances and existing switchboards.

His startup *Eden Smart Homes*, has been recognized under the 'Startup India' initiative of Department of Industrial Policy and Promotion, Government of India.

Eco-friendly technique to replace wood with cow dung logs for cremation

IIT Delhi students have devised a way to fight air pollution - by replacing wood with cow dung "logs" during funerals. The eco-friendly technique also seeks to reduce deforestation by cutting down dependence on wood. 'Arth', an initiative by Enactus IIT-D, targets gaushalas to produce cow dung logs, thus doing a sustainable socio-economic impact.

Here's Nasofilters' Pollution Net to prevent pollution from entering your home

Nanoclean Global Pvt. Ltd., which had earlier launched Nasofilters that can be put on the nose to prevent the entry of PM 2.5 particles by 90%, launched its Pollution Net - a nano-fibre mesh that would block the entry of pollutants coming inside homes.

The net has nanofibres that can be attached to windows or doors, much like a mosquito net. The product was launched on the World Pollution Prevention Day.

It is supposed to prevent entry of PM 2.5 (particulate matter) by 80 per cent, and PM 10 particles by 92 percent.

The nets can be purchased from nasofilters.com and costs just Rs. 160 per sq ft.

KriyaLabs converting rice straw (parali) into cups, plates

KriyaLabs has demonstrated how waste biomass can be converted into useful products like biodegradable tableware, fabrics etc.

They have established a demonstration unit to convert rice straw into cellulosic pulp. This is a raw material for making cups and plates which can be a substitute for currently used plastic-lined or styrofoam plates. They have also generated samples for the same.

Rice straw contains up to 10 per cent of silica, with which existing industrial processes involving chemical recovery can't cope with. The team has developed a proprietary solvent-based process that overcomes this problem. It enables industrial usage of agro residue, irrespective of its silica content and even on small scales.

Sponsored Research Projects & Consultancy Jobs Undertaken Through IRD Unit During September 2018 - November 2018.

-60 Sponsored projects with sanctioned value to the tune of Rs. 32 Crores.

-54 Consultancy jobs with a total sanctioned value of Rs. 4 Crores.

High Value Sponsored Research Projects (with sanctioned value Rs. 100 Lacs and above) undertaken during September 2018 - November 2018.

-"Capacity Building of Academic Institutions IIT Delhi to Support Remediation Initiatives (CBIPMP)" *sponsored by Ministry of Environment, Forest & Climate Change* (Sanctioned Value: Rs. 424.80 Lacs).

-"Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST) Project for Department. of Chemical Engg." *sponsored by DST* (Sanctioned Value: Rs. 324 Lacs).

-"Research and development of smart, secure, scalable, resilient and adaptive cyber-physical power system (S3RA-CPPS)" *sponsored by DST* (Sanctioned Value: Rs. 300 Lacs).

-"DOSA - Diagnostics for One Health and User Driven Solutions for AMR" *sponsored by DBT* (Sanctioned Value: Rs. 192.19 Lacs).

-"RuTAG Centre at IIT Delhi: Developing Demand Driven Technology for Rural Areas (Phase- II)" *sponsored by Govt. of India* (Sanctioned Funds: Rs. 189.71 Lacs).

-"Foam Processability of Ultra High Molecular Weight Polyolefins and its High Performance Applications" *sponsored by Reliance Industries Ltd.* (Sanctioned Value: Rs. 101.48 Lacs).

CORPORATE RELATIONS

Twitter Co-Founder & CEO Jack Dorsey @ IIT Delhi

Addressing a town hall meet at IIT Delhi during his first visit to India, Twitter Co-Founder & CEO Jack Dorsey said, "It all goes back to self-awareness. Pick up a few skills and master them. For me it was programming. I learnt what was necessary to take the next step. It felt amazing. Finding a purpose and mastering some skills, we need them both."

