

Alumni Day Celebrations at the Institute



Distinguished Service Awards Winners along with Director, DD (FEA) and Dean (ACR) during Alumni Day Celebration at IIT Bombay

The Institute, celebrated its annual Alumni Day on December 27, 2015. The day started with a warm welcome by Prof. Ravi Sinha, Dean, Alumni & Corporate Relations, while the Director, Prof. Devang Khakhar, gave the visiting alumni an overview of the Institute and its growth over the years. In his address, Prof. Khakhar, informed how the institute is growing from strength to strength. *"Today, IIT Bombay is the leading academic Institution in the field of research and development . In a span of over 10 years, 100 technologies have been licensed by the Institute. The Institute is focusing on research that makes a difference and has set up major research centres in areas like electronics, nanoscience and solar energy. Our aspiration is to see IITB*

among the top ranks of technical universities in the world and we need continued support from our alumni to realize this dream," he added.

As a part of the function, **Distinguished Service Awards** were bestowed on four alumni members this year, who besides being achievers in their own chosen domains, have contributed in a notable and sustained manner to the progress of the Institute. The award, instituted in the year 1999, consists of a certificate, memento and an Uttaria. **This year, the award was conferred on Mr. Pramod Chaudhari, Mr. Ashok Kalbag, Mr. Rajesh Radhakrishnan, and Mr. Abhay Sawant, by the Director.**

The Silver Jubilee Batch (class of 1990) has decided to fund three existing initiatives as a part of their Legacy Project and pledged a sum of Rs 6.5 crore towards it. (A Legacy Project is a project adopted by the batch celebrating its Silver Jubilee anniversary, for the betterment of the institute and of the people associated with it, as a way of giving back to the alma mater and to leave behind a lasting legacy and remembrance of their silver jubilee reunion.)

The projects they have decided to fund include – **Retired Faculty Wellness Fund** (It covers medical coverage for the faculty members who retired prior to 2003, as well as for their spouses); **Scholarship Program for Students; Young Faculty Award or New Faculty Sign-on Bonuses and Faculty Development Fund** (basically to attract and support new faculty members at IIT Bombay. The project gives a joining bonus of Rs 4 lakhs over a period of three years to every new faculty hired at IIT Bombay and some financial aid in the subsequent years as well); **Innovation Fund** (The fund will provide early stage funding for students with product ideas that can be developed and later developed into bigger companies); and **Clean Campus Green campus Project** (The project is for things like cleaning the Powai Lake, beautifying the Institute campus etc.)



Silver Jubilee Batch (class of 1990) handing over the Cheque to Prof. D. V. Khakhar, Director, IIT Bombay

According to Mr. Sandeep Asthana, a representative of the Silver Jubilee Batch, "It is amazing to come back to the campus after so many years. Lot has changed outside the campus and inside the campus too, but the feeling we got when we entered the campus was truly magical. Our roots are at IIT Bombay and we know that whatever we are today, is because of

the Institute and the lessons that we learned here through our teachers, friends, and hostel mates. Therefore, we feel that it is important to give back to the Institute which has given us so much. Our batch is giving away a cheque of Rs 6.5 crore to the Institute as a part of the legacy project or as we call it **Insti Wapsi** which simply means coming back to the Institute."

Mr. Ram Kelkar representing the Reunion batch of 1980 and Mr. Nirmesh Mehta from the Decennial Batch (Class of 2005) also spoke at the Alumni Day function. Several fun-filled activities were also held during the alumni meet which included departmental tours, hostel visits, cultural performances, student-alumni interactions, musical evenings and so on. A large number of alumni members and their family members participated in the Alumni Day celebrations this year.

Mood Indigo: Euphoria grips IIT Bombay



Annual Cultural Festival Mood Indigo at IIT Bombay

The annual cultural festival Mood Indigo held during December 18-21, 2015, saw an overwhelming response from the youth of the country. The fest registered a footfall of 1,31,000.

