



# Greetings!

I take this opportunity to send a copy of the quarterly Newsletter Issue-1, Year 2018 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 news from alumni desk.

I would welcome your comments and suggestions in making this more informative.

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

## News • Events • Seminars

### Republic Day celebration at IIT Delhi

The 69<sup>th</sup> Republic Day celebration was held with a lot of enthusiasm and fervour at IIT Delhi. Speaking on the occasion, Institute Director Prof V Ramgopal Rao spelt out the significance of Republic Day and how this day gave us the power to elect a leader. Later, the Director presented the awards for outstanding achievements in the field of sports. This was followed by a vibrant cultural presentation by the students.







### Foundation Day, Distribution of Excellence in Teaching Awards

The Foundation Day of IIT Delhi was celebrated on January 29 by felicitating ten faculty members for excellence in teaching followed by a stimulating lecture on the engineering landscape of the country, the challenges and the ways to address them.

Dr. Harish Hande, social entrepreneur, and co-founder of SELCO India gave the Foundation Day Lecture: "What does engineering mean for India and are we there?"

As many as 10 faculty members were recognized with the Excellence in Teaching Awards on the Foundation Day on January 29. The awardees included Prof. Arpan

Kumar Kar (DMS), Prof. Manoj Datta (Civil), Prof. Deepak U Patil (EE), Prof. N. Shravan Kumar (Maths), Prof. Amit Priyadarshi (Maths), Prof. Amlendu Kumar Dubey (DMS), Prof. Shashank Bishnoi (Civil), Prof. Abhijit Ramchandra Abhyankar (EE), Prof. Dalip Singh Mehta (Physics) and Prof. Sampa Saha (CPSE).

















### IIT Delhi wins the Inter-IIT Cultural Championship Trophy

IITD demonstrated a stupendous performance at the just concluded Inter-IIT cultural meet while bagging the overall championship. The cultural meet was hosted this year by IIT Kanpur from December 28 to 30, 2017, and a total of 18 IITs participated at the event. The participants from IIT Delhi performed extremely well in all categories of events, winning the maximum points among all participating institutes.







### New Department DMSE Inaugurated

In an effort to boost the study of materials and promote multidisciplinary research, IIT Delhi has started a new Department of Materials Science and Engineering (DMSE).

The Department has 10 core faculty members which includes 6 from the Center for Polymer Science and Engineering and 4 from the Department of Applied Mechanics. The plan is to add 10-15 new faculty in the next 2-3 years.

### International Society for Porous Media inaugurated

The Indian Chapter of InterPore was inaugurated at IIT Delhi on December 14, 2017. InterPore is an international non-profit-making independent scientific organization established in 2008. The motive of InterPore symposium was to provide a platform to exchange ideas for Indian researchers working in the field of flow in porous media and propel future interaction and collaboration.



### SmartCane from IIT Delhi exhibited at Cooper Hewitt Smithsonian Museum, New York

Access+Ability Exhibition opened in Cooper Hewitt Smithsonian Museum in New York on December 15, 2017. Among 70 devices on exhibit it also featured SmartCane from IIT Delhi. Exhibition is open till Sep 3, 2018. Smart Cane was designed to address the needs of people with vision loss in the developing world. A significant feature is that it can detect obstructions between a person's knee and chest upto three meters away. Sensors emit and receive ultrasonic waves that trigger haptic vibrations when a physical hazard is detected using various patterns to differentiate obstacles and distances. SmartCane is a great example of technology solving real-life problems of people while bringing in latest innovations to the market.









### Institute Lecture by Prof Jagdish (Jay) Narayan

An Institute Lecture "Discoveries of Q-Carbon and Q-BN and High-temperature BCS Superconductivity B-doped Q-carbon" by Professor Jagdish (Jay) Narayan was held on December 14, 2017. He is the John C. Fan family Distinguished Chair in Materials Science and Engineering Department of North Carolina State University and is Internationally known for his pioneering contributions in laser annealing and pulsed laser deposition, defects and interfaces, domain matching epitaxy for novel thin film heterostructures across the misfit scale, and creation of new of materials with unique properties.

Nanotechnology is critical to quality of life for humanity. As the critical materials are being depleted from Earth, we must do more with less of materials and make nanosystems more efficient.



### "Shuruaat" bus flagged-off from IIT Delhi

As a part of the Global Entrepreneurship Summit GES2017, Niti Aayog and IIT Delhi flagged off the "Shuruaat" bus in November. The 8<sup>th</sup> annual Global Entrepreneurship Summit (GES 2017) was held in Hyderabad on November 28-30, 2017.



