

Connections

IIT Gandhinagar



2015-2016, Volume VIII, Issue II
Oct - Dec 2015

Connections is the quarterly newsletter for friends of IIT Gandhinagar

Institute News

UNIVERSITY OF THE YEAR

IIT Gandhinagar was recognized as **University of the Year** at the Federation of Indian Chambers of Commerce and Industry (FICCI) Higher Education Excellence Awards 2015 in the category of institutes “in existence for less than 10 years”.



HUDCO DESIGN AWARDS 2015

The staff residences and student hostels of IIT Gandhinagar’s newly constructed permanent campus at Palaj, Gandhinagar bagged the First Prize at the **HUDCO Design Awards 2015** under the category of Cost Effective Rural/Urban Housing including Disaster Resistant Housing.



5TH ACADEMIC ADVISORY COUNCIL MEETING

The 5th **Academic Advisory Council** meeting held on Dec 28, 2015 discussed issues relating to tenure system for faculty, peer review and mentoring for faculty, and efficient usage of funds both for faculty productivity and student support. Envisioned as an annual meeting, the Academic Advisory Council provides strategic and external inputs on issues of key importance to the growth of the Institute.

6TH LEADERSHIP CONCLAVE

The 6th **Leadership Conclave** held on Dec 29, 2015 discussed



LAUNCH OF GLOBAL INITIATIVE OF ACADEMIC NETWORKS (GIAN) AT IITGN

The Union Minister of Human Resource Development (MHRD), **Smt Smriti Irani** inaugurated the new MHRD scheme **Global Initiative of Academic Networks (GIAN)** at IIT Gandhinagar on Nov 30, 2015. Other dignitaries who were present include **Shri Bhupendrasinh Chudasama**, Minister of Education, Government of Gujarat, **Shri V S Oberai**, Secretary of Higher Education in MHRD and **Prof P P Chakrabarti**, director, IIT Kharagpur. The GIAN initiative was flagged off with two 10-day courses. The first course held at IITGN was titled **3D Digitization for Cultural Heritage** delivered by **Dr Marco Callieri**, Institute of Science and Technologies of Information, Pisa, Italy. The second course that ran in parallel at IIT Kharagpur was titled **Orthopaedic Biomechanics: Implants and Biomaterials**. During her visit, Smt Irani had several informal interactions with the students, and also visited the student hostel mess.



initiatives for strengthening an entrepreneurship culture in the institute, making community engagement part of the mainstream agenda, frameworks for international partnerships, and engaging external stake-holders. The Institute organizes this annual Conclave to seek guidance regarding the Institute’s short-term, medium-term, and long-term strategic issues. The Conclave is attended by eminent educators from India and around the world, as well as participants from the industry and government.

IITGN'S NEW MONOGRAPH PUBLICATION

Under the series **Campus on the Sabarmati** IIT Gandhinagar has recently released the first monograph **Confined masonry for residential construction**. This publication describes the use of confined masonry construction technology for over thirty buildings

(student hostels and faculty and staff apartments). This monograph is expected to help sensitize and educate building professionals in India and elsewhere about the excellent features of confined masonry. The link to the full text is available at: <http://goo.gl/AcL9st>. The series intends to describe the development of IITGN's campus.

Support for the Institute

PROF M H DIVEKAR SCHOLARSHIP

The family of late **Prof M H Divekar** has set up a merit scholarship for the undergraduate students in chemical engineering. The scholarship is to be awarded to a student securing highest grade in chemical engineering at the end of third year. Prof Divekar was Adjunct Professor at IITGN during Dec 2009 to July 2013 and was passionate about chemical engineering experiments. He made enormous contribution to the Institute by setting up excellent teaching laboratories in chemical engineering.



REACHING OUT

- **Prof Sudhir K Jain**, director attended the **Visitor's Conference 2015** at Rashtrapati Bhavan during Nov 4-6, 2015.
- **Prof Harish J Palanthandalam Madapusi** and **Prof Pratik Mutha** visited Boston to represent IIT Gandhinagar at the

Young Investigator Meeting 2015 held during Oct 10-12, 2015 at the Massachusetts Institute of Technology. The meeting serves as an interactive platform for young scientists to learn about the evolving academic scenario in India. In this context, Prof Harish and Prof Mutha spoke about the exciting opportunities that exist at IITGN and also discussed more broadly, the dynamics of starting an academic career in India.

VISITS

- **Dr Albert Schram**, Vice Chancellor along with **Dr S Gopalakrishnan**, PNG University of Technology, New Guinea visited the institute on Dec 17, 2015 for building relationships between the two institutes.
- **Prof Satish Tripathi**, President, SUNY, Buffalo; and **Prof Stephen Dunnett**, Vice-provost, International Education, visited the Institute during Oct 27-28, 2015 and interacted with some of the faculty members and student entrepreneurs.