Competitions: Competitions at Mood Indigo have been a bastion of opportunities to showcase talent in any genre of cultural proficiency. Covering the genres of Dance, Dramatics, Design and Digital Arts, Fine Arts, Music, Lifestyle, Literary Arts and Speaking Arts, Mood Indigo have something for everyone. Also, with a highly developed and home-grown LYP-Live Your Passion campaign, Mood Indigo provides a platform to the winners to make it big and live **their dream**. This year the event witnessed maximum participation from IIT Bombay students in the competitions with great results. The Institute won the championship in the genres of fine arts, speaking arts and dramatics.

The genre-wise results are as follows:

Dramatics : IIT Bombay **Dance:** Gargi College
Music: Hansraj College **Speaking Arts:** IIT Bombay
Literary Arts: IIT Madras **Fine Arts:** IIT Bombay

Popular and Cultural Events: Continuing the legacy of bringing the maximum number of international artists to a College festival, Mood Indigo witnessed performances from national and international artists. The concerts or pronights as they are popularly known, at the festival witnessed a huge crowd which came to see Bollywood ace music director Pritam along with Javed Ali, Neha Kakkar, Aditi singh sharma, Antara Mitra, Nakash Aziz and Amit Mishra. Borgeous performed at the EDM night that filled the youth with utmost enthusiasm during the festival while Bollywood singer Shann performed on Kishore Kumar songs as part of the nostalgia night. Mood Indigo also had an International Music Festival which witnessed one of the greatest Electro- Ethnic Reggae group Anna RF, the great multi-instrumentalist Arjun Kumaraswamy popularly known by his stage name Arjun, A Cappella group Ragga Trippin and many more. The EDM night saw the LA based platinum recording artist and dj Borgeous , the creator of 'Tsunami', one of the most popular EDM tracks in the world electrify the audience at Mood Indigo.

Litfest:- Ashwin Sanghi kick - started the LitFest with his interactive session. Justice Markandey Katju, Former Judge of Supreme Court of India lived up to his reputation of being a bag full of surprises. He awakened and enlightened the audience with his lively insights on a host of topics. Indian social activist and social reformer Medha Patkar, expressing her views on the trending topic of

‘Globalisation: Threat or Opportunity’. Litfest also witnessed the presence of Mr. Shashi Tharoor, the renowned author, diplomat and politician and a pioneer in using social media as an instrument of political interaction. The globally recognized speaker shared his views on **“India in today’s networking world”**, and how India is dealing with this respect.

Humorfest: The HumorFest was at its best when stand-up comedian Vir Das entertained the audience through his antics. Another artist who enthralled the audience in

the HumorFest was Indian stand-up comedian and the runner up of 2005 Great Indian Laughter Challenge, Ahsaan Qureshi,

The festival was extensively covered by various mainstream and regional media houses. Various news channels also covered the festival on television. In an attempt to explore the new mode of mass communication, social media, the organisers indulged in posting live updates via various social networking sites like Facebook, Twitter and Instagram. In all it was a great success.

Techfest makes an entry into Guinness Book of World Records

IIT Bombay’s annual International Science and Technology Festival called TechFest, celebrated its 18th anniversary this year. The event was organized between December 26-28, 2015 and saw a footfall of around 1.65 lakhs. **Techfest also made an entry into Guinness Book of World Records for the maximum number of people**

learning magic lesson at the same time during a magic show this year.

Some of the activities which were organized as part of Techfest this year are as follows:

Major Attractions at the TechFest :

Exhibitions: The aim of exhibitions is the direct interaction of crowd with these world class exhibits and make their experience a memorable one. Some of the highlights were:

- 1. Jinn Bot:** (3-D printed walking humanoid robot) Android app controlled robot able to express and understand different human emotions like anger, joy etc.
- 2. Dutch Nao Team, Netherlands:** Autonomous football playing Robots
- 3. NASA Chandrobot, Bangladesh :** Robot capable of mining at lunar environment

SoUL: Techfest brought Solar Lamp as a ray of hope for Rural India to bring glow in Life. The aim of this competition was to make low cost solar lamps available to the common people in the rural parts of our nation as a part of the Million SOUL project. Teams from all over the globe will be participating, presenting their 3D printed model to grasp a prize money of INR 7 LAKHS. The competition was under the guidance of Prof. Chetan Solanki of IIT Bombay.