#### 48th Convocation of IIT Delhi

Amidst a strong resonance of congratulatory messages and confidence boosting speeches, the 48<sup>th</sup> convocation of IITD was held on November 4, 2017. The President of India Shri Ram Nath Kovind was the chief guest on the occasion.

A total of 1942 degrees were awarded which included 306 PhD and 28 MSR degrees. The main event was held at the open air theatre followed by the departmental convocations at different venues. The major announcements included-Creation of a School of Interdisciplinary Research (SIRe), a new Department of Design, a new Department of Materials Science & Engineering, a new School of Public Policy and Joint Degree programmes with various academic institutions in India and abroad.







#### Art from Junk Workshop

The Office of Dean Infrastructure and Design and Innovation Centre jointly organized an 'Art from Junk' workshop from August 2017 to September 2017. The workshop was mentored by Mr Gopal Namjoshi, an acclaimed Public Art Installation Artist with an experience of more than 25 years.

Led by the artist's infectious enthusiasm, the team set about ideating and conceptualising the installations. The students were divided into two teams- Wood and Metal. Discarded metal, pipes, meters, wires, mother boards, glassware along with old furniture and cycles were collected from all departments and deposited in front of Textile department- the selected site for the public artworks. The Wood Team picked up a large fallen tree stump and branches. The teams set about chiseling, welding, casting, cutting, sawing and binding.

The workshop was co-ordinated by Prof Deepti Gupta, Associate Dean (Infra) and Prof PVM Rao, Co-ordinator Design and Innovation Centre.



#### Clensta- For a cleaner tomorrow

Established in 2016, Clensta is a biotechnology based, Consumer Product Company. It envisions at providing easy solutions for day-to-day health and hygiene requirements, while aiming to reduce the ever-increasing problem of water shortage. Clensta has already come out with a resource-friendly hygiene product line. These products will be utilized in the defence and home healthcare sectors as well as multiple hospitals across the country.

Over 2.4 billion in the world have lack of access to adequate hygiene, non-availability of clean water being a significant reason. Clensta's products have been approved by various authorities, giving them the necessary push to dominate the market. With the onset of backpacking and travelling, many travellers venture to places where they don't have access to clean water or personal hygiene products.

Clensta continued bagging laurels during the Army Day where it was pitched to the Hon'ble Prime Minister, Sh. Narendra Modi, Hon'ble President Sh. Ram Nath Kovind and the Chief of Army, General Bipin Rawat and other respected diplomats from different countries at the house of the Chief of Army, where Clensta was highly appreciated for its contribution to fellow citizens. Moreover, it is understood that given Clensta's promotion by the Indian government, institutional clients would further be eager to partner with them.



The products not only solves defence sector hygiene issues but also works for bedridden patients and draught hit areas. The company is gaining recognition all over the world by being amongst the top 3 global start-ups in the world start-up factory. They are currently exploring opportunities in EU market with head start funding which included partnership alliance with NATO, UN, MOD, European Space Agency and many more. Nexus, an American centre of the US Embassy has also awarded them with infrastructural alliance in US embassy and recognised them among top 4 start-ups in India; this is expected to further open opportunities in Central Asia and America.

Clensta with research partnership of IIT- Delhi has pledged to save water and maintain hygiene, both of which they are remarkably delivering hand-in-hand. The company supports the government in power in their programs like "Swacch Bharat, Swastha Bharat", the product is also indigenously manufactured under the "Make in India" program.



## IRD News

### Faculty Interdisciplinary Research Project (FIRP)

19 projects were approved for support under FIRP Phase-II. The selected projects are given an initial grant of Rs. 10 lakh. A total of Rs. 5 lakh would be given as the seed fund for the first year followed by similar amount in the second year. The joint research team is expected to submit at least one research project to a funding agency on the completion of the 1st year.

### IRD Student Start-up Action Projects

8 Projects have been approved for financial support in the second phase of this scheme. The main objective is to support the student startup activity. The selected teams have been given a seed grant of Rs. 2 lakh per year. IP and other output generated by any startup will be owned by the startup team with 5% equity for the Institute. The startup activity will be facilitated by a faculty member.

### 1234 Discover and Learn Projects (1-2-3-4)

14 projects were approved for financial support in the Phase–II of the scheme Discover & Learn (1-2-3-4) Projects. The objective of this initiative is to enhance research aptitude among undergraduate students and increase the component of 'Learning by Research'.

