

Connections

IIT Gandhinagar



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Connections is the quarterly newsletter for friends of IIT Gandhinagar

Institute Activities

WIN CENTRE OF WATER & SANITATION

WIN Centre of Water & Sanitation and WIN Centre for Maternal & Child Health were inaugurated on Jan 30, 2018 at IITGN's Research Park and at Indian Institute of Public Health (IIPH) Gandhinagar, respectively. The two Centres are supported by the US-based WHEELS Global Foundation through its WHEELS India Niswarth (WIN) Foundation. **Mr Chirag Patel**, a US-based philanthropist and co-CEO & chairman, Amneal Pharmaceuticals Pvt Ltd and his family contributed substantial funds for the two Centres through these foundations. The Centre for Water & Sanitation aims to focus on developing new and cost-effective ways to treat water, reduce water contamination, and work to improve policies related to drinking water. It will work towards finding the most cost-effective methods to bring clean drinking water to rural communities. The Centre will not just provide solutions to critical problems of water and sanitation, but will also provide opportunities to our faculty and students to work on real-life problems.



VISITOR'S CONFERENCE

Professor Sudhir K Jain participated in a meeting of the directors of the IITs, IISERs and IISc hosted by the President of India in his capacity as Visitor of these institutes. The President of India was present through all 31 presentations made by the directors on achievements and challenges of the respective institutes. It is heartening to see the confidence being placed in the role of the IITs in nation building.



8TH LEADERSHIP CONCLAVE

The 8th annual **Leadership Conclave** was conducted on Jan 13, 2018. The event brought together eminent thinkers in the field of education from India and overseas, from industry, academia and the government. The participants discussed the Institute's short, medium and long-term strategic goals during the day-long event. The emphasis this year was on planning the 10-year anniversary of the institute, identifying ways to bring 'Learning by Doing' into the pedagogy, planning senior leadership roles, and

effective utilization of philanthropic funds.

7TH ACADEMIC ADVISORY COUNCIL

The 7th annual **Academic Advisory Council** consisting of eminent academics from India and overseas met on Jan 12, 2018. The Council deliberated upon initiatives for strengthening teaching and learning processes in the institute, improving governance systems, identifying focus areas in research, and planning future academic facilities.

Support for the Institute

PROFESSOR D V PAI SCHOLARSHIP

Prof D V Pai has set up a scholarship for the students of MSc program in Mathematics. Prof Pai is one of the pioneer faculty members of IIT Gandhinagar, who joined the institute in Aug 2008. He obtained his BSc (Hons) and MSc (Mathematics) from Mumbai University, and a PhD from IIT Bombay. He also served as President, Indian Mathematical society during the year 2016-17.



SANTOSH RANI TANDON SCHOLARSHIP

Prof Mahesh Tandon has setup a scholarship for one girl student to carry out summer research internship overseas in the area of structural engineering. Prof Tandon is the managing director, Tandon Consultants Pvt Ltd, Delhi. He is a renowned structural engineer and has designed numerous challenging projects. His special areas of interest includes motivating the next generation to adopt civil engineering as their profession. The scholarship has been set up in honour of his mother Smt Santosh Rani Tandon.



MRS SITA JHA MEMORIAL SCHOLARSHIP

Mr Nirmal Jha has setup a scholarship for BTech students in honour of his mother Smt Sita Jha. Mr Jha has more than 38 years of experience in the multinational power industry across Asia, USA and China. He has also served on the board of several international companies. He is currently associated with IIT Gandhinagar as Advisor (Industry Partnerships). Mr Jha obtained a BTech in Electrical Engineering from IIT Kanpur in 1977.



TINKERING LABORATORY INAUGURATED

A Tinkering Laboratory supported by the alumni of class-of-1975 from IIT Bombay, was inaugurated on Jan 13, 2018 by **Prof S P Sukhatme**, former Director of IIT Bombay. Students have open access to this facility on a 24x7 basis.

Faculty News

PATENTS

A computer implemented system and method for detecting Parkinson's disease: Inventors are **Mr Vrutangkumar Shah** and **Prof Harish P M**, IITGN.