Techfest App : This year Techfest incorporated the Beacons technology by which the user will be able to

obtain offline notifications. This was a prime example of PM, Narendra Modi’s vision of Digital India.

International Summit: Techfest, this year organized Techfest International Summit which helped the participants to interact with experts and get the exposure

about the research and development in the topic of Internet of Things. The Summit also included a discussion among the CTO’s and other delegates from companies of IBM, Qualcomm, Microsoft and other tech giants.

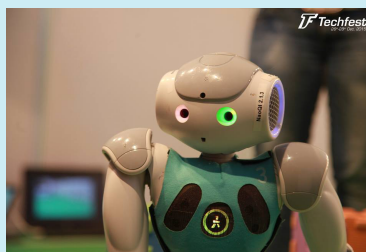
Lecture Series: A platform for both the brilliant and the blooming to interact with unparalleled personalities from across the world and to bridge the gap between industry, academia and students. Eminent

personalities who were part of the series were Dr. K Radhakrishnan: Former chairman of the ISRO and the man behind Chandrayaan and Mars and Moon Orbiter mission; Eric Klinker: CEO of Bit-Torrent; Prof. Serge Haroche: Nobel Laureate in Physics; and many more.

Directors Conclave: Techfest organized an IIT Directors Conclave which saw director of IIT Bombay and IIT Gandhinagar coming together to address various questions and hold discussions.

International Robotics Competitions: Techfest brings forth the IRC, a battle for establishing the glory among tech-enthusiasts at the International platform. The nations of Egypt, Sri Lanka, Bangladesh and Nepal contested in the finals for a prize money of INR 4.5 LAKHS.

Technoholix: It acted as a perfect opportunity for an audience of 10,000 to rejuvenate through magic, pyrotechnics, fire shows, acrobatics and even virtual 3D holographic displays.



TechFest, an Annual International Science and Technology Festival at IIT Bombay

Global R&D Summit 2015



IITB stall at Global R & D Summit 2015

IIT Bombay participated in the Research & Development (R&D) Exhibition organised by the Federation of Indian Chambers of Commerce and Industry (FICCI) and Department of Science & Technology, Government of India in conjunction with the 'Global R&D Summit 2015' at Vigyan Bhawan, New Delhi during December 7-8, 2015. The summit aimed to explore avenues of partnerships for Indian technology based start-ups and build capacities for market assessment and rapid commercialization of research. It also aimed to create unique networking ground for local and global research community and to create avenues for industry-academia-government partnerships by showcasing R&D projects, programs and success stories to the R&D community. The event was inaugurated by Shri. Nitin Gadkari, Hon'ble Union Minister of Road Transport & Highways and Shipping and Shri. Y.S. Chowdary, Hon'ble Minister of State for Ministry of Science & Technology & Earth Sciences, Government of India.

The focused themes of the summit this year were Innovation Ecosystem, Issues in the innovation sectors- Healthcare, Electronics & Software, Cleantech, Policy interventions, Funding of startup among others. Apart from IIT Bombay, 26 other Government R&D institutions and Industry such as Defence Research and Development Organisation, Department of Biotechnology, Indian Oil Corporation Ltd., CSIR Labs. participated in the event. IIT Bombay exhibits included posters on technologies developed in the Institute (both in print and video version), Videos on R&D Development, IIT Bombay-history & student research and distributed R&D Resources booklet, Technology brochure, R&D Highlights fliers. IIT Bombay stall attracted an overwhelming response mostly from R&D personnel from the Government institutions and Industry apart from general public. IIT Bombay Exhibition was organised by Dr. V. Arumugam, IRCC and his team (Mr. Ramesh M. Rajput and Ms. Vanishree Hebbar).

