

Connections

IIT Gandhinagar



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Connections is the quarterly newsletter for friends of IIT Gandhinagar

Institute News

IIT GANDHINAGAR CAMPUS RECEIVES 5 STAR GRIHA LD RATING

The IIT Gandhinagar campus at Palaj became the first campus in the country to receive a 5-star rating from the **Green Rating for Integrated Habitat Assessment for Large Developments (GRIHA LD)**.



This is a unique Indian National Rating System for green buildings, developed jointly by GRIHA Council and The Energy and Resources Institute (TERI), to rate environmental performance of large developments like educational campuses, townships, etc. The rating system judges the overall impact of the development on its surrounding environment, and IITGN has received an overall impact score of 25.9%. The ratings are given between 0 and 100, and a lower score indicates higher sustainability of the project.

The range of green features envisioned in the masterplan and executed in the campus development include low-energy sewage treatment, water recycling, rain water harvesting, rooftop solar photovoltaic plants, solar water heaters, passive ventilation, pedestrian-friendly campus, environmentally-friendly materials used on site (e.g. concrete roads, fly ash bricks), solid waste management, biogas plant, etc.

IITGN BOARD OF GOVERNORS RECONSTITUTED

Four new members have joined the Board of Governors of the Institute as nominees of the IIT Council: **Dr Chandrima Shaha**, director, National Institute of Immunology, New Delhi; **Prof Shobhana Narasimhan**, dean, Academic Affairs, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore; **Prof Mythily Ramaswamy**, professor, Tata Institute of Fundamental Research, Bangalore; **Shri R Subrahmanyam**, IAS, Additional Secretary (Technical Education), Department of Higher Education, Ministry of Human Resource Development, Government of India, New Delhi. Further, **Prof R Sharan**, Visiting Professor, and **Prof Amit Prashant**, Professor, IIT Gandhinagar, have joined the Board as Senate nominees.



DUKE UNIVERSITY TIES UP WITH IIT GANDHINAGAR FOR COLLABORATIVE RESEARCH

As a step forward in realising the joint declaration of intent signed between MHRD and USAID for providing support to IITs, with IIT Gandhinagar identified as the initial partner, a 4-day event was organized at IIT Gandhinagar in partnership with Duke University, RTI International, and USAID during Jan 5-8, 2016. With IITGN's strong vision to become a top institute, and Duke University's extensive experience (ranked #20 worldwide, according to The Times Higher Education World University Rankings for 2016), the two schools immediately found common ground for collaborative research, student exchanges, and joint engagement of private sector partners.

During their visit, the 15-member delegation from Duke and RTI International worked with IITGN faculty and staff to develop new research projects, improve IITGN capacity in critical areas, and discuss potential industry partnerships. The delegation was led by **Prof Larry Carin**, Duke's Vice Provost for Research, and included **Ms Kathryn Stevens**, USAID Acting Mission Director, **Ms Sheila E Desai**, USAID India senior science and technology advisor, **Ms Laura Brinn**, Executive Director, Global Communications; **Ms Minnie Glymph**, Director of Communications & Marketing, Pratt School of Engineering, Duke University, and others.

LANDMARK DISCOVERY OF GRAVITATIONAL WAVES HAS IITGN CONTRIBUTIONS

IIT Gandhinagar is a global partner in the landmark scientific discovery of gravitational waves coming from colliding black holes. These waves were detected on September 14, 2015 by the Laser Interferometer Gravitational wave Observatory (LIGO) detectors, confirming a prediction made by Albert Einstein in his general theory of relativity in 1915. A research group at IITGN lead by **Prof Anand Sengupta** has been a part of this discovery. Over the past four years,



the group has worked on the development of sensitive search algorithms using a network of terrestrial detectors and their deployment over automated data analysis workflows using high-throughput computing technology.

Support for the Institute



Mr Raj and Mrs Pallavi Shah have established undergraduate scholarships in the name of his parents Mrs Lalita J Shah and Mr Jayantilal B Shah. Mr Raj did his B.Tech from IIT Bombay and holds a Master's degree from University of Wisconsin. Mr Shah brings unique combination of creative leadership, entrepreneurial success, management discipline, and global experience.

