Campus diary

July - August 2017 http://www.iitb.ac.in/en/activities/campus-diary

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

55th Convocation Held At IIT Bombay

*** 2612 students were awarded their degrees including 357 PhDs**
*** Degree of Doctor of Science (Honoris Causa) conferred on Dr. Yusuf Hamied**
*** 'Lifetime Achievement Award 2016-17' conferred on Prof. N.B. Ballal**

Chief Guest Mr. Manohar Parrikar, Hon'ble Chief Minister of Goa, addressing the gathering during 55th Convocation of the Institute

The 55th Convocation of the Indian Institute of Technology Bombay took place on August 12, 2017 in the campus with a lot of zeal. During the 55th Convocation ceremony, 2612 students were awarded the degrees. The convocation marks a new beginning in the lives of these graduating students, who will now also be the flag bearers of the Institute in the outside world.

Hon'ble Chief Minister of Goa Mr. Manohar Parrikar was the Chief Guest on the occasion and he delivered the Convocation address.

Prof. Devang V. Khakhar, Director, IIT Bombay presenting the Director's Report of the Institute

The graduating students this year include **357*** PhDs (* including 179 awarded during interim convocation), **32** Dual Degree (MTech + PhD) and **20** Dual Degree (MSc + PhD). Out of these, **33** research scholars were selected for the '**Award of Excellence in PhD Thesis**' for the year 2017. In addition, **15** joint PhD degrees, in association with Monash University, were also conferred by the Vice-Chancellor and President of Monash University Prof. Margaret Gardner.

Besides these, **6** MSc (by Research), **8** Dual Degree (MSc+MTech), **4** Dual Degree (MSc+MPhil), **590** MTech, **63** MDes, **25** MPhil, **117** MMgt, **220** two-year MSc, **29** five-year integrated MSc, **482** Dual Degree (BTech + MTech), **616** BTech degrees and **21** PGDIIT degrees were awarded at the Convocation.

Presenting the Institute's Report for the year 2016-17, Prof. Devang V. Khakhar, Director of IIT Bombay informed that IIT Bombay

Prof. N. B. Ballal, Department of Metallurgical and Materials Science, receiving Lifetime Achievement Award 2016-17

continues to be a sought-after destination for undergraduate and postgraduate studies. *"Among **23** IITs in the country, **41** of top 50 rankers and **61** of top 100 rankers in JEE **2017** have joined IIT Bombay and **7** of the top **10** All-India JEE rank holders have chosen to join IIT Bombay. Similar trends are observed for the candidates qualifying in other entrance examinations as well,"* he said. Wishing the graduating students the best in life, Prof. Khakhar said, *"The education you have received at IIT Bombay is comparable to the best in the world and you are now ready to take greater challenges and overcome them. Continue to develop your knowledge and skills and always keep in mind how you can help society and the nation through your work. I wish you all the success in your future endeavors."*

Mr. Dilip Shanghvi, Chairman, Board of Governors, IIT Bombay addressing the gathering

Three students were presented with the gold medals for their exemplary performance. The '**President of India Medal**' was bestowed on **Mr. Aniket Sanjay Patankar, a student from the Department of Mechanical Engineering**. The '**Institute Gold Medal**' was awarded to **Mr. Himanshu Nigudkar, a student from Engineering Physics** and the '**Dr. Shankar Dayal Sharma Gold Medal**' was conferred on **Mr. Chirag Chandrahasa Shetty, a student from the Department of Electrical Engineering.** Additionally, more students were presented with gold medals sponsored by donors.

Dr. Yusuf K. Hamied, Chairman, CIPLA Ltd. was awarded with the degree of Doctor of Science by Mr. Manohar Parrikar

The **degree of Doctor of Science (Honoris Causa) was bestowed on Dr. Yusuf K. Hamied, Chairman, CIPLA Limited** for his outstanding contributions to the growth of the pharmaceutical industry.

The Convocation also witnessed the **'Lifetime Achievement Award 2016-17' of IIT Bombay** being bestowed on **Prof. N.B. Ballal from Department of Metallurgical Engineering and Materials Science**, in recognition of his contributions to the Institute.

Prof. Margaret Gardner, Vice-Chancellor, Monash University, Australia, members of Board of Governors and several other distinguished guests from India and abroad attended the Convocation function, besides the graduating students and their proud parents.

Mr. Aniket Sanjay Patankar, Department of Mechanical Engineering, receiving the President of India Medal from Mr. Manohar Parrikar

MEDALS AND PRIZES

President of India Medal (for the year 2016-17)
Aniket Sanjay Patankar (BTech)

Institute Gold Medal (for the year 2015-16)
Himanshu Nigudkar
BTech (Dual Degree)
Engineering Physics

Institute Silver Medal (for the year 2016-17)

BACHELOR OF TECHNOLOGY

Aerospace Engineering
Pavan R. Hebbar

Chemical Engineering
Roshan Patel

Civil Engineering
Prajwal K.A

Computer Science and Engineering
Anchit Gupta

Electrical Engineering
Shorya Consul

Mechanical Engineering
Patankar Aniket Sanjay

Metallurgical Engineering and Materials Science
Tushar Sanjay Karnik

Engineering Physics
Khera Neev

MASTER OF SCIENCE (MSc) PROGRAMME

Applied Geology
Mohd Rizwan

Applied Geophysics
Nirban Majhi

Chemistry
Nikita Chiripal
Korak Kumar Ray

Mathematics
Deepanshu Verma
Hitaishi Arora

Physics
Akhil Premkumar

Biotechnology
Avishek Shah

DUAL DEGREE (BTech + MTech)

Electrical Engineering
Ojas Apoorva Kanhere

Mechanical Engineering
Ghogare Sumedh

Metallurgical Engineering and Materials Science
Hussain Motiwala

MASTER OF TECHNOLOGY (MTech) PROGRAMME

Aerospace Engineering
Sachchit Kalyan Vekaria

Chemical Engineering
Abhirup Basu

Civil Engineering
Aupal Mondal

Computer Science and Engineering
Eeshan Malhotra

Electrical Engineering
Shah Deval Ashokbhai

Mechanical Engineering
Aman Kumar
Thakkar Arjav Pareshbhai

Metallurgical Engineering and Materials Science
Hem Shruti Bhardwaj
Kapil Kumar Gupta

Biomedical Engineering
Sahil Garg

Environmental Science and Engineering
Ayushi Khare

Geoinformatics and Natural Resources
Lakshmi Kanthan M

Earth Sciences
Radhika Arora

Energy Systems and Engineering
P. Pradeep

Systems and Control Engineering
Apoorva Sohani

Technology and Development
Lakshmikantha N. R.

Industrial Engineering and Operations Research
Rahul Munet

MASTER OF DESIGN
Animation
Gokul C.J.