Srijan Technologies awards project on Blockchain Technology

Srijan Technologies Pvt Ltd awarded a Joint Research and Development project to Dr. Kavya Dashora of Centre for Rural Development and Technology, IIT Delhi, on E-traceability of Supply Chain of Honey in India using Blockchain technology. The outcomes of the project would be a significant step forward in ensuring food safety by gathering, transferring and sharing authentic data related to production, processing, distribution, and selling of honey.

YES BANK partners with IIT Delhi to institutionalise YES BANK Chair for climate modeling

YES BANK, India's fourth largest private sector bank, signed an MoU with IIT Delhi to institutionalise the YES BANK Chair for Climate Modeling. The Chair will be instrumental in development and improvisation of climate modeling methodology and contribute towards formulation of an India centric climate model at the DST Center of Excellence (COE) in Climate Modeling.

TCS Day @ IIT Delhi

Corporate Relations in collaboration with *TCS* is organising TCS Day, on 21st Jan 2019. The objective of the event is to provide a platform to showcase the different technology research work being carried out by TCS and IIT Delhi so as to create new opportunities for collaboration. Mr. K Ananth Krishnan, VP & CTO, TCS would be gracing the occasion with other high-level dignitaries.

Ramboll's 'Inspire the Future' Program

Ramboll India initiated the program "Inspire the Future" to provide financial aid (includes hostel and mess charges, books and conference visits cost) of INR 65000/- per academic year for two undergraduates (one girl and one boy). The intent of this program is to provide the opportunity to deserving and talented students from financially underprivileged sections of society.

During the 49th Annual Convocation ceremony, IIT Delhi honored the following alumni with Distinguished Alumni Award:

Mr Raghu Hari Dalmia (B. Tech, Mech. Engg., 1972), President *OCL India Ltd.*, for his contributions in public service and policy.

Mr. Sumant Sinha (B. Tech, Civil Engg., 1987), Chairman & CEO, *ReNew Power*, for his contributions in corporate business development and entrepreneurship.

Dr. Venkata N. Padmanabhan (B. Tech. CSE, 1993), Principal Researcher, Microsoft Research India, for his contributions in teaching and research.

IIT Delhi Alumni Association celebrated Alumni Day on December 16, 2018. The inaugural session was addressed by Guest of Honour Mr Anant Madhukar Yardi, Director, Phoenix Broadband Ltd.

The inaugural session was followed by thematic sessions on topics focused on "Smart People for Smart Technologies".

Sh. Babul Supriyo, Union Minister of State for Heavy Industries and Public Enterprises, was the Chief Guest during Junoon-e-Kishore, a musical extravaganza.

The Golden Jubilee Reunion of 1968 batch was celebrated on 15th December, 2018. Close to 80 alumni along with their family members attended the reunion. The alumni, who attended the reunions, interacted with the Director, DDO, DD (S&P), Deans and other senior functionaries of the Institute.

The Silver Jubilee Reunion of 1994 batch was celebrated on 21st December, 2018. It was attended by more than 150 alumni and their family members. The event turned out to be a wonderful platform for interaction, exchange of ideas and networking.

The Pearl Reunion of 1984 batch was celebrated on 28-29 December, 2018. The alumni, who attended the reunions, interacted with the Director, DDO, DD (S&P), Deans and other senior functionaries of the Institute.

Alumni Contribution

- Anshul Kumar Professional Chair Rs. 1.08 Lacs.
- Class of 66 Batch Endowment Chair Professorship Rs. 50,000.
- IITD CS&E Research Acceleration Fund Rs. 2.02 Lacs.
- Stay-Con Rs. 19,000.
- Miscellaneous Rs. 4.32 Lacs.
- 1982 Pearl reunion Endowment Rs. 3.18 Lacs.
- 1983 Pearl Reunion Endowment Fund Rs. 66.05 Lacs.
- 1984 Pearl Reunion Endowment Fund Rs. 19.15 Lacs.
- Soumitra Dutta Chair $ 27 K.