At Microsoft, he reenergized their online mapping services, and these mapping assets were acquired by Uber in June 2015. At Google, he spearheaded creation of Maps by establishing a global infrastructure that encompasses all countries mapped by Google from the ground-up. An entrepreneur by nature, Mr Shah has also held senior

management positions in leading Silicon Valley technology firms.

REACHING OUT

- Prof Sudhir K Jain attended the **Development Dialogue and Yuva Summit**, Hubballi, Feb 5-7, 2016. Prof Jain also attended the **International Seminar on Emerging Building Materials and Construction Technologies** organized by Building Materials & Technology Promotion Council (BMTPC), in New Delhi, March 21, 2016.
- Prof Amit Prashant together with Prof Chelva Kumar visited Colombo, Sri Lanka to meet with the High Commissioner of India in Colombo and also visited engineering colleges in Sri Lanka for developing partnerships with Sri Lankan universities, Feb 24-28, 2016.

Faculty News

AWARDS AND RECOGNITION

- Prof Nihar Ranjan Mohapatra has received the **Young Faculty Research Fellowship** from the Department of Electronics and Information Technology (DeitY) of Ministry of Communications and IT, Government of India. The fellowship aims to encourage and recognize brilliant young faculty members involved in cutting edge research & technology development in the areas of Electronics System Design and Manufacturing (ESDM) or IT or IT enabled services.
- Prof D V Pai has been elected as the President of the Indian

Mathematical Society (IMS) for a period of one year.

- Prof Vineet Vashista received the **INSPIRE Faculty Award** from Department of Science & Technology

PROFESSIONAL ACTIVITIES

Prof Rita Kothari was one of the panelists on **Reading In Other Words** at the Jaipur Literature Festival, 2016. She was also invited to moderate the sessions on **The Kalam of Shah Abdul Latif and Temples of Pakistan**.

SPONSORED PROJECTS

- **Enhanced single-molecule spectroscopy with tuned dipole antennas of end-to-end dimers of gold nanorods** sponsored by Science and Engineering Research Board. Principal investigator: Prof Saumyakanti Khatua, Chemistry.
- **Printed document security using intrinsic characteristics of imaging devices** sponsored by Board of Research in Nuclear Sciences. Principal investigator: Prof Nitin Khanna, Electrical Engineering.
- **Flow improvement of fine and ultra-fine AP powder through surface modification using flow additives** sponsored by Defence Research and Development Organization. Principal investigator: Prof Chinmay Ghoroi, Chemical Engineering.
- **Theoretical investigations of carbohydrate-water interactions** sponsored by Science and Engineering Research Board. Principal investigator: Prof Sairam Swaroop Mallajosyala, Chemistry.
- **Water soluble glycosylated amphiphilic porphyrins: Synthesis, Photophysical, Electrochemical studies and Bio-imaging applications** sponsored by Science and Engineering Research Board. Principal investigator: Prof Iti Gupta, Chemistry.
- **Extended depth of field imaging using coded camera architecture** sponsored by Indian Space Research Organisation. Principal investigator: Prof

Shanmuganathan Raman, Electrical Engineering.

- **Towards performance-based earthquake design of unreinforced masonry-infilled reinforced concrete frame structures** sponsored by Science and Engineering Research Board. Principal investigator: Prof Manish Kumar, Civil Engineering.
- **Newton-Bhabha India UK advanced training school (IUATS) on Smart Communities**. Principal investigator: Prof Naran Pindoriya, Electrical Engineering.
- **High impact weather events in Eurasia selected, simulated and storified** for Belmont Forum. Principal investigator: Prof Vimal Mishra, Civil Engineering.