MASTER OF PHILOSOPHY
Planning and Development
Priya Sharma

MASTER OF MANAGEMENT
Ankit Nayyar

OTHER MEDALS

Miss Jayati Deshmukh Memorial Gold Medal
Anchit Gupta
Computer Science and Engineering

Dr. Shankar Dayal Sharma Gold Medal
Shetty Chirag Chandrahasa
Electrical Engineering (Dual Degree)

Vidyasagar Nehra Gold Medal
Prajwal K.A
Civil Engineering (BTech)

Prof. Madhav Kulkarni Lt. Col.(R) Gold Medal
Prajwal K.A
Civil Engineering (BTech)

Rajit Bhagwati Memorial Gold Medal
Ayushi Khare
CESE

Hindi Vidya Bhavan Gold Medal
Ankit Nayyar
Centre for Environment Science and Engineering

Sharad Maloo Memorial Gold Medal
Anchit Gupta
Computer Science and Engineering (BTech)

PRIZES

Prof. K C Mukherji Award
Shorya Consul

Tulsiram Devidayal, P.M. Natu, Damle Trust Prize
Aman Kumar
Thakkar Arjav Pareshbhai

Prof. R.P. Singh Memorial Prize (BTech / 2 Year MSc)
Akhil Premkumar

Chandrashekhar Prize
Shivani Agrawal

Shri R Vembu Iyer Memorial Prize
Mohd Rizwan

Dilip R Limaye Academic Excellence Award
Patankar Aniket Sanjay

Prof. A.B. Biswas Memorial and Shri Prakash Krishnan Award Prize (MSc)
Nikita Chiripal

Dr. Gargi Vishnoi Memorial Prize
Priyatosh Ranjan

Prof. Hiralal Memorial Award
Korak Kumar Ray
Nikita Chiripal

Shri Ashok Chaturvedi Memorial Prize (MTech)
Aman Kumar
Thakkar Arjav Pareshbhai

Prof. M.N. Gopalan Prize (MSc)
Hitaishi Arora

Prabhulal Bhatnagar Memorial Prize
Gouranga Mallik
Mohammad Zafar

Mrs. Rama Mathur Memorial Prize
Deepanshu Verma

Ajit Shelat Award
Ravi Shankar Mishra
Anurag Gupta

Bhavesh Gandhi Memorial Prize
Arpit Sunil Agrawal
Akhil Shetty

Akshay Dhoke Memorial Award
Sneha Dilip Goenka

Prof. K.C. Khilar PhD Award
Saikat Roy

Prof. K.C. Khilar Prize (MTech)
Savla Nirav Laxmichand

R.G. Manudhane MTech student Excellence Award Best MTech Thesis
Abhirup Basu

R. G. Manudhane PhD Excellence Award
Mahendra Kumar Prajapat
Harini Madakashira

Indira Manudhane Student Excellence Award
Harshit Manocha

Mr. Pranab Ranjan Sen Award
Aniruddha Singh Lakhnot

Shubhada Mulekar Joshi Award
Akansha Agarwal

Prof. S N Sinha memorial award
Saurabh Ranjan

Dr. P.V. Sukhatme Memorial Award
Deepanshu Verma
Shidhesh Dattatraya Supekar
Hitaishi Arora
Parth Dharmesh Dave

Institute Academic Prizes for the year 2016-17
II year BTech / Dual Degree

Sr. No.	Name	Prize	Value of prize	Department
1	Karkhanis Deep Tejas	I	Rs. 3000/-	Mechanical Engineering
2	Kartik Patekar	I	Rs. 3000/-	Engineering Physics
3	Sriram Balasubramanian	II	Rs. 2000/-	Electrical Engineering
4	R Sudarsanan	II	Rs. 2000/-	Computer Science and Engineering
5	Shah Sahil Hiral	II	Rs. 2000/-	Computer Science and Engineering
6	Kartik Khandelwal	Additional	Rs. 2000/-	Electrical Engineering
7	Shah Yash	Additional	Rs. 2000/-	Computer Science and Engineering
8	T Akshay	Additional	Rs. 2000/-	Mechanical Engineering
9	Sanchit Jain	Additional	Rs. 2000/-	Computer Science and Engineering
10	Animesh Bohara	Additional	Rs. 2000/-	Computer Science and Engineering
11	Rao Pranav Vasudeva	Additional	Rs. 2000/-	Mechanical Engineering
12	Godbole Adwait Amit	Additional	Rs. 2000/-	Electrical Engineering
13	Joshi Nitish Hemant	Additional	Rs. 2000/-	Electrical Engineering
14	Sumit Chaturvedi	Additional	Rs. 2000/-	Metallurgical Engineering and Materials Science
15	Manu Srivastava	Additional	Rs. 2000/-	Engineering Physics

III year BTech./Dual Degree/Four year BS/BDes Branchwise
BTech

Sr. No.	Name	Prize	Value of prize	Department
1	Divyanshu Gola	I	Rs. 3000/-	Aerospace Engineering
2	Sathe Atharva Sunil	II	Rs. 2000/-	Aerospace Engineering
3	K S Reshma	I	Rs. 3000/-	Chemical Engineering
4	Malu Suraj Gopal	II	Rs. 2000/-	Chemical Engineering
5	Sudip Kumar	I	Rs. 3000/-	Civil Engineering
6	Akash Bhairav Gupta	II	Rs. 2000/-	Civil Engineering
7	Ayush Pandey	II	Rs. 2000/-	Civil Engineering
8	Bharat Khandelwal	I	Rs. 3000/-	Computer Science and Engineering
9	Charles Rajan	II	Rs. 2000/-	Computer Science and Engineering
10	Arpit Singh	I	Rs. 3000/-	Electrical Engineering
11	Sridhar Srivatsan	II	Rs. 2000/-	Electrical Engineering
12	Saksham Jindal	I	Rs. 3000/-	Mechanical Engineering
13	Samir Wadhwa	II	Rs. 2000/-	Mechanical Engineering
14	Arjun Prashant Agrawal	I	Rs. 3000/-	Metallurgical Engineering and Materials Science
15	Balreen Saini	II	Rs. 2000/-	Metallurgical Engineering and Materials Science
16	Kulkarni Anish Kiran	I	Rs. 3000/-	Engineering Physics
17	Karambelkar Viraj	II	Rs. 2000/-	Engineering Physics
18	Sagar Airen	II	Rs. 2000/-	Engineering Physics

III year BTech/Dual Degree/Four year BS/BDes Branchwise
DUAL DEGREE

Sr. No.	Name	Prize	Value of prize	Department
1	Abhishek Singhal	I	Rs. 3000/-	Electrical Engineering
2	Hrushikesh Manoj Loya	II	Rs. 2000/-	Electrical Engineering
3	Shah Nikunj Minesh	I	Rs. 3000/-	Mechanical Engineering
4	Som Phene	I	Rs. 3000/-	Metallurgical Engineering and Materials Science
5	Mehta Dhruvin Ketan	I	Rs. 3000/-	Energy Science and Engineering
6	Romal Kumar		II	Rs. 2000/- Energy Science and Engineering
7	Mandar Milind Sohoni	I	Rs. 3000/-	Engineering Physics

4 Year BS (Chemistry)

Sr. No.	Name	Prize	Value of prize	Department
1	Akanksha Yadav	I	Rs. 3000/-	Chemistry
2	Susnata Bhowmick	II	Rs. 2000/-	Chemistry