SPONSORED PROJECTS

- Statistical downscaling for hydro-climatic projections with CMIP5 simulations to assess impacts of climate change; and Impacts of climate variability and climate change on water resources in the Sabarmati River basin, Ministry of Water Resources, Principal Investigator: **Prof Vimal Mishra**, Civil Engineering.
- Fabrication and characterization of hybrid organic-inorganic nanocomposite thin films for photovoltaic

- application resources, Science and Engineering Research Board, Principal Investigator: **Prof Rupak Banerjee**, Physics.
- Development of nanoporous geopolymeric catalysts for industrially relevant liquid-phase reactions, Science and Engineering Research Board, Principal Investigator: **Prof Sudhanshu Sharma**, Chemistry.
- Development of indigenous technology for CZTS (Cu₂ZnSnS₄) absorber based solar cell using industry friendly magnetron sputtering and RTP (Rapid Thermal Processing) sulfurization process, Science and Engineering Research Board, Principal Investigator: **Prof Emila Panda**, Materials Science and Engineering.
- Regulation of inter-allelic epigenetic differences by CGGBP1-CTCF axis, Department of Biotechnology, Principal Investigator: **Prof Umashankar Singh**, Biological Engineering.

CONSULTANCY PROJECTS

- Safety evaluation of Reserve Bank of India's Office Building at La-Gajjar Chambers, Ahmedabad, Principal Investigator: **Prof Sudhir K Jain**, Civil Engineering.
- Addressing soil excavation problem @ WTP project, Dholera for SPML Infra Ltd., Principal Investigator: **Prof Amit Prashant**, Civil Engineering.
- Technology solutions for a safe Rath Yatra in Ahmedabad for Raksha Shakti University, Principal Investigator: **Prof Shanmuganathan Raman**, Electrical Engineering.
- Air temperature and relative humidity, dataset for each district for the period of 1980-2016 at 6-hourly interval, for National Dairy Development Board, Principal Investigator: **Prof Vimal Mishra**, Civil Engineering.
- Metallurgical investigation of cylinder liner, Indian Railways Diesel Loco Shed, Principal Investigator: **Prof Superb Misra**, Materials Science and Engineering.

NEW FACULTY

The following faculty members joined the institute during this quarter:

Name	Designation	Discipline	PhD/Last degree	Date of joining
Achal Mehra	Visiting Professor	Humanities & Social Sciences	Illinois University, Carbondale, USA	05-02-18

SCHOLAR-IN-RESIDENCE

Name	Affiliation	Date of joining
Marjorie Greene	Consultant for Earthquake Engineering Research Institute, USA	01-01-18
Jorge Louca	ISCTE-IUL Lisbon University Institute, Portugal	22-01-18
Maria Joao Amante	Information and Documentation Services Director at ISCTE, Lisbon	05-02-18

Activities at IITGN



EXCHANGE WITH THE NEW SCHOOL, NEW YORK

Under an exchange arrangement, IITGN hosted 28 students and two faculty members from The New School (TNS), New York during Jan 8 - 19, 2018 for a workshop on "Design for a Billion". The TNS students worked to find solutions for problems related to waste management, village ecosystem, education system, water management, and bus transportation. **Prof Vineet Vashista** coordinated the workshop.

MOU's

Papua New Guinea University of Technology

IITGN Director **Prof Sudhir K Jain** and Papua New Guinea University of Technology (PNG Unitech) Vice Chancellor **Dr Albert Schram** signed a Memorandum of Understanding (MoU) during the latter's visit to IITGN on Jan 10, 2018. As per the MoU, IITGN will accept two applicants from PNG Unitech for the master's degree (MSc or MTech) on yearly basis.

GEER Foundation

An MoU was signed with the director of Gujarat Ecological

WRITING STUDIO

The much awaited Writing Studio and its website (initiatives.iitgn.ac.in/writingstudio/wp/) were inaugurated on Feb 14, 2018. The objective of the Writing Studio is to assist students to learn the immersive craft of writing as a central component of human communication. This is a service centre meant for conducting activities related to writing skills on a regular basis and for providing one-on-one support to the students on their specific needs.

RESEARCH PARK & INCUBATION CENTRE

The Advisory Council meeting was held on Feb 16, 2018 for the Research Park and the Incubation Centre at IITGN under the chairmanship of **Mr Kris Gopalakrishnan** (co-founder of Infosys). A dinner for potential stakeholders in Research Park was organized on Mar 10, 2018 with Mr Kris Gopalakrishnan to promote the Research Park. The Research Park is currently hosting Gujarat Urja Vikas Nigam Limited (GUVNL); Final Mile Consultants Pvt Ltd; BBC World Services Pvt Ltd; Wheels India Niswarth Foundation (WIN); and Einfochips.