Celebration of National Constitution Day by Magaswargiya Karmachari Sansad (MKS)

IIT Bombay SC/ST/OBC Employees welfare Association (MKS) celebrated "Constitution Day" on December 9, 2015 in IIT Campus. Prominent Advocates of High Court, Mr. Sangharaj Rupawate and Mr. Deepak Paikrao were the Chief Guest and Speakers for the occasion.

Departmental Lectures

Department of Aerospace Engineering

Dr. Andreas Klockner, University of Illinois at Urbana-Champaign, gave a talk on "Quadrature by Expansion: Fast, Accurate Evaluation of Layer Potential Integrals" on December 17, 2015.

Dr. Meelan Choudhari, Senior Research Scientist, NASA Langley Research Center, gave a talk on

"Who Dun It — Laminar-Turbulent Transition via Discrete Roughness Elements" in hypersonic flows on December 15, 2015.

Department of Humanities and Social Sciences

Dr. Preeti Dhillon, International Institute for Population Sciences (IIPS), Mumbai, gave a talk on "Economic implications of longevity improvements and age structural transition in India" on December 4, 2015.

Dr. Sharmistha Saha, Freie Universitat, Berlin, gave a talk on "Coagulating communities: formation of a national body through cultural practice in colonial India" on December 8, 2015.

Department of Metallurgical Engineering and Materials Science

Prof. Sanjay Sampath, Director, Center for Thermal Spray Research, Stony Brook University delivered a lecture on "Thermal Spray as an Additive and Layered Manufacturing

Technology for Applications in Energy Systems” on December 10, 2015. The lecture was organized jointly by the Dept of MEMS, IIT Bombay, Indian Institute of Metals, Mumbai Chapter and NACE International Gateway India Section.

Climate Studies

Mr. Jeffery Schub, Executive Director, Coalition for Green Capital, USA, gave a talk in a seminar on “Clean Energy Investment & Economic Development” on December 14, 2015.

National Centre for Aerospace Innovation and Research (NCAIR)

Dr. Ravinder S. Bhatia, Associate Project Manager, Thirty Meter Telescope, gave a talk on “India’s Contributions to The Thirty Meter Telescope” on December 29, 2015.

Research Scholar Forum

The Department of Humanities and Social Sciences in collaboration with Research Scholars Forum organized a talk with the help of German Consulate, Mumbai on “Life and Writing in Germany” & “Dialogue of Cultures” on December 4, 2015.

Seminars / Conference / Workshops

The International Ergonomics conference Humanizing Work and Work Environment 2015

The Department of Industrial Design Centre organised the 13th HWWE2015 International Ergonomics Conference at IIT Bombay during December 6-9, 2015.

The conference aimed to provide an excellent forum for participants to present research findings, exchange ideas, develop networking and collaboration in the area of ergonomics and nutrition and lively participation of researchers in the area of Ergonomics, Human Factors Engineering and Nutrition not only from India and Asia Pacific Regions but also from other parts of the world.

Proteomics Conference

“Targeted Proteomics Workshop and International Symposium (TPWIS)”, was organized by the Department of Biosciences & Bioengineering at IIT Bombay from December 10-14, 2015.

Targeted proteomics is emerging as a promising tool for the proteomics researchers with interest in quantifying specific proteins in complex mixtures, thus not only helping validate interesting targets but also providing a deep understanding of biology. The Targeted Proteomics Workshop and International Symposium focused on hypothesis-driven proteomics for such validation studies, to know when and how to move from the discovery to a targeted phase of proteomics research, and improve confidence in initial results and progress to findings with clinical relevance.

The six-day-long conference comprised of Education Day, International Conferences and workshops. Mr. Brendan MacLean from University of Washington coordinated the targeted proteomics workshop and Dr. Robert Moritz coordinated Trans-Proteomic Pipeline workshop. Several international distinguished scientists, including Dr. Mark Baker (president HUPO), Dr. Joshua LaBaer (President, US-HUPO), Dr. Jennifer Van Eyk, Dr. Leigh Anderson, Dr. Bruno Domon, Dr. Jacob Jaffe, Dr. Olga Vitke and others also participated in workshop and international symposium.