IV year BTech/Dual Degree/ Four year BS Branchwise
BTech

Sr. No.	Name	Prize	Value of prize	Department
1	Tejaswi K C	I	Rs. 3000/-	Aerospace Engineering
2	Shravan Tangudu	II	Rs. 2000/-	Aerospace Engineering
3	Pranay Agarwal	I	Rs. 3000/-	Chemical Engineering
4	Himanshi Arora	II	Rs. 2000/-	Chemical Engineering
5	Gumireddy Sushmitha Sree	I	Rs. 3000/-	Civil Engineering
6	Shubham Agrawal	II	Rs. 2000/-	Civil Engineering
7	Ritwick Chaudhry	I	Rs. 3000/-	Computer Science and Engineering
8	Anuj Mittal	II	Rs. 2000/-	Computer Science and Engineering
9	Sohum Dhar	II	Rs. 2000/-	Computer Science and Engineering
10	Chadha Karan Naresh	I	Rs. 3000/-	Electrical Engineering
11	Sattwik Deb Mishra	I	Rs. 3000/-	Electrical Engineering
12	Shah Abhin Swapnil	II	Rs. 2000/-	Electrical Engineering
13	Mikail Khona	I	Rs. 3000/-	Engineering Physics
14	Kalantre Sandesh Sachin	II	Rs. 2000/-	Engineering Physics
15	Yashraj Gurumukhi	I	Rs. 3000/-	Mechanical Engineering
16	Karan Jain	I	Rs. 3000/-	Mechanical Engineering
17	Potluri Vachan Deep	II	Rs. 2000/-	Mechanical Engineering
18	Gagrani Nisarg Bhushan	I	Rs. 3000/-	Metallurgical Engineering and Materials Science
19	Vidit Gupta	II	Rs. 2000/-	Metallurgical Engineering and Materials Science

IV year BTech/Dual Degree/ Four year BS Branchwise
DUAL DEGREE

Sr. No.	Name	Prize	Value of prize	Department
1	Ov Shashank	I	Rs. 3000/-	Electrical Engineering
1	Praveen Sriram	I	Rs. 3000/-	Electrical Engineering
2	Aman Dixit	II	Rs. 2000/-	Electrical Engineering
3	Yashaswini K Murthy	I	Rs. 3000/-	Mechanical Engineering
4	Chirame Sanket Sanjivan	I	Rs. 3000/-	Engineering Physics
5	Rohan B. Vora	I	Rs. 3000/-	Energy Science and Engineering
6	Himanshu Gupta	II	Rs. 2000/-	Energy Science and Engineering
7	Kewal S. Bhat	I	Rs. 3000/-	Metallurgical Engineering and Materials Science
8	Mapuskar Pratik Sushant	II	Rs. 2000/-	Metallurgical Engineering and Materials Science

IV year BTech/Dual Degree/ Four year BS Branchwise
4 Year BS (Chemistry)

Sr. No.	Name	Prize	Value of prize	Department
1	S.V. Shree Sowndarya	I	Rs. 3000/-	Chemistry

V year Dual Degree/MSc(Integrated) Branchwise
DUAL DEGREE

Sr. No.	Name	Prize	Value of prize	Department
1	Sarath Pattathil	I	Rs. 3000/-	Electrical Engineering
2	Patil Kalpesh Vijaykumar	I	Rs. 3000/-	Electrical Engineering
3	Bhat Ashwin Rajendra	II	Rs. 2000/-	Electrical Engineering
4	Harshwardhan Alok Singh	I	Rs. 3000/-	Energy Science and Engineering
5	Sushrut Dhananjay Thakar	II	Rs. 2000/-	Energy Science and Engineering
6	Nazhar Hussain	I	Rs. 3000/-	Mechanical Engineering
7	Saurabh Balkishan Bajaj	II	Rs. 2000/-	Mechanical Engineering
8	Pallavi Verma	I	Rs. 3000/-	Metallurgical Engineering and Materials Science
9	Sanghavi Bhavik Jashmin	II	Rs. 2000/-	Metallurgical Engineering and Materials Science
10	Saumya Shivam	I	Rs. 3000/-	Engineering Physics

V year Dual Degree/MSc(Integrated) Branchwise
5 Year Integrated MSc

Sr. No.	Name	Prize	Value of prize	Department
1	Sonya K Bharathkar	I	Rs. 3000/-	Chemistry

II Year MSc(2 year)

Sr. No.	Name	Prize	Value of prize	Department
1	Ranadeb Ball	I	Rs. 3000/-	Chemistry
2	Radhika Gupta	II	Rs. 2000/-	Chemistry
3	Birupakshya Panda	I	Rs. 3000/-	Earth Sciences
4	Meghomita Das	II	Rs. 2000/-	Earth Sciences
5	Vaibhav Sharma	I	Rs. 3000/-	Physics
6	Dibya Sankar Chattopadhyay	I	Rs. 2000/-	Physics
7	Bhavuk Dhamija	I	Rs. 3000/-	Biosciences and Bioengineering
8	Gargi Das	II	Rs. 2000/-	Biosciences and Bioengineering.
9	Rudra Prasad Das	I	Rs. 3000/-	Applied Statistics and Informatics
10	Souvik Chakraborty	II	Rs. 2000/-	Applied Statistics and Informatics
11	Sachin Garg	I	Rs. 3000/-	Mathematics
12	Ritika Nair	II	Rs. 2000/-	Mathematics
13	Shivani Pandey	I	Rs. 3000/-	Applied Geophysics

Institute Academic Prizes for the year 2015-16 for BDes

Sr. No.	Name	Prize	Value of prize	Department
1	Shanbhag Maulashree Bhooshan	I	Rs. 3000/-	Industrial Design center
2	Bhagwat Samarth Aniruddha	II	Rs. 2000/-	Industrial Design center

Other Prizes

Name of the Prize	Name of the Awardee	Total Amount
Shri Rakesh Mathur Excellence Award	Anuj Mittal	Rs. 1,00,000/- IV Year UG student
Shri T.K. Subramanian Prize for Academic Excellence	Karan Jain	Rs. 1000/- IV Year BTech Mechanical Engineering
Urvish Medh Memorial Prize (For Electrical Engg.)	Syomantak Chaudhuri	Rs. 2000/- I Year BTech Electrical Engineering
	Sriram Balasubramanian	Rs. 2000/- II Year BTech Electrical Engineering
	Sridhar Srivatsan	Rs. 2000/- III Year BTech Electrical Engineering
	Sattwik Deb Mishra	Rs. 2000/- IV Year BTech Electrical Engineering
Prof. M.N. Vartak Memorial Prize	Rudra Prasad Das	Rs. 6000/- II Year MSc Applied Statistics And Informatics
Mrs. Rama Mathur Memorial Prize	Sachin Garg	Rs. 2000/- II Year MSc Mathematics
Aditya Choubey Memorial Prizes	Sriram Balasubramanian	Rs. 4000/- II Year BTech Electrical Engineering
S C Mehrotra Prize	Subham Pirojiwala	Rs. 10000/- II Year BTech Civil Engineering
	Sudip Kumar	Rs. 10000/- III Year BTech Civil Engineering
	Shubham Agrawal	Rs. 10000/- IV Year BTech Civil Engineering
Prof. A.K. Mallik Award	Gagrani Nisarg Bhushan	Rs. 5000/- IV Year BTech Metallurgical Engineering and Materials Science
Shri Ram Kumar Gupta Merit Award	Pranay Agarwal	Rs. 10000/- IV Year BTech Chemical Engineering (Topper)
Shrimati Prakashvati Devi Gupta Merit Award	Jain Divyam Hitesh Himanshi Arora	Rs. 3750/- Rs. 3750/- IV Year BTech Chemical Engineering (2^{nd} highest)

Launch of National Carbonaceous Aerosols Programme at Indian Institute of Technology Bombay

Chief Guest Dr. Harsh Vardhan, Hon'ble Union Minister for Environment, Forest and Climate Change, Science and Technology, and Earth Sciences along with Prof. D.V. Khakhar, Director, IIT Bombay at the launch of NCAP-COALESCE project

National Carbonaceous Aerosols Programme Project (NCAP) on Carbonaceous aerosol emissions, source apportionment and climate impacts (NCAP-COALESCE project) was launched at IIT Bombay on July 07, 2017. Hon'ble Union Minister for Environment, Forest and Climate Change, Science and Technology, and Earth Sciences Dr. Harsh Vardhan was the Chief Guest on the occasion. During the launch, Dr. Harsh Vardhan said that scientific research should reach the public and scientists should work at the grassroots level. The Minister emphasized that there should be synergy and coordination between the various scientific and technical institutions working for the common goal to combat climate change.