### Sponsored Research Projects & Consultancy Jobs

(Undertaken from October - December 2017)

24

Sponsored Research Projects with sanctioned value to the tune of Rs. 35.45 crores.



Consultancy Jobs with a total sanctioned value of Rs. 5.83 crores.



Nokia – IIT Delhi Centre of Excellence

### High value projects undertaken from October - December 2017

Public Engagement on Health and Development in India: Sponsored by Bill & Melinda Gates Foundation, US. Sanctioned Funds: Rs. 9.6 Crores

Integrated low cost water sensors for real- time river water monitoring and decision-making: Sponsored by Indo-US Science and Technology Forum (IUSSTF), US.

Sanctioned Funds: Rs. 9 Crores

Development of roller carding machine for manufacturing of nonwovens: Sponsored by Department of Heavy Industry, Govt. of India.





## Corporate Relations News



### **IBM SUR Grant**

Dr. Parag Singla and Dr. Mausam, CSE, have been awarded projects under IBM's Shared University Research (SUR) Program in the domain of Cognitive Computing. Both the organizations expect talent base of researchers and the scope of association to grow in this area through this initiative.

After multiple successful course programs, Maruti Suzuki India Limited has initiated an MSIL lecture series at the Institute. The organization is further looking to expand the association through M.Tech, programs to serve their company specific needs. A similar program has also just been initiated with Mahindra and Mahindra Limited.

### ARTECH-2018 & Army Day

IIT Delhi participated at ARTECH-2018, organized by the Indian Army to showcase novel products and technologies which could be of benefit to our armed forces. *Clensta*, a biotechnology start-up from IIT Delhi was one of the 5 companies shortlisted from all over India to showcase their uniqueness to the hon'ble Prime Minister, Sh Narendra Modi, the hon'ble President, Sh. Ram Nath Kovind, the Chief of Army, General Bipin Rawat, and diplomats from different countries at the house of the Chief of Army, on Army Day.

### **INTEL School Program**

IITD has been selected to participate in the ambitious Intel School Program where our talented faculty members are providing workshops to poor, rural and tribal students from government schools on innovation and entrepreneurial skills that will go on to transform India. Participating faculty members are making great use of this opportunity to give back to the community by helping our students learn and adopt relevant skillsets to be successful in this ever changing & challenging world.

### Corporate Social Responsibility

IIT Delhi recently received a CSR grant of Rs. 30 lakhs from Tower Research Capital towards scholarship to support CSE students. It is the first time they are collaborating with IIT Delhi and we are hopeful for the relationship to grow in other domains as we start working together. Corporate Relations is also exploring prospective opportunities to partner with various other Corporates under the CSR umbrella. We expect many meaningful collaborations in the near future to emerge from this effort.

## Alumni & Collaborations

## International Programmes

AAIP office took important steps under its International Programmes portfolio during July 2017 to January 2018. Six major International Workshops/Roadshows/Talks/Events were organized:

### India-Iran workshop

A workshop was held at IIT Delhi on the Topic "Increasing Impact of Research: Strategies to develop cooperation in Science & Technology between IITs and Iranian Universities" during August 16-18, 2017. The workshop was attended by delegates from 7 Iranian Universities and various IITs. The two-day workshop had extensive discussions on ICT, Life Science & Bio Technology, Mechanics & Materials, Energy & Petroleum, Water & Hydrology and Science & Heritage.



As a follow-up of the workshop, the following professors from IIT Delhi were invited to various universities in Iran in Februrary and March 2018:

- 1. Prof. Puneet Mahajan (Applied Mechanics)
- 2. Prof. Suhail Ahmad (Applied Mechanics)
- 3. Prof. S.M. Ishtiaque (Textile Engineering)
- 4. Prof. S.K. Koul (CARE)
- 5. Prof. Veena Koul (CBME)

### Joint Workshop with Washington University, St. Louis

During the inaugural session on June 12, 2017 brief presentations were made on Washington University in St. Louis and IIT Delhi followed by presentations from the Heads of some departments of IIT Delhi. The session on the first day had broad ranging discussions and presentations on clean coal related research at IIT Delhi and IIT Bombay. There were also deliberations on the technology requirements and various opportunities for collaborations.



### Academia Sinica-IIT Delhi Joint Workshop

The workshop held in September, 2017 marked a further deepening of the engagement between the two institutions after the visit of the scientists from Academia Sinica, Taiwan to IIT Delhi.