SciPy India 2015 International Conference on Python for Science and Engineering, Research and Education

Free and Open Source Software for Education (FOSSEE) organized **SciPy India 2015 Conference** at IIT Bombay Campus from December 14 – 16, 2015. SciPy India Conference aimed at providing opportunities to spread the use of the Python programming language in the Scientific Computing community in India. It provided an unique opportunity to interact with the “Who’s who” of the Python for Scientific Computing fraternity and learn, understand, participate, and contribute to Scientific Computing using Python. The conference objective was to combine education, engineering, and science with computing through the medium of Python.

The conference featured a variety of workshops and invited speaker lectures. Prof. Andreas Klöckner, creator of PyOpenCL/PyCUDA and other tools was the key note speaker and he conducted numerous workshops during the conferences.

International Conference of the Commission on Legal Pluralism

The Department of Humanities and Social Sciences, IIT Bombay in collaboration with the Commission on Legal Pluralism organized the biennial international conference of the Commission entitled “Normative Interfaces of Globalization and High-Tech Capitalism: Legal Pluralism and the Neo-Liberal Turn” from December 14 - 16, 2015, preceded by the biennial pre-conference course on Legal Pluralism from December 9 - 12 December 2015. The conference focused on the areas which have gained momentum due to globalization, the emergence of ‘knowledge economies’, the evolution of high-tech capitalism, debates on information technology, biotechnology, genetic engineering and intellectual property rights and their relationship with legal pluralism.

5th International Conference on Advances in Energy Research 2015 (ICAER)

The Department of Energy Science and Engineering, IIT Bombay, organized the 5th International Conference on “Advances in Energy Research” during December 15 – 17, 2015 to provide an excellent platform to know, exchange new ideas, discuss new developments and finally look at the challenges ahead. Prior to ICAER a workshop on “Electrochemical Techniques for Energy Storage and Conversion Devices” was organized by the Department of Energy Science & Engineering, IIT Bombay & Biologic India on December 14, 2015.

Plenary Speakers included Prof. Mark S Wrighton, Chancellor, Washington University, St. Louis, USA and Dr. Anil Kakodkar, Ex-Chairman, Atomic Energy Commission of India, Ex-Director, Bhabha Atomic Research Centre, Mumbai followed by the Keynote Speakers Prof. Pratim Biswas Washington University in St. Louis,

USA, Prof. Colin R. Pulham University of Edinburgh, UK and Prof. Vijayamohan K. Pillai Director, CSIR-Central Electrochemical Research Institute, India. Numerous Theme and Invited speakers.

Awards and Distinctions

Prof. Souvik Mahapatra, Department of Electrical Engg has been elected as a Fellow of IEEE.

Prof Kannan Moudgalya, Department of Chemical Engg has been selected for the HINDUSTAN TIMES for Mumbai award and also bagged the first prize for the Spoken Tutorial project in the Reimagine Education Competition, under "Nurturing Employability" category.

Prof. Krithi Ramamritham, Department of Computer Science and Engineering, has been selected to receive the Outstanding Service Award, in recognition of his services as the Editor-in-Chief of IEEE Embedded Systems Letters from July 2011 to December 2015.

Prof. R. Balaji, Department of Civil Engineering, received The Institution Prize (Donated by Col G N Bajpai) from Institution of Engineers India (IEI) for his Journal paper titled 'A Load Cell for the Measurement of Slack Mooring Forces', published in the Series 'C' Journal of IEI, Vol. 95, Issue 3, during the 30th Indian Engineering Congress, held at Guwahati, Assam on December 18, 2015.