The Environment Minister affirmed that climate change and global warming is the talk of the world and this project will be a milestone in our history. He also stressed that carbonaceous aerosols are a matter of great concern on the issue of climate change. He also urged the student community to set ambitious goals and work relentlessly to achieve them. The Minister expressed the hope that the project will encourage our scientists to address important questions, generate new and impacting knowledge and produce research outputs which are second to none in the world.

The Minister informed that organizations like ISRO are working in the field of carbon emissions. He suggested that there should be a synergy between various organizations working in a particular field. He emphasized that the country needs environmental soldiers. The Minister disclosed that a data bank of environment friendly practices is being prepared. For this, joint secretaries from the Centre are being sent to various regions across the country. He encouraged the students to dream big and work hard and he assured them that the government will support them on every step of the way. Speaking about India's ancient culture, the minister said that environmental protection is in the Indian DNA.

The NCAP-COALESCE project was launched as part of India's National Climate Action Programme. Under the leadership of IIT Bombay's Interdisciplinary Programme in Climate Studies, this multi-institutional, coordinated project would enable teamwork in cutting-edge fundamental research to understand the sources, fate and impacts of carbonaceous aerosols on climate change in the Indian region.

The project would be a key step to build a strong knowledge base related to short-lived climate pollutants, including carbonaceous aerosols as part of India's broad commitment to climate action.

Research activities in the NCAP-COALESCE project should lead to significant advances in understanding of key areas within carbonaceous aerosol influence on climate change. The project would also contribute towards building scientific capacity, through training of MSc, MTech and PhD students as well as the creation of infrastructure and systems at the participating institutions.

It is envisaged that the project would strengthen scientific networks and provide key new knowledge to underpin government decision making in regard to climate change.

Over a period of time, the NCAP-COALESCE project would emerge as an important knowledge and information resource to support national and state actions responding to climate change caused by carbonaceous aerosols.

IIT Bombay Invents Next Generation Coloured Solar Cells For Building Integrated Solar Power Generation For Urban Landscaping

Prof. Aldrin Antony and Mr. Anishkumar Soman showcasing colored solar cells

With depleting oil reserves and increasing prices, pollution and political instability over natural resources, the world looks forward to renewables. Recently there has been uproar on photovoltaics being used as building material with Tesla CEO Elon Musk unveiling its solar roof tiles. A competing technology has been invented in India by inventors from IIT Bombay, a premiere technology institute in India. IIT Bombay inventors Prof. Aldrin Antony and Mr. Anishkumar Soman, a senior research fellow of Department of Electrical Engineer, IIT Bombay and currently a PhD student of University of Delaware, have found a promising method in which they can use any conventional solar cell technology to integrate into buildings as architectural glass for building fenestrations like windows, facades, roof shingles etc. The invention consists of a nanophotonic coating named SMART© (Selectively Modulated Aesthetic Reflector Technology), which is the technological secret to fabricate different coloured solar modules. The beauty of this invention is, just like mixing colours or lights to make different other colours, here the inventors have succeeded in mixing nanophotonic coatings to generate different colour appearance for solar modules. This invention has been done with the financial support from MNRE under the National Solar Science fellowship award for Prof. Aldrin. The research work was carried out at the National Centre for Photovoltaics Research and Education at IIT Bombay.

Building Integrated Photovoltaics is at a very nascent stage where researchers across the globe are trying to find new ways to integrate solar cells to building material. At present, more than 90% of the solar market consists of silicon solar cells, which are used as roof top or stand-alone systems. Though there are new technologies like perovskite cells which are capable of giving colour, they suffer from stability issues due to which they are not yet commercialized. The main factor which limited the production of coloured solar cells was giving colour to the cell which results in very high reflection losses, causing the solar cell beneath not to work. However this invention smartly reflects only a selected wavelength of light to give it a coloured effect whereas the cell below works with nearly 60 to 80% relative efficiency. Currently solar panels are only installed on roof tops and are big bulky systems which consume a lot of space and are unaesthetic due to its blue or black colour.

The inventors Prof. Aldrin and Mr. Anish feel that this invention could change the way we look at building architecture of the future and believe India is an upcoming market for such innovative and green technology with rising real estate business. *"We wish to make solar cells customizable, attractive and irresistible to people along with contributing to a greener planet. Imagine sparkling, appealing, beautifully coloured, customizable window shades and facades generating energy for you! Isn't it cool?"* said Mr. Anish, one of the co-inventors. *"I feel our work has been in line with the government policy of Make-in-India campaign and we believe we should get more support from the government and media to promote development of such technology within the country,"* said Prof. Aldrin, who left his job in solar energy research and permanent residency in Europe to join the National Solar Energy Mission research in India as a National Solar Science Fellow, a prestigious fellowship awarded by the President of India, under the Ministry of New and Renewable Energy (MNRE). The inventors have filed for an Indian patent and a PCT for their invention and they are currently being approached by glass manufacturing companies and wish to license their technology to local players instead of international ones to promote technology development within the country.

Techfest Launches Initiative On Menstrual Hygiene

Launching of Techfest initiative on menstrual hygiene by actress Ms. Tapsee Pannu

Techfest launched its initiative on menstrual hygiene on August 26, 2017. It saw celebrities and other leaders involved in the initiative. The website of the initiative was launched by actress Ms. Tapsee Pannu.

She spoke about the importance of menstrual hygiene and breaking the silence around menstruation in our society. *"Women must step forward. Periods are not STDs or some crime but are as natural as any other body processes like eating, breathing, having sex, etc.,"* she said.

Dean of Student Affairs of IIT Bombay Prof. Soumyo Mukherjee congratulated the Techfest team for the initiative and added, *"It is high time we review some orthodox thoughts. Distribution of sanitary napkins is not enough, ideas must change. Education on menstruation should spread across all the sections of the society."*

This was followed by video testimonial of actress Ms. Sonnalli Seygall, who unfortunately couldnt make it to the launch event, but gave Techfest her heartiest congratulations for taking up the initiative. She said, *"Taboos around menstruation is probably the most important issue that needs to be addressed in the society. Congratulations to Techfest, IIT Bombay for taking up this initiative".*

The volunteer bus was flagged off right after by Tapsee Pannu and Prof. Mukherjee followed by a panel discussion on the issue amongst Prof. Ahona Roy, Department of Humanities, IIT Bombay, Prof. Soumyo Mukherjee, Dean of Students Affairs and Mr. Nitin Wadhwani, founder of CACR Rotary 3141.