Education and Research (GEER) Foundation **Mr R D Kamboj** on Mar 20, 2018 to promote scientific and academic cooperation and collaboration in the field of ecological research, education, and sustainable development.

GIDM

Gujarat Institute of Disaster Management (GIDM) and IITGN entered into an agreement to cooperate on training, research, documentation, case study, consultancy / advisory services on disaster resistant construction technology and fire safety. The MoU was signed by IITGN Director **Prof Sudhir K Jain** and Director General of GIDM **Mr P K Taneja** on Mar 23, 2018.



REPUBLIC DAY CELEBRATIONS

The 69th Republic Day celebrations on Jan 26, 2018 began with flag hoisting by **Prof Sudhir K Jain**. The **Staff Excellence Awards** were presented to **Mr Sumit Kumar** - security supervisor, **Mr Tenils Solanki** - junior superintendent, **Mr Gaurav Shukla** - junior superintendent, **Ms Ankita Bhandari** - administration assistant, **Mr Tej Bahadur Gurung** - junior assistant, **Mr Pragadesh Parikh** - junior technical superintendent, **Ms Anandiben Sonara** - Day Care Centre helper, **Mr Anil Bodar** - physiotherapy assistant, **Mr Sujit Shah** - junior assistant, **Mr Shailesh Vaghela** - housekeeping staff. **Faculty Excellence Awards** were given to **Prof Abhijit Mishra**-Excellence in Teaching Award, **Prof Chinmay Ghoroi** - Excellence in Research Award, **Prof Pratik Mutha** - Excellence in Institution Building Award. The students whose excellent academic performance had saved them a place on the Dean's list (Sem 1, 2017-2018) were also felicitated.

ORGANIC FARM

IITGN's organic farm invited the campus residents for a village-style get-together and lunch on Jan 21, 2018. Residents enjoyed the healthy dose of vegetables grown in the farm. The food was prepared with warmth and care by the organic farm employees from freshly-picked farm vegetables.



HOUSING FOR CONSTRUCTION WORKERS

IITGN has been working closely with the CPWD to ensure that the construction workers of our various projects have proper housing with basic facilities. The housing colony for workers of M/s Shanti Constructions was inaugurated on Jan 23, 2018. It has toilets, wash basins and bathing rooms, and there is arrangement for sewage disposal through appropriate septic tanks.

COMMUNITY OUTREACH

- Students of 6th, 7th and 8th grade from the Government Primary School in Basan village visited the campus on Mar 10, 2018 and built a simple low-cost hydraulic arm that moves with the help of syringes filled with colored water.
- The Centre for Creative Learning organised a mammoth "Makers Fest" on Feb 28, 2018, with the Ahmedabad Municipal Corporation (AMC). A total of 2000 children and 300 teachers exhibited science and maths models at the Sardar Patel Stadium in front of an audience of close to 4000 people.
- The 3rd edition Sanjeevani - Health Mela and Medical camp was conducted on Jan 28, 2018 by the Nyasa Team at Basan village. Approximately 650 people attended the camp. Doctors and medical students from Indian Institute of Public Health (Gandhinagar), Maharaja Sayajirao University (Baroda) and Government of Gujarat along with volunteers from our student community were the key participants who made this camp a huge success.



SPEAKERS @IITGN

Workshops

- Dr Arvind Viswanathan, IPR consultant, Mar 17, 2018.
- Dr Subhasree Nag, Solution consultant, Scientific Research Division, Clarivate Analytics, Mar 17, 2018.
- Dr Shubhra Dutta, Elsevier publishers, Mar 24, 2018.

Short Courses

- Blockchain Technology Foundation and its Commercial Applications by Mr Kamallesh Dwivedi, Chairman & Founder, ipLockChain, Jan 15-26.
- Participatory Rural Appraisal- a tool for participatory Social Surveys and Natural Short course on Resource Planning by Prof C.N Pandey, IITGN, Jan 19 - Feb 9.
- Winter School on Cognition and Complexity by Prof Jorge Louca, ISCTE Lisbon University Institute,

Portugal, Jan 22-28.