Faculty News

AWARDS AND RECOGNITION

- **Prof Arnab Dutta** and **Prof Saumyakanti Khatua** of the Chemistry discipline; and **Prof Virupakshi Soppina** of the Biological Engineering discipline have been awarded the **Ramanujan Fellowship** by the Department of Science and Technology, Government of India. The duration of the Ramanujan Fellowship is 5 years.
- **Prof Jyoti Mukhopadhyay** has been appointed as part-time Director (non-official) on the Board of Mishra Dhatu Nigam Ltd (MIDHANI), Department of Defence Production, Ministry of Defence, Government of India.
- **Prof Siddharth Y Wakankar** has been selected by the Government of Maharashtra to receive **Mahaakavi Kaalidaasa Sanskrit Saadhanaa Puraskaara** for his distinguished contribution to Sanskrit research. This award is conferred on a scholar of Sanskrit who lives and works outside Maharashtra.

investigation of polychromatic designs sponsored by Department of Science & Technology. Principal investigator: **Prof Ravi Hegde**, Electrical Engineering.

- **Grain boundary structure and transformations** sponsored by Science and Engineering Research Board. Principal investigator: **Prof Abhay Raj Singh Gautam**, Materials Science and Engineering.
- **Integrating robotic gait training system with virtual reality for gait rehabilitation - a novel approach in neurorehabilitation** sponsored by Department of Science & Technology. Principal investigator: **Prof Uttama Lahiri**, Electrical Engineering.
- **Disulfide-rich peptides as scaffold for the development of tau protein aggregation inhibitors in Alzheimer disease** sponsored by Department of Science & Technology. Principal Investigator: **Prof Sharad Gupta**, Biological Engineering.

SPONSORED PROJECTS

- **Development of novel double hydrogen bond donor catalysts for asymmetric diels-alder reactions** sponsored by Department of Science & Technology. Principal investigator: **Prof Chandrakumar Appayee**, Chemistry.
- **Towards ultra-thin optical wavefront manipulation devices based on all-dielectric high-efficiency transmissive metasurfaces: demonstration of beam focusing and**

CONSULTANCY PROJECTS

- **Towards a regional drought monitoring and forecasting capability for South Asia** for International Water Management Institute (IWMI). Principal investigator: **Prof Vimal Mishra**, Civil Engineering.
- **Identification of climate vulnerability hot-spots in Meghalaya using high resolution climate projections** for Meghalaya Basin Development Authority (MBDA). Principal investigator: **Prof Vimal Mishra**, Civil Engineering.

NEW FACULTY

The following faculty joined IITGN during this quarter:

Name	Designation	Discipline	PhD/Last degree	Date of joining
Vineet Vashista	Assistant Professor	Mechanical Engineering	Columbia University, 2015	26.11.15

Name	Designation	Discipline	PhD/Last degree	Date of joining
Dilip Srinivas Sundaram	Assistant Professor	Mechanical Engineering	Georgia Institute of Technology, 2013	01.12.15
Sandipan Sengupta	Assistant Professor	Physics	IMSc, Chennai, 2011	28.12.15
Rajmohan Gandhi	Visiting Professor	HSS	University of Calgary, Canada, 1997	28.12.15
Svetlana Brzev	Visiting Professor	Civil Engineering	IIT Roorkee, 1994	29.12.15
R N Singh	Visiting Professor	Earth Sciences	Banaras Hindu University, 1969	29.12.15
Rosa Maria Perez	Visiting Professor	HSS	ISCTE, Lisbon, 1992	29.12.15

SCHOLARS-IN-RESIDENCE

Name	Affiliation	Date of joining
Jonathan Mark Kenoyer	Professor, University of Wisconsin, Madison	21.12.15
Frederick L Coolidge	Professor, University of Colorado, USA	28.12.15
Manuel Ramos	Associate Professor, ISCTE, University Institute of Lisbon	29.12.15
Atul Singh	Founder, CEO & Editor-in-Chief of Fair Observer	30.12.15

Activities at IITGN

3RD INTERNATIONAL CONFERENCE ON COGNITION, BRAIN AND COMPUTATION

The Centre for Cognitive Science at IIT Gandhinagar hosted its 3rd International Conference on Cognition, Brain and Computation during Dec 5-7, 2015. The conference brought together an interdisciplinary dialogue between neuroscience and computational approaches in study of cognition. The event saw a participation of 150 members from across India. The conference was coordinated by **Prof Krishna P Miyapuram**, IITGN.