CONSULTANCY PROJECTS

- **To assess the Fluvial flood risk to communities along Ghaghra river from Chisapani station** for Practical Action Consulting (PAC). Principal investigator: Prof Vimal Mishra, Civil Engineering.
- **Validation of Wuji brainwave application** for WujTech. Principal investigator: Prof Jaision Manjaly, Humanities and Social Sciences.
- **Survey of Unrecorded Alcohol (SURA-India)** for Sam Houston State University. Principal investigator: Prof Malavika Subramanayam, Humanities and Social Sciences.

NEW FACULTY

The following faculty joined IITGN during this quarter:

Name	Designation	Discipline	PhD	Date of joining
Ramesh Gaonkar	Visiting Professor	Electrical Engineering	Syracuse University, New York, 1975	07.01.16
Manoj Gupta	Assistant Professor	Computer Science & Engineering	IIT Delhi, 2013	18.01.16
K Chelvakumar	Visiting Professor	Mechanical Engineering	Caltech, Irvine, 2005	19.02.16

SCHOLAR-IN-RESIDENCE

Name	Affiliation	Date of joining
Marjorie Greene	Special Projects Manager, Earthquake Engineering Research Institute	29.02.16

Activities at IITGN

GIAN COURSE ON TUNABLE DIODE LASER SPECTROSCOPY FOR SENSING

A course on Tunable Diode Laser Spectroscopy for Sensing -

Principles and Applications was organized at IITGN during Feb 1-5, 2016. The lectures were delivered by Prof Walter Johnstone, University of Strathclyde, Glasgow, UK, and by Prof Arup Lal

Chakraborty, IITGN. A total of 21 participants participated from government labs, academia and educational institutions.

SCIENTIFIC AND MATHEMATICAL CONCEPTS WORKSHOP

A workshop for science teachers, sponsored by Sarva Shiksha Abhiyan, Gujarat, was held during Feb 5-6, 2016 at the institute. It was attended by around 100 science teachers of class 6-8 from Gandhinagar and Ahmedabad districts. The event is a part of Rashtriya Avishkar Abhiyan, an initiative launched by Ministry of Human Resource Development. It was conducted by an alumnus of IIT Kanpur, **Mr Manish Jain** and an alumnus of IIT Delhi, **Mr Vishal Bhatt**, and was coordinated by **Prof Sriram Kanvah**, IITGN

SANJEEVANI

Sanjeevani: Health Mela and Medical Camp was held on Feb 6-7, 2016 at IIT Gandhinagar. It was a joint venture of **Nyasa: A social initiative of IIT Gandhinagar** and the Boston-based **Desai Foundation**. Inaugurated by the Health Commissioner of Gujarat, **Shri J P Gupta**, the camp catered to more than 1400 villagers from Palaj and Basan, on-campus construction workers, housekeeping staff and security personnel. A team of around 30 student volunteers and faculty members from IIT Gandhinagar were involved in the planning and execution of the event.

REPUBLIC DAY CELEBRATIONS

The 67th Republic Day celebrations on Jan 26, 2016 began with flag hoisting by **Prof Sudhir K Jain**, director; at the permanent campus for the first time. Based on the performance during Semester I of Academic Year 2015-16, a total of 90 students featuring in the Dean's List were felicitated with a letter of appreciation and a topical book. The event concluded with a cultural program.

COCOA 2016

An International School on a software system for Computational Commutative Algebra called **COCOA** was organized during Feb 22-26, 2016. This is the first time that this school is being held in India. The school was coordinated by **Prof Indranath Sengupta**.

SCIENCE DAY

A variety of science secrets that could be used either as life hacks or entertainment were showcased at IITGN on March 12, 2016. The display was a part of the institute's celebration of Science Day. Apart from experiments showcased by IITGN, the events also hosted a line of interesting demonstrations and workshops by Physical Research Laboratory (PRL), Vikram Sarabhai Community Science Centre, and Pratham. The event is a part of the Rashtriya Avishkar Abhiyan (RAA) activities of IITGN which is supported by Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA). The event was coordinated by **Prof Sriram Kanvah** and **Prof Shivakumar Jolad**.