Invited Talk

Prof. R. Balaji, Department of Civil Engineering, gave a special lecture titled "Siltation dynamics of navigational channel and harbour basin ‐A case study" at the International Conference on Ship and Offshore technology-India 2015 organised by The Royal Institutions of Naval Architects and IIT Kharagpur at IIT Kharagpur during Dec 10-11, 2015.

Prof. Rajkumar S. Pant, Department of Aerospace Engineering has joined School of Mechanical and Aerospace Engg at Nanyang Technological University, Singapore as a Visiting Professor for a year, starting Dec 14, 2015, on lien from IIT Bombay.

Appointments

Dr. Shiva Kant Shukla, Wadhwani Research Centre for Bioengineering (WRCB) has been appointed as Post Doctoral Fellow w.e.f December 1, 2015.

Dr. Divya Haridas, Department of Mechanical Engineering, has been appointed as Post Doctoral Fellow w.e.f. December 4, 2015.

Dr. Serena D'Souza, Department of Chemical Engg., has been appointed as Post Doctoral Fellow w.e.f December 7, 2015.

Dr. Kapil K.Sharma, Department of Electrical Engineering, has been appointed as Post Doctoral Fellow w.e.f December 28, 2015.

Dr. Alankar Alankar, Department of Mechanical Engineering, has been appointed as an Assistant Professor w.e.f. December 28, 2015.

Dr. Jayesh S. Pillai, Department of Industrial Design Centre, has been appointed as an Assistant Professor w.e.f. December 28, 2015.

Dr. Arnab Maity, Department of Aerospace Engineering, has been appointed as an Assistant Professor w.e.f. December 29, 2015.

Dr. Zakir H. Rathar, Department of Energy Science and Engineering, has been appointed as an Assistant Professor w.e.f December 30, 2015.

Dr. Vipin Kumar, Department of Metallurgical and Materials Science, has been appointed as Post Doctoral Fellow on December 31, 2015.

Notification

1. **Prof. B.V.S. Viswanadham**, Department of Civil Engineering, has been appointed as Dean (IPS) and has taken over the charge w.e.f. 31.12.2015

2. **Prof. A.M. Kulkarni**, Department of Electrical Engineering, has been appointed as Associate Dean (R & D) w.e.f 1.1.2016.

3. **Prof. Neela Nataraj**, Department of Mathematics, has been appointed as Head w.e.f. December 28, 2015.

Retirements in December 2015

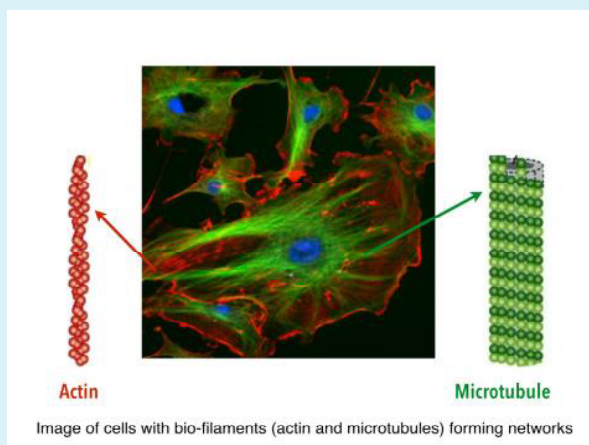
Prof. Susheel Durani, Department of Chemistry, retired after 30 years of service.

Shri Bajrang B Upadhyay, Library Attdt. (SG), Department of Industrial Design Centre, retired after 39 years of service.

Ms. Anusaya B Chavan, Helper, Administration Section, retired after 23 years of service.

Research in Focus

Teamwork is Superpower



Actin-Microtubule

Ten robots are working independently to push a cargo. Can they produce a net force equivalent to that of eleven robots working independently? The answer is, YES, it is possible in the nano-bio world — each robot has to switch between two “states”, based on a set of rules!

A new study in the Physics Department and the Department of Biosciences and Bioengineering of IIT Bombay finds that cellular filaments can generate more force than is possible by sum of forces exerted by each filament. The extra force indirectly arises due to ‘switching’ between two states as a result of a set of chemical reactions.