The following themes were covered during the workshop:

- 1. Chemical Biology & Interdisciplinary Research
- 2. Protein Folding & Aggregation
- 3. Cell & Molecular Biology
- 4. Virology & Biodiversity Research
- 5. Instrumentation & Mobile Applications
- 6. Interdisciplinary Lecture I: from Cold Atom to System Biology
- 7. Interdisciplinary Lecture II: Biophysical chemistry



#### UNSW Australia Research Roadshow

UNSW Australia held a research road-show at IIT Delhi on November 20, 2017, in the areas of Social Entrepreneurship, Water and Environmental stream, Smart City and Global Health Stream.



### Lecture by a Nobel Laureate



Sir Venki Ramakrishnan, FRS, Nobel Laureate, President of the Royal Society, delivered a short talk on "Nurturing Excellence at the MRC Laboratory of Molecular Biology in Cambridge: Some General Lessons" on November 1, 2017.

### Strengthening ties between IITD - Washington University

IIT Delhi became a member of the McDonnell International Scholars Academy. The agreement was signed by Prof. Ramgopal Rao, Director IIT Delhi and Prof. Mark S Wrighton Chancellor Washington State University in St. Louis on December 15, 2017.



## IIT Delhi Distinguished Alumni Awards

(Conferred during the 48th Convocation)



Prof. Soumitra Dutta
Founding Dean, Cornell SC Johnson
College of Business, Cornell University
B.Tech. (Electrical Engineering), 1985
for "Contributions in Teaching and Research."

Mr. Sunil Sood

Managing Director & CEO, Vodafone India Limited
B.Tech. (Textile Technology), 1982
for "Contributions in Corporate Business
Development & Entrepreneurship."



Mr. Saurabh Mittal

Founder and Chairman, Mission Holdings B.Tech. (Electrical Engineering), 1995 for "Contributions in Corporate Business Development & Entrepreneurship." Dr. Kiran Bedi Lieutenant Governor of Pondicherry Ph.D. (Humanities & Social Sciences), 1993 for "Contributions in Public Service and Policy."



## Mentorship Opportunity

Out of 11 applicants for the Alumni mentorship programme being run on the Alumni portal, 7 have already been selected for the mentorship. This has been a very popular and successful venture amongst the Students and Alumni.



### Alumni Contribution

- The Institute has decided to start one Lifetime Research Award and three Research Awards for the faculty of the institute.
- The Silver Jubilee Reunion Batch has created an Endowment and at present has funds close to Rs. 72 Lakh. The batch is working with the Alumni Office to augment the endowment, once it reaches a pre-defined level, it will be utilised for Institute purposes.
- The Alumni have contributed generously to the D/O CS&E Development Fund. Funds to the tune of Rs.87 lakh
  have already been garnered and efforts are on to seek more support.
- Mr. Ajay Gupta, an Alumnus, has extended/pledged a support of Rs 1 Crore towards the creation of a Chair Professorship.

Photo-source: Www.iddalumini

### Alumni Events

AAIP office organised 5 major events during July 2017 to January 2018



IIT Delhi celebrated its Alumni Day on December 17, 2017. The Chief Guest of the event was Mr. Jayant Sinha, MoS, Ministry of Civil Aviation and also an alumnus of the Institute.

1967 pass out batch of IIT Delhi celebrated its Golden Jubilee Reunion on December 16, 2017. Over 80 alumni had participated in the event.





1993 batch of IIT Delhi celebrated its Silver Jubilee Reunion on December 22<sup>nd</sup> and 23<sup>rd</sup>, 2017.

1967 entry batch level visited the Institute on December 8, 2017 and celebrated their get-together.





Batch of 1997 celebrated their 20<sup>th</sup> year on December 24, 2017 and about 50 alumni participated in the event.

## International Delegations at IIT Delhi

As many as 26 International Delegations visited the Institute during this period. Here's a glimpse of some of them.



### Images (Clockwise):

Delegation from International University of Grand-Bassam, Cote d'Ivoire visited on September 25, 2017

Delegation from University of Glasgow, UK, visited on December 6, 2017

Delegation from Mangolia University visited on January 15, 2017

Delegation led by Dr. Adam Wright, President, Dallas Baptist University, US, visited on September 29, 2017

Delegation from Ethiopian Space Science and Technology Institute visited on December 19, 2017

Delegation with Evan, Director, and International Initiatives visited on November 8, 2017

Delegation from different countries visited on September 15, 2017 for International Parliamentarians Conference (IAPPD) Delegation from UNAM Mexico visited on September 25, 2017

#### Center Image

Delegation from Hiroshima University visited on October 26, 2017

### Giving back to the Institute

A 2017 Computer Science graduate, **Kartikeya Gupta**, has set an unprecedented example of giving back to the institute by initiating a scholarship from his own salary for CSE students of IIT Delhi. He plans to donate a total of Rs 1.5 Lakh annually to 3 meritorious students from the CS Department with an economic need, and also intends to increase this amount over the years. He is currently working as a software developer with a quantitative investment firm in London.