Digital Empowerment Program On The Theme Of Transforming To A Cash-Less Society

The Organizing Committee of PanIIT organized a digital empowerment program on the theme of "Transforming To A Cash-Less Society" on July 22, 2017 at IIT Bombay. Pan IIT is the global alumni association of all IIT Alumni representing over 300,000 IITians.

Prime Minister Mr. Narendra Modi has given a clarion call for a Digital India with a vision to transform the country into a digitally-empowered society and knowledge economy. Towards this, PanIIT is carrying out a nationwide program to take thought leadership in the digital transformation policies of Government of India with a view to transform India into a digitally-empowered society and knowledge economy.

The program majorly aimed at five themes:

- Reforming Governance Through Technology - Delhi
- Transforming To A Cash-Less Society - Mumbai
- Start-Up India, Stand-Up India - Towards A Knowledge Economy - Bangalore
- Digital Empowerment Of Society - Education/Health - Chennai
- Digital Transformation Of Agriculture

The event was attended by around 250 business leaders representing education, research, academia, banking, financial Services, entrepreneurs, start-ups, VCs, enterprises and technology providers. Mr. Deepak Patil, Vice Chairman, PanIIT Alumni Association delivered the welcome and introductory speech.

Some key speakers included in the programme were Mr. A. P. Hota, CEO of NPCI, Mr. Sanjeev Chandak, Co-founder & CEO of FtCash, Mr. Madhivan Balakrishnan, CTO & CDO of ICICI Bank, Mr. Sangram Singh, Head - Cards & Payments of Axis Bank, Prof. G. Sivakumar, Professor in IIT Bombay, Mr. Ashank Desai, Chairman of Mastek (Moderator).

IIT Bombay And ISRO's SCL Indigenously Augment Their 180-Nanometer Technology For Versatile And Powerful Chips

A joint effort by IIT Bombay and ISRO's Semi-Conductor Labs (SCL) Chandigarh has demonstrated, for the first time, indigenously developed Bipolar Junction Transistor to augment SCL's 180-nanometer chip offering with versatile and powerful BiCMOS (short for Bipolar-CMOS) capability. This success boosts SCL's capability to serve the nation's civilian & strategic for the new wave of Internet-of-Things (IoT) technologies.

Internet-of-Things (IoT) connects sensors & appliance to computers and the internet to make an intelligent system. Essentially, this network of system will "see" situations instantaneously (through sensors), make "smart decisions" (using the internet / computer) and respond (with tool / appliance) seamlessly. It requires many specialized integrated circuits (ICs) to create this network in different environments of national interest e.g. a home, hospital, factory or paddy field. For example, a sensor IC may measure (e.g. soil moisture or room temperature or blood oxygen level in a patient) and communicate to a controller IC to enable a response. The sensors are normally "analog" as it reports a specific value of moisture/ temperature/ oxygen within a range – while this is converted into a simplified "digital" information in a computer for decision-making.

Bi-CMOS technology enables mixed signal ICs. It combines two transistor technologies in one chip – the high-speed and high power Bipolar Junction Transistor (BJT), and low speed and low power Compliementary Metal Oxide Semiconductor (CMOS). In simple terms, CMOS are equivalent of miniature on-off switches (i.e. digital) while BJTs are like miniature fan regulator dials (i.e. analog) that smoothly control the fan-speed. The result is a versatile technology platform in terms of integrated digital-analog (i.e. mixed) signal ICs, with optimal performance based on choice of high speed (BJT) and low power (CMOS), which strongly enables IoT applications.

India's strategic needs is served by the 180-nanometer CMOS technology at Semi Conductor Labs Chandigarh. A team from IIT Bombay lead by Prof. Udayan Ganguly has been collaborating with SCL to add BJT technology to the existing CMOS manufacturing baseline at SCL to indigenously develop BiCMOS technology. In May 2016, Dr. Piyush Bhatt kick-started the project by developing process design for nano-fabrication based on existing SCL capabilities and demonstrating the technical feasibility through computer simulations. Next, the equivalent process was implemented in the IC fabrication lab by a team under Mr. H S. Jatana at SCL. In June 2017, the fabricated devices showed first signs of life! The device amplified the input signal a 100 times at the output! In fact, it worked so well that this amplification is sufficient for the first version of BiCMOS technology.

Prof. Devang Khakhar, Director of IIT Bombay notes, *"Such successful joint technology development attests to skill and the readiness of the Indian agencies to indigenously enhance our capabilities – which is a first step towards market competitiveness in technology."*

India's electronic consumption could outstrip its oil consumption by 2020 according to National Electronics Policy 2011. The Government of India is pushing mega-fabs (large-scale chip factories) to support this need. Mr. Surinder Singh, Director of SCL, has the enviable experience of already running a smaller but high-tech CMOS fab in India.

"Mega-fabs are necessary but the ultimate goal is technology autonomy – enabled by indigenous technology development capability. Here, we have leveraged the world-class expertise of IIT Bombay to enable a manufacturable technology development at SCL. This collaborative model works!" remarks Singh.

An Indian semiconductor manufacturing enhanced with the ability for indigenous technology development significantly improves national access to technology that is custom, unique and secure focused on national needs and priorities.

Spurred on by the success, the team is working towards higher frequency BiCMOS technology. This involves further engineering to incorporate of new materials into the SCL fab using advanced processes. For example, replacing Silicon atoms with Germanium distorts the crystal and speed up electrons to enable 1000x faster systems. Such high-speed systems are used in high-end communications systems.

Prof. Udayan Ganguly's team works at the bustling Center of Excellence in Nanoelectronics (CEN) at IIT Bombay, which was seeded by the Ministry of Electronics and IT (MeitY) in 2005. Debashis Dutta, Group Coordinator, R&D in Electronics, MeitY says, *"The research success of CEN at IIT Bombay is well known. However, the technology translation stories are coming out only now. I believe these are signs of great things to come – which is essentially the realization of vision of our Ministry for Make in India in ESDM (Electronics Systems Design and Manufacturing)".*

Shirucafe Launches In IIT Bombay Campus

SHIRUCAFE was launched in IIT Bombay campus on August 1, 2017. It is located on the first floor foyer between two Lecture Hall Complexes. This membership-based cafe offers students, professors and staff members a chance to register and enjoy complimentary drinks such as mango juice, tea and coffee.

Launching of SHIRUCAFE at IIT Bombay

IIT Bombay Faculty Wins Young Researcher Award

Hon'ble Union Minister for Environment, Forest and Climate Change, Science and Technology, and Earth Sciences Dr. Harsh Vardhan inaugurated the 11th Foundation Day of Ministry of Earth Sciences in New Delhi on July 27, 2017. The Young Researcher Award was presented to Prof. Vikram Vishal, Department of Earth Sciences, for the outstanding work in Earth Science and Technology. His mother collected the award on his behalf.