IITGN CELEBRATES MOTHER TONGUE DAY

On the occasion of **International Mother Tongue Day**, students, staff and faculty of IITGN came together to celebrate the vividness and diversity of India at its campus on Feb 21, 2016. Students belonging to various regions of India presented songs and poems in their local language and dialect. The Institute also exhibited a book stall having a collection of many languages like Sanskrit, Bengali, Urdu, Gujarati and Hindi.

IITGN HOSTS 150 BTECH GIRLS FOR A DAY

IITGN hosted a group of 150 students for a day on Feb 11, 2016 from Madhuben and Bhanubhai Patel Women Institute of Engineering for Studies and Research in Computer and Communication Technology (MBICT), New Vallabh Vidyanagar. They were introduced to facilities available in the campus including the labs and the hostels and they interacted with IITGN faculty during the later part of the day. The visit was coordinated by **Prof Bireswar Das**.

ANNUAL PICNIC

The annual picnic was held on February 14, 2016 at Gujarat Forest Research & Training Institute, Gandhinagar. More than 200 people, including faculty, staff and their family members were a part of the day-long event. Apart from games and hikes, the IITGN family came together to enjoy an on-stage Antakshari event organized by **Prof Malavika Subramanayam** and **Ms Soumya Harish**. The trip was coordinated by **Prof Neeldhara Misra**.

SHORT COURSES/ WORKSHOPS/ PANELS

- Short course on **Design in Terracotta** by **Mr Nikunj Vakani**, Clay Club Innovations Pvt Ltd, Jan 23-24, 2016.
- Short course on **Exploring social transformation through music** by **Dr Susana Sardo**, University of Aveiro, Jan 27-28, 2016.
- Workshop on **Creative Writing** by **Mr Luke Kennard**, University of Birmingham in collaboration with British Council, Jan 27, 2016.
- Short course on **Southern circulations: Asia and Africa in historical perspective** by **Caio Simões de Araújo**, Graduate Institute of International and Development Studies, Geneva, Jan 30-31, 2016.
- A workshop on **Gender and Sexuality: Theory and Politics in India** by **Prof Svati Shah**, University of Massachusetts, Amherst, Feb 4, 2016.
- A seminar on **Conversations Across Disciplines: Teaching & Learning** was organized on Feb 13, 2016. **Prof Ramesh Gaonkar** was the moderators of the event. Besides IITGN faculty, the event was attended by **Prof Sahana Murthy**, IIT Bombay; and **Prof Shreepad Karmarkar**, IIT Madras.
- **Teacher workshop-II** by **Mr Manish Jain** and **Dr Procheta Mallik**, Arvind Gupta Toys, targeted at teachers of class 9-12 was held on Feb 25-26, 2016.
- Short course on **Issues in Social Cognition** by **Prof Lilavati Krishnan**, IIT Kanpur, March 8-15, 2016.
- A short course on **Economics of Innovation and Entrepreneurial Finance** by **Dr Harry Yukle**, Management Consultant, March 21-28, 2016.
- A workshop on **Globalization and Marginaliation** was conducted on Feb 9, 2016. **Prof Jan Breman**, Amsterdam School gave the keynote address. Panelists included **Prof Ghanshyam Shah**, formerly at JNU; **Prof Indira Hirway**, Center for Development Alternatives, Ahmedabad and **Prof Tara Nair**, Gujarat Institute of Development Research, Ahmedabad.

LECTURES

- **Prof Ram Murty**, Queen's University, Kingston, Canada, Jan 1, 2016.
- **Prof Kishore Marathe**, Brooklyn College and City University of New York, Jan 4-5, 2016.
- **Dr Moitri Maiti**, Bogoliubov Institute of Theoretical Physics, JINR, Brazil, Jan 5, 2016.
- **Prof Debmalya Panigrahy**, Duke University, Jan 6, 2016.
- **Prof Sameer Murthy**, King's College London, Jan 6, 2016.
- **Prof Bozidar Stojadinovic**, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland, Jan 7, 2016.