### 1) What was your motivation behind starting this programme?

In the present world, availability of resources can incredibly impact one's development. I was fortunate to have parents who could provide me with everything which would help me do well. Even though IIT Delhi provides a lot of facilities, there can still be problems faced by students from financially weaker backgrounds. There was a batchmate of mine who was not very financially well off. He did not have a smartphone or a laptop. He used to study in the labs all the time and he was academically very bright. I helped him once by giving him a laptop. I believe that if someone is very hardworking and intelligent then lack of resources will not stop him/her from reaching their goals but this can definitely pose obstacles. I want to help remove such hurdles in the way of good students.



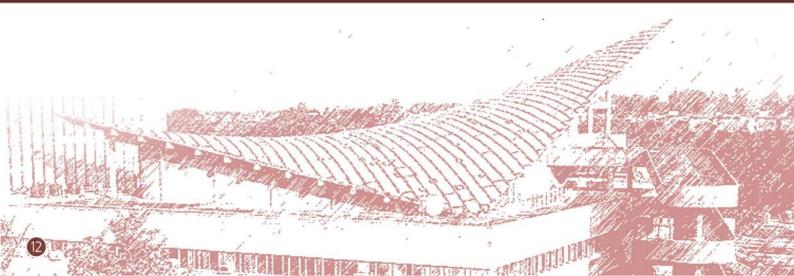
### 2) What are your future plans as far as this scholarship is concerned?

I plan to increase my contributions every year and expand it to reach more students and also to other departments. I also hope that this inspires other batchmates of mine and alumni members to contribute in a meaningful way.

3) Could you share some ideas/suggestions that we should incorporate into the IIT Delhi ecosystem so as to retain our alumni base and also give them a chance to give back to their alma mater.

When I was discussing about this idea to start a scholarship with some batchmates, the coherent response was that the money will be taken by students with fake income certificates and may not actually help the ones in need. However, I think this is a very pessimistic view. Even though there will be people who will misuse the system, there will be some positive things that will come out from such earnest efforts. If these can be highlighted in some way, it will be easier for alumni to think that their contributions are actually being put to a good use. The positive results can motivate other alumni members to donate as well.

I believe that if someone is very hardworking and intelligent then lack of resources will not stop him/her from reaching their goals but they can definitely pose obstacles.



## Sports News

The IIT Delhi contingent also gave a riveting performance at Udghosh-the annual sports fest held by IIT Kanpur in October. 136 students of IIT Delhi represented in the event. Gold medals were bagged in cricket, weightlifting and a few events in athletics.

IIT Delhi stood third in badminton (M), lawn tennis (M & W), table tennis (M) and squash. Amit Kothari and Karan Birpali were named "Player of the Tournaments" in their respective sports.



At the Inter IIT Sports meet, held in Madras in December 2017, the sports contingent gave a spectacular performance and ended up at a close fourth place. A total of 23 IITs had participated. The athletics team broke 5 records, showing their dominance over the other IITs yet again. Shubham Yadav broke the High Jump record with a 1.90m jump, Dileep Pudi made yet another record, in the 800m. The girls did extremely well, where Namrata Tripathi broke the 400m record.



The cricket team bagged one of the biggest trophies by winning a thrilling final. Kumar Sahaj was awarded the Player of the tournament. The Table Tennis girls outperformed all other IITs by not only winning the Gold medal, but also winning the player of the tournament title to Medha Agrawal. IIT Delhi girls contingent was really strong as they bagged the runners up trophy in both Athletics Women and Women's Badminton.

Earlier in October at the inter IIT Aquatic meet, IIT Delhi gave an excellent performance with Dhritiraj Das winning the Gold Medal in all 3 events: 50m Free, 100m Free and 50m Butterfly. Parth Bharadwaj also won a Bronze medal in the 50m Free.



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### Corporate Relations

Indian Institute of Technology Delhi

Hauz Khas, New Delhi Phone: 011-2659-6078

Email: adcorprel@admin.iitd.ac.in Website: www.corprel.iitd.ac.in