FIRST INDO-CHINESE YOUNG ENGINEERS LEADERS' CONCLAVE

IIT Gandhinagar in association with Indian National Academy of Engineering (INAE) and Chinese Academy of Engineering (CAE) hosted the 1st Indo-Chinese Young Engineers Leaders' Conclave, Oct 7-9, 2015. The four themes of the conclave included: Safety-Technology and Culture; Health Care Devices; Big Data; and Clean Water. **Dr K Kasturirangan**, former chairman, ISRO, was the chief guest. Other dignitaries included **Dr Baldev Raj**, chairman of IITGN Board of Governors; **Mr M V Kotwal**, Larsen & Toubro; **Dr Zhong Zhiuha**, Secretary General of Chinese Academy of Engineering. About 15 Chinese and 25 Indian delegates participated in the event. The event was coordinated by **Prof Pranab Mohapatra**, IITGN.

INDIA KI KHOJ

The fourth edition of **India Ki Khoj** held during Dec 14-23, 2015 was joined by a team of three students from Japan Advanced Institute of Science and Technology (JAIST) along with 12 students from Caltech and 16 students of IITGN. Eminent speakers included **Prof Rowena Robinson**, IIT Bombay;



Dr Linda Hess, Stanford University; **Prof Surinder Jodhka**, Jawaharlal Nehru University; **Ms Amrita Shah**, columnist and non-fiction writer. **India Ki Khoj** was first conceptualised in 2011 to host a cultural immersion into India for foreign students. The event was coordinated by **Prof Jaison A Manjaly** and **Prof Rita Kothari**.

TOYS FROM TRASH

As part of its **School Outreach Activities**, IIT Gandhinagar organized **Toys from Trash** for class XI and XII students of two Kendriya Vidyalaya Schools, Oct 12, 2015. **Mr Manish Jain**, an IIT Kanpur graduate who now works full-time on popularizing science and mathematics in schools, took the students on an amazing ride of science through toys made from everyday items.

INAUGURATION OF CANARA BANK BRANCH

A branch of the Canara Bank was inaugurated by Director, **Prof Sudhir K Jain** on Nov 19, 2015 at permanent campus of the Institute. The branch went into operation the same day and has been providing wide range of banking services including an 24 hours ATM.

CONSTITUTION DAY CELEBRATION

The Institute observed the **First Constitution Day** on Nov 26, 2015. All the students, faculty and staff members present read aloud the Preamble of the Constitution of India. **Prof Mona Mehta** explained the importance and the process of drafting of the Constitution.

DISCUSSION ON UNDERGRADUATE RESEARCH

Ms Candace Rypisi, Director of Student-Faculty Programmes at Caltech, interacted with faculty and research students on Dec 17, 2015. The main theme of this meeting was to discuss "Characteristics of Excellence in Undergraduate Research" in the context of Caltech's highly acclaimed SURF programme and IITGN's vision to promote research right from undergraduate level.

SHORT COURSES/ WORKSHOPS/ PANELS

- Short course on **3D Geometry and Structures: Hands-on Science and Maths** by **Mr Manish Jain**, IUCAA, Pune, Oct 10-11, 2015.
- Short course on **Engineering and Value Creation** by **Mr**

- Gautam Mahajan**, president, Customer Value Foundation, Oct 10, 16 & 17, 2015.
- Short course on **Geotechnical Investigations for Structural Engineering** by **Prof VS Raju**, distinguished Honorary Professor,

Prof Ajanta Sachan, and Prof Amit Prashant, IIT Gandhinagar, Oct 15-17, 2015.

- Short course on **X-ray diffraction** by Prof T Ramachandran, formerly with IIT Kanpur, Oct 26 to Nov 7, 2015.
- A workshop on **Designing with Data** by Ms Harshada Patil, designer, Global Nomad, Oct 27, 2015.
- A workshop on **Research Methodology** under the aegis of TEQIP-II was coordinated by Prof Amit Prashant, IITGN, Oct 27, 2015.

- Short course on **Ground Improvement** by Dr G Venkatappa Rao, formerly with IIT Delhi, Nov 7, 8, 14 & 15, 2015.
- Short course on **Development Studies** by Dr Sandeep Pandey, co-founder of Asha for Education, Nov 8-10, 2015.
- Short course on **Political Economy** by Mr Atul Singh, founder, CEO & Editor-in-Chief, Fair Observer, Nov 12-16, 2015.
- Short course on **Time Series Analysis – ARIMA** by Dr Ash Pahwa, educator, author, entrepreneur, and technology visionary, Dec 21-26, 2015.