- Nonlinear Control and Applications by Prof Ravi Banavar, IIT Bombay, Prof P M Harish, Prof Vineet Vashista, Prof Babji Srinivasan, IITGN, Jan 26-28.
- The Science and Art of Photography by Prof Brian Barsky, University of California, Feb 8-13.
- Scientific Writing for Beginners by Dr Maria Joao Amante, ISCTE, Lisbon, Portugal, Feb 9-14.
- Scientific Writing for Research Scholars by Dr Maria Joao Amante, ISCTE, Lisbon, Portugal, Feb 21-27.
- Design of concrete bridges by Prof Mahesh Tandon, Managing Director, Tandon Consultants Pvt Ltd, Mar 9-17.
- Basic R usage in NGS analysis by Dr Prasoon Agarwal, postdoctoral researcher at University of Manitoba, Mar 10-11.
- Terrain model from UAS data by Dr Pradeep K Srivastava, CEPT university, Mar 26-29.
- Accounting, Finance and Business Valuation for Engineers by Mr Rajiv Bhatt, CA, Mar 31- Apr 1.

Lectures

- Ms Shweta Ramdas, undergraduate student, National University of Singapore, Jan 1, 2018.
- Dr Venkat Sridhar, Virginia Tech, Blacksburg, Virginia, Jan 3, 2018.
- Prof Shyam Sunder, Yale University, Jan 3, 2018.
- Prof Krishnaswami Alladi, University of Florida, Jan 4, 2018.
- Prof Suresh Babu, University of Tennessee, Knoxville, Jan 4, 2018.
- Prof Kishan Mehrotra, Syracuse University, Jan 4, 2018.
- Mr Nishil Talati, Graduating student, Erna Viterbi Faculty of Electrical Engineering, Jan 5, 2018.
- Prof Anshuman Dutt, post-doctoral researcher, Microsoft Research, Jan 8, 2018.
- Prof Devi Parikh, Georgia Tech, Jan 8, 2018.
- Prof Dhruv Batra, Georgia Tech, Jan 8, 2018.
- Prof Vinamra Agrawal, Auburn University, Jan 8, 2018.

- Mr Prem Aurora, Trustee, ASM International USA, Jan 10, 2018.
- Prof Gerd Gigerenzer, Yale School of Management, Jan 11, 2018.
- Dr Suraj Yengde, Harvard University, Jan 11, 2018.
- Dr Alexander Davis La, Trobe University, Jan 11, 2018.
- Prof Ajai Kumar, Institute of Plasma Research, Jan 12, 2018.
- Mr R Gopalakrishnan, formerly with TATA Ltd, Jan 18, 2018.
- Prof Pankaj Jain, IIT Kanpur, Jan 18, 2018.
- Dr Yann-Pierre Montelle, New Zealand, Jan 22-24, 2018.
- Dr Harshvardhan Katkar, University of Chicago, Jan 24, 2018.
- Prof Amitava Raychaudhuri, University of Calcutta, Jan 24, 2018.
- Prof Mark A Borden, Colorado University Boulder, Jan 8-12, 2018.
- Mr Balaji Viswanathan, CEO, Invento Robotics, Jan 27, 2018.
- Mr Mitchell Strocic, Psychologist practicing, Uplift Psychological Services, Jan 29, 2018.
- Ms Karrie Peterson, MIT Libraries Instruction, and Reference Services, Jan 29, 2018.
- Mr Trushar Barot, Digital Launch Editor, BBC News, Feb 2, 2018.
- Dr Peter Wierenga, Ex-CEO, Philips Research, Feb 3, 2018.
- Dr Tejas Gupte, University of Minnesota, Postdoctoral fellow, Feb 5, 2018.
- Dr Jagannath Mondal, TIFR Hyderabad, Feb 8, 2018.
- Ms Shalu Yadav, BBC News South Asia Producer, Feb 9, 2018.
- Prof Raj Srinivasan, University of Saskatchewan, Canada, Feb 9, 2018.
- Dr Mahesh Bhawe, Founder, BHAVE Power Systems, Feb 12, 2018.
- Mr Utkarsh Amitabh, Network Capital Founder, Feb 12, 2018.
- Dr Ginny Karir, Indian Institute of Science Education and Research, Feb 15, 2018.
- Prof B M Azizur Rahman & Prof Kenneth Grattan, City University, London; and Prof Bishnu Pal, Bennett University, Greater Noida, Feb 15, 2018.
- Prof Romesh Kaul, The Institute of Mathematical Sciences, Feb 23, 2018.
- Prof Paul Smith, Oxford University Museum of Natural History, Feb 26, 2018.
- Prof Ryo Honda, Earth Science, Kanazawa University, Mar 6, 2018.
- Dr Ambar Jain, IISER Bhopal, Mar 9, 2018.
- Dr Anil K Rajvanshi, Nimbkar Agricultural Research Institute, Maharashtra, Mar 3, 2018.
- Prof Asok Mallik, Indian Institute of Engineering Science and Technology, Shibpur, Mar 12-13, 2018.
- Ms K Vajayanti, Head, Akshara Foundation, Bangalore, Mar 13-14, 2018.
- Mr Abhinav Pandya, Consultant, Vidya Bhawan, Udaipur, Mar 14, 2018.
- Prof MEI Ganaoui, University of Lorraine (France), Mar 15, 2018.
- Prof Sundar V Atre, University of Louisville, USA, Mar 15, 2018.
- Prof Maulik Parikh, Arizona State University, Mar 15, 2018.
- Mr Ivan Brzev, Ex lead business-Analyst, Rolls-Royce, Mar 17, 2018.
- Dr Vijaykumar Krishnamurthy, International Centre for Theoretical Sciences, Mar 19-20, 2018.
- Dr Achintya Bhowmik, Chief Technology Officer, Starkey Hearing Technologies, Mar 21, 2018.
- Prof Ashish Garg, IIT Kanpur, Mar 22, 2018.
- Dr Aniruddha Joshi, IIT Bombay, Mar 23, 2018.
- Dr Nimmi Rangaswamy, IIT Hyderabad, Mar 23, 2018.