- **Prof Rajendra Bordia**, Clemson University, Jan 7, 2016.
- **Prof Sudeepa Roy**, Duke University, Jan 7, 2016.
- **Shri Zaigham Ali Khan**, Regional Passport Officer, Ahmedabad, Jan 9, 2016.
- **Mr Minesh Kinkhabwala**, leading expert on the design and construction of latest air pollution control technology systems for coal fired power plants in the US, Jan 12, 2016.
- **Dr Dipanshu Bansal**, Oak Ridge National Laboratory, Jan 13, 2016.
- **Prof Pervez Hoodbhoy**, FC College, Lahore, Jan 13-14, 2016.

- **Ms Elena Donets**, StarTau, Tel-Aviv University's innovation and entrepreneurship incubator; and **Mr Danny Hadar**, VC Peregrine, Feb 1, 2016.
- **Prof Ashish Sharma**, University of New South Wales, Australia, Feb 3, 2016.
- **Prof Brian Barsky**, UC Berkeley, Feb 3, 2016.
- **Dr Santonu Goswami**, New York University, Feb 3, 2016.
- **Dr Rahul Jindal**, a Fulbright-Nehru Distinguished Chair at the kidney institute, Ahmedabad Civil Hospital, Feb 4, 2016.
- **Prof Sachidananda Mohanty**, Central University

of Orissa, Koraput, Feb 5, 2016.

- **Mr M Venkataraman**, Garware-Wall Ropes Ltd (Retired), Feb 6, 2016.
- **Prof K G Rangaraju**, formerly at IIT Roorkee, Feb 10-11, 2016.
- **Prof Miguel Yus**, University of Alicante, Feb 11, 2016.
- **Prof Carmen Nájera**, University of Alicante, Feb 12, 2016.
- **Prof S Karmalkar**, IIT Madras, Feb 12, 2016.
- **Dr Kalpit Shah**, University of Newcastle, Feb 16, 2016.
- **Prof Semir Zeki**, University College London, UK, Feb 18, 2016.
- **Dr J Thomas Chapin**, Underwriters' Laboratories, Feb 26, 2016.
- **Prof Soumitra Sengupta**, Indian Association for the Cultivation of Science, Kolkata, March 2-5, 2016.

- The 1st Dr A N Khosla Lecture by **Shri Mangu Singh**, managing Director, DMRC, March 5, 2016.
- **Prof K S Jagadish**, Indian Institute of Science Bangalore (retired), March 10, 2016.
- **Prof Bala Natarajan**, Kansas State University, March 14, 2016.
- **Prof Deshdeep Sahdev**, Quazar Technologies, March 15, 2016. **Prof CV Vishveshwara**, formerly with Indian Institute of Astrophysics, Bangalore, March 17, 2016.
- **Shri Shail Kumar**, co-founder Pan IIT alumni movement, March 19, 2016.
- **Mr Sam Tully**, Credit Suisse Group, March 25, 2016.
- **Mr G C Tallur**, former Secretary of PWD, Government of Karnataka, March 26, 2016.
- **Dr Monica Esteves Reis**, University of São Paulo, March 31, 2016.

1ST INDIRA FOUNDATION DISTINGUISHED LECTURE

Scientific and technological contributions of the Indus civilization: their relevance for the present by **Prof Jonathan Mark Kenoyer**, University of Wisconsin-Madison; under the **Indira Foundation Distinguished Lecture Series** on Jan 12, 2016. The series is instituted by **Mr Avinash Manudhane**, a well-wisher of the Institute, in memory of his mother. Mr Avinash did his B Tech from IIT Bombay, MS from Syracuse University, New York; and MBA from Northwestern University, Chicago. He joined Goldman Sachs in 1987, reaching to the position of Vice President in 1989 and Managing Director in 1996. He was elected as a Partner of the firm in 1998.