LECTURES

- **Silicon nanodevices - some of the research trends and challenges** by Dr M K Radhakrishnan, founder Director, NanoRel Technical Consultants, Singapore, Oct 5, 2015.
- **On characterizing river networks from graph theoretic perspective** by Prof R N Singh, former director, CSIR-National Environmental Engineering Research Institute, Oct 16, 2015.
- **Structural practices in building construction** by Ms Sangeeta Wij, Technical Director (Structures), Building Engineering-India, AECOM, Oct 16, 2015.
- **Challenges and opportunities for Indian engineers** by Prof V S Raju, former director, IIT Delhi, Oct 26, 2015.
- **Symmetry in gravity** by Prof Alok Laddha, Chennai Mathematical Institute, Oct 27, 2015.
- **SciFinder database- an essential tool for your research** by Mr Prathamesh Kulkarni, Sci-Edge Information, USA, Oct 29, 2015.
- **Power distribution in India: Issues** by Mr Murli Ranganathan, ex-director, Torrent Power Ltd, Oct 30, 2015.
- **Black holes in string theory** by Prof Amitabh Virmani, Institute of Physics, Bhubaneswar, Nov 4, 2015.
- **Mining interesting trivia for entities from Wikipedia** by Dr Dhaval Patel,

IIT Roorkee, Nov 13, 2015.

- **Computational and optimization methods: Linking Mathematics to Industry and Singular value decomposition and its applications** by Prof Biswa Nath Datta, Northern Illinois University, Nov 17-18, 2015.
- **Innovation, invention & entrepreneurial thinking** by Prof Mir Imran, chairman, InCube Labs, Nov 30, 2015.
- **Accenture operations innovation network and research programme** by Mr Kaushal Mody, Accenture, Dec 11, 2015.
- **Using combinational treatment bioengineering strategies to treat spinal cord injury** by Prof Anita Singh, Widener University, USA, Dec 16, 2015.
- **Careers begin during college** by Mr Sarthak Jain, co-founder & CEO, Cubeit, and IITGN alumnus, Dec 30, 2015.
- **Assistive and rehabilitation robotics** by Prof Prashant Jamwal, Nazarbayev University, Astana, Dec 30, 2015.
- **Journey in building a successful business and brand** by Mr Rahul Gautam, Managing Director, Sheela Foam Pvt Ltd, Ghaziabad, Dec 30, 2015. Mr Gautam also interacted with start-ups, students interested in pursuing entrepreneurship and members of Nyasa where he gave valuable suggestions to the participants.
- **On-Chip ESD devices and circuits: Essentials and research opportunities** by Prof Mayank Shrivastava, IISc Bangalore, Dec 31, 2015.

Student and Staff Activities

AWARDS AND RECOGNITION

- Ms Abheeti Goyal, a MTech student has been selected for the **2016-17 Shell India PhD Scholarship**.
- Abheeti Goyal and Sumit Singh bagged the first and second **Best Paper Awards** respectively at the 7th Symposium on **Applied Aerodynamics and Design of Vehicles (SAROD)**, Thiruvananthapuram, Dec 5, 2015.
- Abhishek Upadhyay, a PhD student, was awarded the **Overseas Research Experience Fellowship** by IITGN to undertake a 6-month research stint at the University of Strathclyde, Glasgow starting Aug 2015.
- A project proposal by Mr Franklin Kristi on **Flower Power, Solar Lamp and Oven** is one of the three first prize winners of the **Bionik-3D-Printing Challenge** sponsored by the Bionik-Netzwerk Hessen and the Association of German Industrial Designers.

AMALTHEA

The 6th edition of **Amalthea**, the annual technical summit of IITGN was held during Oct 24-25, 2015, on the theme **Towards the future**.

Mr R K Sharma, executive director and the head of Institute of Reservoir Studies, ONGC inaugurated the conclave which was based on the theme **Building**



sustainable future through vision and technology. An exhibition on **Energy and eco-friendly technologies** and a symposium on **Bio-engineering** was also organized.

JASHN

The 5th edition of the intra-college cultural extravaganza, **Jashn** was held from Nov 5- 8, 2015. From solo-participation competitions like Shoot on Site (Photography) to team events like Labyrinth (Treasure Hunt); from Informals (Live Angry Birds, Minute to Win it) to stage events (Decibels, Thump); from Poker, Carrom, WWE, FIFA wars in The Lounge, to verbal battles in the Youth Parliament, it had something for everyone.

Sports News

- Nisha Rawat won the gold medal in the **50 m breast-stroke event** (0:46:31 seconds) at the **31st Inter-IIT Aquatics Meet** held at IIT Madras, Oct 1-4, 2015.
- The IIT Gandhinagar **Table Tennis (men)** team defeated DAIICT by 3-1 while the **Volleyball (women)** team defeated PDP by 2-0 and bagged the champion's trophy at the **Concours**

Cup tournament held at DAIICT, Gandhinagar, Oct 29-Nov 1, 2015.

- The IIT Gandhinagar **Chess team** won the **gold medal** at **Shaurya Cup 2015** held at IIM Ahmedabad by defeating DAIICT in a tie breaker. The **Table Tennis team** won a silver medal.