Student and Staff Activities



ANNUAL PICNIC

The Institute's community looks forward to the annual picnic with eagerness. This year's annual picnic was organized on Feb 18, 2018 as a day-long outdoor activity at Gujarat Forest Research and Training Institute, Gandhinagar. The day was filled with fun, games, conversations, and bonding among members of the community. Several activities were conducted for all age groups and for all the members of staff and faculty of the institute.

JASHN

The 4-day annual intra-college cultural fest that aims to bring the entire student body out of their rooms and labs to participate in exciting cultural events and recreational games was organised from Jan 4-7, 2018. This year's Jashn had a registration of nearly 900 students (the highest number till now) and it was one of the most lively festivals of IITGN.

IGNITE

The Technical Council of IITGN organised IGNITE 4.0 on Mar 10-11, 2018. Drone airshows, laboratory tours and 3D printing workshops were among the highlights

of this technological fest. To nurture the culture of experimentation and innovation, the hackathon CodeFri has developed educational applications for school students and week-talks to encourage technical discussions. Apart from this Aeromodelling, Submerge, ATV Racing, Hovercraft and food ordering app for IITGN campus and VR applications to study psychological mapping are some of the indigenous projects that were displayed at the event.



HALLA BOL

Halla Bol was organised during Mar 22-April 1, 2018. This is an intra-institute sports festival, that aims to increase interaction among students, staff and faculty of IITGN. The event comprised 13 entertaining games played over 10 days. More than 500 matches attracted 3000 registrations from students, staff and faculty, who formed mixed teams. The games, played with modified rules, included Futsal, Tug of War, Frisbee, Throwball, Foot Volley, Gully Cricket, 7 Stones, 3 a side Baddy, Dodgeball, Street Hockey and Kho-Kho.

WINTER CARNATIONS

IITGN's annual carnival night, Winter Carnations was celebrated on the theme of traditions on Jan 7, 2018. The students, faculties, staff members all turned up in the academic block area in beautiful traditional dresses. There were nearly 30 food and games stalls which witnessed interactions and participation of the entire community. The carnival was followed by a stand-up comedy show by the famous **Karunesh Talvar**.



STUDENTS LEADERSHIP CONCLAVE

A Student Leadership Conclave was held at IITGN on Mar 24, 2018. It was conceived and organized by Student Academic Council and led by **Mr Deepak Dhariwal**. The IITGN students along with General Secretary, **Mr Nikhil Roy** were joined by student leaders from the IITs in Indore, Bombay, Jammu, Kharagpur, Guwahati, Goa, Tirupati, BHU, Jodhpur, Mandi, Patna, Ropar, and Bhilai. They had fruitful discussions on student governance, peer learning & mentorship, working of clubs, possible new initiatives such as UG Research Conference and many others. Many new ideas came up in this remarkable initiative and the students had a dynamic and productive interaction.