Student and Staff Activities

AWARDS AND RECOGNITION

- **Gaurav Sharma**, became the first BTech student of IITGN to complete graduation in 7 semesters. He completed the requirements early and would be awarded BTech degree in Mechanical engineering with a minor in management. Currently Gaurav is working with a startup called **Cretif**, incubated at IITGN's Incubation Center.
- **Deekshi Angira**, a PhD student, received the first **Best Poster Award** at the 3rd **Nirma Institute of Pharmacy International Conference** (NIPiCON-2016), Nirma Institute of Pharmacy, Ahmedabad, Jan 21-23, 2016. She was also one of the four recipients for the **Best Posters** presented at **RSC West India Section Meeting of Research Scholars-2016**, Gujarat Forensic Sciences University, Gandhinagar, March 19, 2016.
- **Sunny Verma** received the **Best paper presentation award** at 2nd IEEE International conference on Human Computer Interaction (ICHCI'16) held at Saveetha University, Chennai, March 10-11, 2016.



STAFF EXCELLENCE AWARD

The following seven staff members were bestowed with the **Staff Excellence Award** for the year 2015, for their sincere and sustained devotion to their responsibilities at their work place: **Ms Jasbir Kaur Thadani**, Counsellor; **Mr Harish Singh**, Assistant Security Officer; **Ms Panna Chaudhary**, Sr Library Information Assistant;

Mr Darshan Patel, Junior Assistant; **Mr Jignesh Patel**, Junior Lab Assistant; **Mr Dinesh B Desai**, Junior Lab Attendant; and **Mr Nayan Vaghela**, Office Attendant.

IGNITE 2.0

The intra-institute technological festival of IITGN, **Ignite 2.0**, was held on March 17, 2016. The projects developed by the students and faculty of the institute included shootout with laser guns, robot car racing, CFD analysis of vertical axis wind turbines, hydrogen generation from diesel and more. The event was organized by **Akhil Patnaik, Abhinav Singh, Dinesh Borse, and Ajinkya Tupkar Jain**.

STUDENT COUNCIL ELECTION

The following students were declared elected as office bearers for the academic year 2016-17: **Shubham Patil** (General Secretary), **Nishanth Naik** (Cultural Secretary), **Anurag Singhania** (Academic Secretary), **Ahamed Naji** (Sports Secretary), **Akhil Patnaik** (Technical Secretary), and **Rishabh Jain** (Student Welfare Secretary).

BLITHCHRON 2016

The 8th edition of Blithchron, the inter-college fest of IIT Gandhinagar was organized during Jan 30-31, 2016. It witnessed a footfall of approximately ten thousand people. This year, Blithchron had two stellar musical nights on campus. The fest had several exciting events, including Antarganee (the street play competition), String Theory (the clash of bands), Synchronize (the group dance competition), Euphony (solo-singing competition), Mr & Miss Blithchron (talent show), The Butler Did it (where you play detective), Jobless (a mock interview competition) and Panache (the fashion show).

Sports News

DISHA CUP 2016

Disha Cup 2016, a Cricket tournament was organized during Feb 20-21, 2016 with the view to motivate the IITGN Support staff. A total of 6 teams participated in the tournament. **Mr Mohnish Parmar**, International Cricketer and IPL Kolkata Knightriders player was the Guest of Honour.

MARATHON

Gaurav Sharma qualified for the half-marathon (21 km) and received a medal at the **Run Gandhinagar Run Marathon** organized by Gandhinagar Runners and supported by Gujarat Tourism, Government of Gujarat, Jan 31, 2016. The event witnessed participation of more than 2500 people from all over the country.

KHEL-MAHAKUMBH

IITGN Men's Basketball team, won the District Level **Khel-Mahakumbh** tournament, held at BAPS School, Gandhinagar by defeating BSF. Besides receiving a cash award of Rs 48,000 the entire team has been given the opportunity to participate in the upcoming State Level tournament. **Nikhil Sharma** secured **second** place in **Table Tennis** at District Level **Khel-Mahakumbh** tournament.

JUSTICE LEAGUE

The **Table Tennis** team defeated IITRAM (3-1) and bagged the winner's trophy at the **Justice League** organized by Gujarat National Law University, Jan 25, 2016.