3rd Oct 2018

Minister of Higher Education, Afghanistan visited the Institute.

12th Oct 2018

A 3-member delegation from Rector NTNU Norway at IITD.

1st Nov 2018

A 6-member delegation led by Prof. Dr. Tran Trung Kien (Admissions Director, HUST) from Hanoi University of Science and Technology, Vietnam visited the Institute.

13th Nov 2018

A 2-member delegation from Hiroshima University (ILDP) visited the Institute for discussion about previously conducted student exchange between IIT Delhi and Hiroshima University under ILDP.

3rd Dec 2018

The Board of Trustees of the University of Illinois at IITD.

7th Dec 2018

A 12-member Korean delegation including heads from some universities and heads of Korean smart manufacturing industry visited IITD.

29th Oct 2018

A 14-member delegation led by Dr. Mohamed Shoukr Nada from Embassy of Egypt visited the Institute.

26th Nov 2018

A 5-member delegation from Queensland led by Hon'ble Kate Jones, Queensland Minister for Innovation, Tourism, Commonwealth Games and Champion of Education visited the Institute.

14th Dec 2018

A 7-member delegation from La Trobe University visited IITD.

20th Dec 2018

A 5-member delegation from Shanghai China had visited.

ERASMUS Programme:

The International office is rigorously chasing Erasmus opportunities. During the period under review, the mobility proposals with Technical University of Munich International Center had got materialized.

Further, two mobilities under Erasmus MoU with UCD, Ireland have been accepted & will take place shortly. In addition to this, one mobility has been proposed & is likely to take place under Erasmus with 4 Alianza Universidad Carlos III de Madrid.

Memorandum of Understandings (MoUs):

1. IIT Delhi and Academia Sinica (AS) - 3rd Oct, 2018.

2. IIT Delhi and University of New Castle upon Tyne, UK - 24th Oct, 2018.

3. IIT Delhi and The International Committee of the Red Cross, Regional delegation (ICRC) - 24th Oct 2018.

4. IIT Delhi and Leibniz-Institut fur Polymerforschung Dresden e.V. (IPF) - 27th Nov, 2018.

5. IIT Delhi and the Board of Trustees of University of Illinois - 3rd Dec, 2018.

IIT Delhi wins Overall Championship trophy at Inter IIT Sports Meet 2018

IIT Delhi has won the coveted Overall Championship at the 53rd Inter IIT Sports Meet held at IIT Guwahati.

Apart from the Overall Championship, the team also bagged the General Championship trophy for Men and the March Past Trophy.

The students from IIT Delhi won 4 Gold, 2 Silver, 3 Bronze medals in the individual games along with the athletics championship for the men and women categories.

Athletics (Men) - 1st Position overall
(Best Player - Shubham Yadav)

Athletics (Women) - 1st Position overall

Cricket - Gold

Football - Gold (Best Player - Rahul Meena)

Volleyball (Men) - Gold (Best Player - Shobhit Gupta)

Basketball (Men) - Gold

Basketball (Women) – Silver

Table Tennis (Women) - Silver

Hockey - Bronze
(Best Goal scorer - Samarth and Danish)

Badminton (Men) - Bronze
(Best Player - Samar Singla)

Squash - 4th

Lawn Tennis (Men) - 4th

25th Inter IIT Staff Sports Meet at IIT Guwahati

IIT Delhi has won the General Championship Trophy for Men jointly with IIT Guwahati. The details of medals/position during various games/events are as under:

Men

Cricket - Gold

Lawn Tennis - Silver

Volleyball - 4th position

Athletics - High Jump (Gold and Silver)
    Hammer Throw (Gold)
    Shot-Put (Bronze)

Football - Silver

Table Tennis - Silver

Women

Table Tennis - Silver

Athletics - 200 mtrs (Silver & 4th Position)
    100 mtrs (Bronze)

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