Hon'ble Union Minister for Environment, Forest and Climate Change, Science and Technology, and Earth Sciences Dr. Harsh Vardhan presenting the Young Researcher Awards at the foundation day function of the Ministry of Earth Sciences 2017, in New Delhi

University Challenge Winners Of The DST – Lockheed Martin – Tata Trusts IIGP 2017

The Innovation "IIGPU400364 – SelfCervi: a device for real-time self screening of cervical cancer" by Prof. Rohit Srivastava, Tata Innovation Fellow, INAE Young Associate, Department of Bio-sciences and Bio-engineering, IIT Bombay, his student Mr. Shantanu Phatak, NanoBios Lab, IIT Bombay and other team members Ms. Mukti Vats, NanoBios, IIT Bombay, Dr. Shital Munde, MD pathology student, KEM Hospital, Mr. Kunj Vora, student intern, NanoBios Lab, IIT Bombay and mentors Prof. Dr. Padmaja Mavani, Sr. Gynecologist, KEM Hospital and Dr. Abhijit De, PI, ACTREC has been selected as one of the University Challenge winners of the DST – Lockheed Martin – Tata Trusts India Innovation Growth Programme (IIGP) 2.0 for 2017. The awards ceremony was held on July 26, 2017 in New Delhi.

Prof. Rohit Srivastava, Department of Bioscience and Bioengineering and team receiving the award at the Taj Mahal Hotel, Man Singh Road, New Delhi

Upenn Mid Career Students Visit IIT Bombay

A group of 27 senior and mid career academics and academic administrators from the University of Pennsylvania (Upenn), USA visited IIT Bombay on July 21, 2017 as part of their Executive Doctoral Programme at Graduate School of Education (GSE) at Upenn to understand about various aspects of an education and research Institute like IIT Bombay.

Visit of academicians and administrators of University of Pennsylvania (Upenn), USA at IIT Bombay

Launch Of Third Batch Of EMBA

IIT Bombay-Washington University in St. Louis Research and Educational Academy (IWREA) launched the third batch of EMBA on July 12, 2017 in the Institute. Mr. Yogi Sriram, Sr. Vice President, Corporate HR, Larsen & Toubro was the Chief Guest on the occasion.

Students and dignitaries during the launch of third batch of EMBA

Van Mahotsav 2017

Celebration of Van Mahotsav 2017 – tree plantation drive at IIT Bombay

IIT Bombay had organized tree plantation drive “Van Mahotsav 2017” on July 1, 2017 at Building No. 15, behind Type H-1, hill side, IIT campus. All campus residents, faculty members, staff and students participated in the programme to make it a success. Deputy Director Prof. A.K. Suresh was the Chief Guest for the programme. He gave away certificates to students of Kendriya Vidyalaya and Campus School.

Celebration of Librarian’s Day

Chief Guest Dr. Jagdish Arora, Director of INFLIBNET Centre, delivering the keynote address during the event

Librarian’s Day 2017 was celebrated on August 21, 2017 in Central Library at IIT Bombay. This day is celebrated in memory of Dr. S. R. Ranganathan, the father of Library Science in India. Dr. Jagdish Arora, Director of INFLIBNET Centre, Gandhinagar, Gujarat was the Chief Guest on the occasion.

Prof. A.K. Suresh, Deputy Director (Academic & Infrastructural Affairs), Prof. P.C. Pandey, Dean (Administrative Affairs), Prof. Amitava De, Dean (Academic Programmes), Prof. S.V. Kulkarni, Associate Dean (Infrastructure Planning and Support), Prof. P. Ramadevi, Convener of Library Committee and Prof. G.K. Srinivasan, Member of Library Committee graced the occasion.

Ms. Apeksha Fernandes – Champion in Aquatics

Ms. Apeksha Fernandes, a student of Std. VII in Bombay Scottish School, is a IIT Swimming Club swimmer and daughter of Prof. B.G. Fernandes, Professor and Head of the Department of Electrical Engineering. She has represented Maharashtra state in the 8th sub junior national aquatic championship conducted by Swimming Federation of India at Balewadi, Pune on 28-30th June, and won the following medals:

*Silver medal in 100 m breast stroke,
*Bronze medals in 50 m, 200 m individual medley and 200 m free style
*Gold medals in 4*50 m free style and medley relay, with new meet record.

Earlier to this, Ms. Apeksha has won the following medals at the state level:
*Gold medal in 200 m individual medley, with new meet record
*Silver medals in 50 m and 100 m breast stroke and 200 m free style
*Gold medals in 4*50 m free style and medley relays.

Ms. Apeksha is being trained by Dr. P. Mohan Reddy, Senior Sports Officer, IIT Bombay Gymkhana.

Celebration Of Independence Day

IIT Bombay staff taking pledge to make a "New India" by 2022 in the memory of Quit India Movement

Floral decoration at venue during the celebration of Independence Day at IIT Bombay

71st Independence Day was celebrated on August 15, 2017 with a lot of enthusiasm. The National Flag was unfurled by Prof. Devang V. Khakhar, Director, IIT Bombay in the area in front of SJMSOM building, followed by March Past.

A series of cultural events and competitions based on India and its culture were organized during the week in the Institute.

Before the Independence Day, a pledge was taken by IIT Bombay staff to make a "New India" by 2022 in the memory of Quit India Movement.

Research in focus

A REACTOR FOR REMOVAL OF PERSISTENT POLLUTANTS PRESENT IN POTABLE WATER

Water is no longer a safe and free commodity because most perennial Indian rivers are polluted with persistent organic pollutants. Thus provision of clean and safe potable water to all sec ons of society is the key challenge faced by our nation today. Clean water is also the key to enable Indian industries to produce goods of environmentally acceptable quality.

A project completed by us is an endeavor to provide an indigenous patented technology for the removal of priority chlorinated pollutants in potable water. We have designed a versa le reactor (Fig. 1) which involves the usage of palladium immobilized on an eco-friendly biopolymer, bacterial cellulose (Fig. 2) for degrada on of priority chlorinated pollutants to a non-toxic end-product using a suitable reductant. DDT, pentachlorophenol, endosulfan, trichloroethylene and nitrate are some of the non-point source pollutants present in ground and surface water bodies which can be eûec vely removed using the reactor. We would like to emphasize that there are a number of challenges that need to be tackled prior to translating the technology developed by us for field scale applications; be it ground, surface or industrial water treatment. Clearly more investment in terms of me and finance is the way forward for improving the technology.

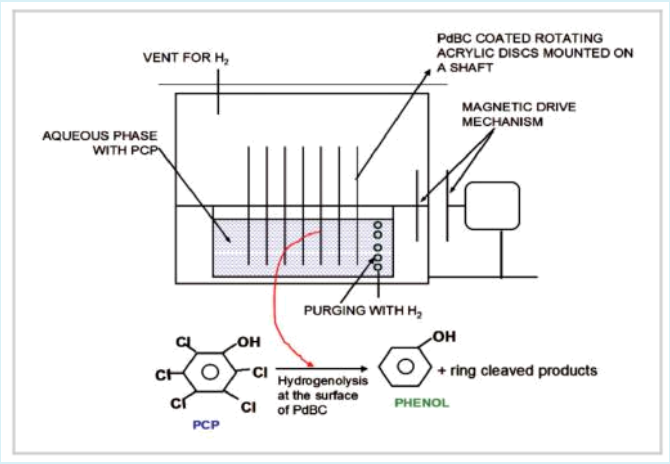

Fig.1 Schema c diagram of reactor used for treating water containing chlorinated pollutant

PdBC = palladized bacterial cellulose, PCP = pentachlorophenol is an example of chlorinated pollutant