Human cells have two kinds of rigid filaments – actins and microtubules. They have considerable number of functions. They are the roadways along which cell substances are transported. They are also the structures that hold the cell in its shape and form.

When these cellular filaments stand opposed against any obstacle, they can generate force and push against the obstacle. The study by IIT Bombay researchers’ theoretically shows that the net force of many filaments opposing an obstacle can be more than the sum of forces generated by individual filaments. Of course there is no violation of the law of conservation of energy.

This collective force generation is an indirect consequence of a chemical reaction — conversion of ATP (Adenosine Triphosphate) to ADP (Adenosine Diphosphate). Interestingly, this chemical reaction decreases the force-generation capacity of a single filament, but produces this surprising collective effect, as a result of an intriguing physical phenomena, which the authors have discovered. The extra force is to the order of 10% of sum of forces, informs one of the researchers, Dr. Dibyendu Das. The extra force generated may be small, but it can be important in the context of cell shape and movement.

How does this study contribute to human welfare? Does this study improve medical treatment? Is human life and human health likely to improve due to this study?

While this research may not directly impact human health or medical treatment, yet it is exciting as it is a novel demonstration of how bio-filaments can work together collectively, making use of some complex physical principles; it also compels every future research into bio-physics of cell force balance to take the study results into account. Since scientific understanding of human cell has a role to play in understanding root causes of disease, any study that improves our understanding of human cell will impact studies that contribute to medical treatment and human health.

It is interesting that this study is entirely theoretical and based on analysis of various models that capture chemical switching. Indeed much of the work by the researchers is entirely mathematical, which makes it rigorous and a compelling piece of fundamental research.

It is very interesting that this work that finds additional force in a group of filaments is novel with no known previous work finding similar results. This has also resulted in some resistance for the findings to be accepted.

Yet this work is seminal as it charts into a new territory. Interestingly this work is interdisciplinary with researchers of diverse back grounds — physics and biosciences — contributing to the study. Experimental verification of this theoretical study would require special conditions that researchers may have to simulate to obtain accurate results.

The researchers postulate that such extra force may not be limited to filaments, but may also be found in other biological systems such as molecular motors. Indeed considering that the size of filaments and motors are in nano dimensions, researchers speculate that it may be possible to develop physical nano robots that generate such extra force, collectively.

For more visit: <http://www.iitb.ac.in/en/research-highlight/teamwork-superpower>

CEP courses scheduled during February 2016

No.	Course Title	Course Coordinator / Department	Duration
1	Leadership Development Center - I	Prof. Ashish Pandey, School of Management	February 3 – 5, 2016 (3 days)
2	Transformational Leadership Programme for Managers	Prof. S. Bhargava, School of Management	February 4 – 6, 2016 (3 days)
3	Leadership Development Center - I	Prof. Ashish Pandey, School of Management	February 8 – 10, 2016 (3 days)
4	Artificial Intelligence and Business Applications	Prof. Rajendra M. Sonar, School of Management	February 7 – 18, 2016 (12 days)
5	Urban Drainage Management -state-of-the Art 2016	Prof. Kapil Gupta, Civil Engineering	February 11 – 13, 2016 (3 days)
6	Term Leadership Development Program	Prof. Ashish Pandey, School of Management	February 22 – 23, 2016 (2 days)
7	Training Programme on Road Works for Powd Engineers	Prof. Dharamveer Singh, Civil Engineering	February 22 – 25, 2016 (4 days)
8	Optimization Based Improved Decision Making For Process and Business Operations	Prof. Ravindra D. Gudi, Chemical Engineering	February 24 – 26, 2016 (3 days)
9	Recent Advances in Welding of Steels	Prof. K. Narasimhan, Metallurgical Engineering & Materials Science	February 25 – 27, 2016 (3 days)
10	Orientation Course in Chemical Engineering for Young Officers	Prof. Ranjan Kumar Malik, Chemical Engineering	February 27 – March 1, 2016 (4 days)