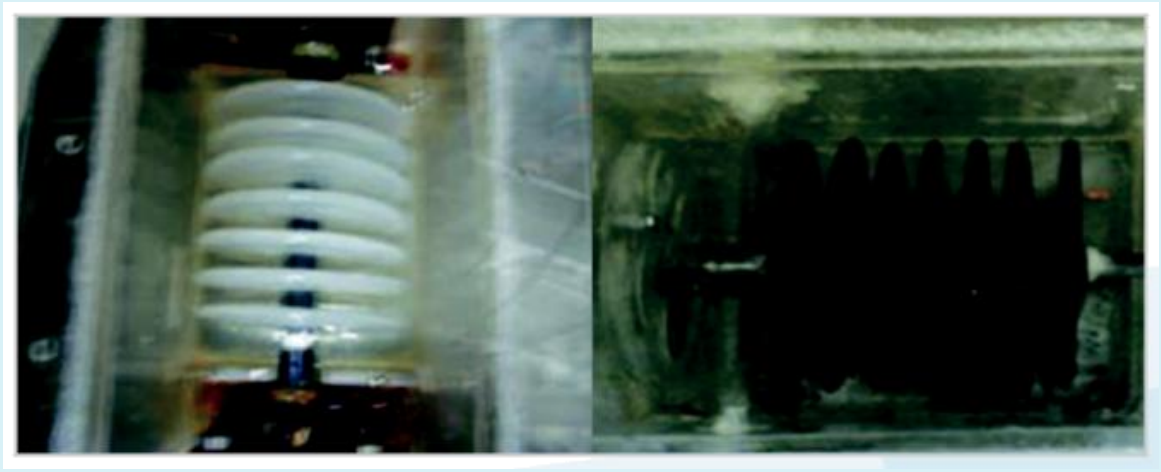

Fig.2 Picture on the left shows bacterial cellulose immobilized on acrylic discs while the picture on right shows palladized bacterial cellulose on acrylic discs

Prof. Sumathi Suresh,
Centre for Environmental Science and Engineering, sumathis@iitb.ac.in

NOTIFICATION

Prof. George Mathew, Department of Earth Sciences has taken over the charge of Chairman of UCEED-CEED-JEE (Adv) 2018, w.e.f. August 23, 2017

Prof. Bhalchandra P. Puranik, Department of Mechanical Engineering has been appointed as the Head w.e.f. August 24, 2017

Institute Colloquium

Dr. S. K. Mishra, Distinguished Scientist, DRDO, Ministry of Defense delivered an Institute lecture on *"India's Achievements in Missile Technology"* on July 17, 2017

Prof. Surajit Sen, Department of Physics, State University of New York at Buffalo, NY, USA gave an Institute lecture on *'Nonlinear Dynamics in the Real World'* on July 13, 2017

Mr. Raj Nair, Chairman, Avalon Consulting, India gave an Institute lecture on *"The Future is Here"* on August 3, 2017

Departmental Lectures

Industrial Design Centre

Prof. Neeta Verma, University of Notre Dame gave a talk on *"Visualization Of Data: Creating Narratives With Numbers"* on July 5, 2017

Department of Aerospace Engineering

Prof. N. Ananthkrishnan, an independent consultant with over 23 years experience in academia and industry in multi-disciplinary research & development across a wide spectrum from combustion systems to airplane aerodynamics to flight control and guidance systems gave a talk in a seminar on *"Advanced Flight Dynamics with Elements of Flight-Control"* on August 23, 2017

Department of Bio-science and Bio-engineering

Dr. Nisarg Shah, Harvard University, delivered a lecture on *"Assembling biomaterial regulators in tissue and immune development"* on July 14, 2017

Prof. Manu Prakash, Stanford University and Foldscope (Paper Microscope) fame delivered a lecture on *"Frugal Science and Challenges in Global Health"* on August 29, 2017

Department of Humanities and Social Sciences

Prof. Sai Bhatawadekar, Director of the Center for South Asian Studies at University of Hawaii delivered a talk in a seminar on *"Symptoms of Withdrawal: Hegel's and Schopenhauer's Conceptual Structuring of Hindu Religion and Philosophy"* on August 2, 2017

Dr. Sri Craven, Portland State University in Oregon, USA gave a talk in a lecture on *"Feminist Studies and Global Indian Literature: Literary Criticism in a New Century"* on August 1, 2017

Dr. Shailaja Paik, University of Cincinnati, USA delivered a lecture on *"The Social Life of Tamasha"* on August 30, 2017

Department of Civil Engineering

Dr. Lisa Stewart, Head of Flood Estimation, Centre for Ecology & Hydrology, Wallingford, UK gave a lecture on *"Flood frequency and the UK Flood Estimation Handbook: data, methods and challenges"* on August 1, 2017

Department of Mechanical Engineering

Prof. Shalabh Maroo, IIT Bombay alumnus and faculty in the department of Mechanical and Aerospace Engineering in Syracuse University (USA) gave a talk in a seminar on *"Experimental and Molecular Insights of Microlayer for Boiling Enhancement and Thin Film Evaporation"* on July 26, 2017

Centre for Policy Studies (CPS) and SJMSOM School of Management

Mr. Parminder Jit Singh, Executive Director of IT for Change, an India based NGO gave a talk on *"Digital data - the new raw material in the Globalising Economy"* on July 28, 2017

Centre of Excellence in Steel Technology (CoEST)

Prof. Veena Sahajwalla, Scientia Professor, School of Materials

Science and Engineering, University of New South Wales, Australia delivered a talk in a seminar titled *"Reviving Waste in Green Manufacturing: Creating new solutions through Innovation and Partnerships"* on August 21, 2017

Awards and Distinctions

Prof. C.P. Rao, Department of Chemistry has been chosen to receive the Chemical Research Society of India silver medal for his contributions to research in Chemistry

Prof. Milind Atrey, Department of Mechanical Engineering has been appointed as the Founding Chair of the Institution of Mechanical Engineers' (UK) Process Industry Division's India Technical Centre, which will be headquartered in Mumbai for a period of 3 years in an honorary capacity

Prof. Suvarn Kulkarni, Department of Chemistry has been invited to become a Member of the Editorial Board of *"Carbohydrate Research",* for a period of 3 years

Prof. Anindya Dutta, Department of Chemistry has been chosen to receive the Chemical Society of India Bronze Medal in recognition of his contributions to Chemistry. The medal will be presented at the 22nd National CSRI Symposium

Prof. Varun Bhalerao, Department of Physics has been selected as an Associate of the Indian Academy of Sciences

Prof. Deepankar Choudhury, Department of Civil Engineering has been appointed as the new Co-Editor (Associate Editor) of ASCE International Journal of Geomechanics, published by the American Society of Civil Engineers

Prof Vikram Gadre, Department of Electrical Engineering has been nominated as a member of IIT council. IIT council is the apex body for IITs chaired by the Minister of MHRD

Prof. Anil Kumar, Department of Chemistry has been awarded this year's NASI-Reliance Industries Platinum Jubilee Award for Application Oriented Innovations

Prof. Nina Sabnani, Industrial Design Centre has won the Animation Gold Award at the 12th Indian Documentary Producers' Association Awards 2017 for the animation film *"Hum Chitra Banate Hain"* directed by Prof. Sabnani

Prof Rohit Srivastava, Department of Biosciences and Bioengineering, has developed a medical device for detection of renal diseases. It was selected for display in an exhibition to be held in Parliament House in July 2017

Prof. Subhasis Chaudhuri, Department of Electrical Engineering has been selected for this year's Distinguished Alumnus award of IIT Kharagpur. The award was conferred on him during IIT KGP convocation ceremony held in August 2017

Recent work of **Prof. Siddhartha Chaudhuri**, Department of Computer Science and Engineering on 3D shape structure, using recursive auto-encoders was chosen to be featured in a press release of the Association for Computer Machinery (ACM) via the American Association for Advancement of Sciences (AAAS)

Student News

Mr. Abhishek Verma, alumnus of Industrial Design Centre, has won the Annecy award for his animated short film *"Maacher Jhol"* at the prestigious Annecy International Animation Film Festival. It is one of the four international animated film festivals sponsored by the Association Internationale du Film d'Animation (or ASIFA, the International Animated Film Association).

Global Grad Show at Dubai will exhibit IDC Alumni Projects

Projects by IDC alumni have been selected for the prestigious Global Grad Show at Dubai, an annual exhibition of graduate projects from design schools around the world. It is held in November as part of Dubai Design Week. In the Global Grad Show, Mr. Nishit Parikh's project titled 'Solar study lamp for Rural India', Mr. Arun Shah's project 'Portable Patient Chair for Dental Camps' and Ms. Devanshi Saksena's project 'Water Filter Bottle for CRPF Jawans' have been selected.

The exhibition brings together highlights from the degree shows of the most innovative technology and design programs in the world. Last year, it featured works from 50 universities in 30 countries. This includes well-established schools such as MIT, Royal College of Art, National University of Singapore etc.

Projects of IDC Alumni selected to exhibit in Global Grad Show at Dubai

Symposium On Science And Engineering For Sustainable Development

IIT Bombay and The Ohio State University, USA, jointly organized an annual symposium on July 26, 2017 on the topic of *"Science and Engineering for Sustainable Development"* in collaboration with Techstain Technologies as organizing partner. The symposium theme this year was 'Sustainability of Earth and Water Resources from Ecological Perspective'. Dr. V.K. Saraswat, member NITI Aayog and former Director General of DRDO, was the chief guest at the symposium.

The day-long symposium focused on identifying the cross-linkages between the concepts and practice of sustainable engineering. The event involved presentations by start-ups working in the area of sustainability. It brought together thought leaders and practitioners across multiple sectors to deliberate upon the critical challenges facing India's sustainable development and brainstorm about the direction needed for exploring potential solution. The broad objectives of symposium were:

**To create awareness and necessary linkages for bringing Sustainability and Resilience studies from periphery to center of all engineering R&D initiatives*

**To provide a platform for sustainability thinkers from corporate, academia, Government and NGOs for framing relevant and implementable policies for a clean environment*

**To evolve sustainability governance framework at the global level with special attention to the emerging economies like India*

**To identify key research projects those need to be incubated*

**To build and maintain linkages between laboratory researches, immediate industry need, corporate governance tools and governmental planning to support such initiatives*

The organisers and the host included Dr. Biplab Pattanaik, Techstain Technologies, Prof. Yogendra Shastri, Department of Chemical Engineering, IIT Bombay and Prof. Bhavik Bakshi, The Ohio State University, Columbus, Ohio

Chief Guest Dr. V.K. Saraswat, Member of NITI Aayog and former Director General of DRDO addressing the conference

Publications

Prof. Tara Shankar Shaw, Department of Humanities and Social Science recent paper (co-authored with Prof. Lerong He from State University of NY) titled *"Institution Logic in Family Business: Evidence from Board Structure Change in Indian Public Firm"* was awarded the Best Paper award in *"The Ninth International Symposium on Multinational Business Management—Entrepreneurship, Organizational Change and Employment Management"* held at Nanjing, China on June 16-18, 2017

Invited Talk / Lectures

Dr. Ranjit Kumar Das, In-Charge, Central Library was invited to act as a Resource person to deliver lecture on *"Collection Development of e-resources"* for the UGC Refresher Course in Library and Information Science from the UGC-Human Resource Development Centre, Sant Gadge Baba Amravati University, Amravati. As a Resource Person, Dr. Das delivered the lecture for the UGC Refresher Course in Library and Information Science on July 10, 2017.

Other News

Prof. C.P. Chaturani, Retired Faculty Of Department of Mathematics has been conferred fellowship of International Academy of Physical Sciences at Hyderabad in July 2017

Appointments

Prof. Vineeth Nair, Department of Aerospace Engineering, has been appointed as Assistant Professor w.e.f. July 20, 2017

Retirements on July 31, 2017

Mr. H. S. Verma, Dy. Registrar, Audit Section, retired after 20 years of service

Ms. Pushpa S. Sharma, Library Information Officer, Central Library, retired after 31 years of service

Retirements on August 31, 2017

Prof. S.D. Jog, Department of Mechanical Engineering, has retired after 34 years of service

Mr. Manoj D. Bhadekar, Jr. Tech Superintendent, Department of Aerospace Engineering, has retired after 32 years of service

Mr. Ashok R. Joshi, Sr. Lab, Assistant, Centre of Studies in Resources Engineering, has retired after 40 years of service

Mr. Tukarakm B. Londhe, Attendant (SG), Estate Office, retired after 39 years of service

Mr. Ashok K. Birare, Sr. Helper, Public Health Office, retired after 38 years of service

Mr. Yuvraj R. Mane, Sr. Helper, Printing Press, retired after 36 years of service

In the Wilderness

Photo Credit :

Mr. Lakshmipathi N.
Department of Aerospace Engineering

Salt'n Pepper

by Prof. Arun Inamdar

CEP courses scheduled during September and October 2017			
Duration	**Days**	**Course Title**	**Course Coordinator / Department**
Open Programmes :			
12-9-2017	5 days	Advanced Welding Technology	Prof. Amber Shrivastava Prof. Sushil M. Mechanical Engineering
14-9-2017	2 days	Efficient Steam Handling	Prof. Manaswita Bose Energy Systems Engineering
18-9-2017	3 days	Theory And Technology of Silicon Solar Cell	Prof . Anil Kottantharayil Electrical Engineering
21-9-2017	3 days	Expo Info Design	Prof. Ravi Poovaiah Industrial Design Centre
24-9-2017	4 days	Advanced Executive Program In Management	Prof. Dinesh Sharma School of Management
25-9-2017	2 days	Perovskite Solar Cells	Prof. Balasubramaniam Kavaipatti Energy Systems Engineering
In-House Programmes :			
1-9-2017	5 months	Transmission Electron Microscopy	Prof. Nithyanand Prabhu Metallurgical Engineering & Materials Science
14-9-2017	3 days	Process Hazard Evaluation And Loss Prevention	Prof. Sandip S. Roy Chemical Engineering
Open Programmes :			
3-10-2017	5 days	E-Mobility And Innovations In Sheet Metal Forming	Prof. Prashant P. Date Mechanical Engineering
6-10-2017	3 days	Leadership Development Programme For Managers And Entrepreneurs	Prof. S. Bhargava School of Management
31-10-2017	6 days	Expo Creative Design Methods And Innovation	Prof. Ravi Poovaiah Industrial Design Centre
In-House Programmes :			
4-10-2017	2 days	Systems Engineering Principles	Prof. Hemendra Arya Aerospace Engineering
5-10-2017	4 months	A 21 Days Course On New Product Development	Prof. Vijay P. Bapat Industrial Design Centre

campus diary

July - August 2017

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BOOK POST