

Connections

IIT Gandhinagar



Connections is the quarterly newsletter for friends of IIT Gandhinagar

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Institute News

Futuristic Undergraduate Curriculum to be implemented in July 2011

Undergraduate students joining IIT Gandhinagar in July 2011 will go through a new curriculum developed with a futuristic outlook. Before students start regular courses, they will undergo a five-week Foundation Programme that will help them make a smooth transition from the days of intense preparation for the JEE to a new phase of campus life in an Institute of Higher Learning. A prominent change in curriculum is a significantly increased component of humanities courses. The new curriculum focuses on the overall development of students and a step-by-step value addition to prepare leaders of tomorrow who can see the relevance of their professional training to the needs of the society. Students will enjoy greater flexibility in customizing their courses so that they are able to develop their individual interests. Active learning, hands-on design experience and studio concepts are other ideas embedded within the curriculum. The new curriculum was primarily developed by a group of faculty members comprising **Prof. Amit Prashant, Prof. S. L. Narayanamurthy, Prof. Surendra Ranganath, Prof. Supreet Saini, Prof. Raghavan Rangarajan (PRL, Ahmedabad), Prof. Murali Damodaran and Prof. Basudeb Guha-Khasnobis**. The group sought and assimilated valuable inputs received from the entire Institute faculty.

New M. Tech. Programme

The new two-year M. Tech. Programme being introduced at IIT Gandhinagar in July 2011 has compulsory courses in general engineering and humanities as an important aspect. The students will have the flexibility to choose courses to strengthen their knowledge in the areas of their interest. The course lays emphasis on a thesis of high academic standard as an academic requirement. This would require the students to apply the knowledge accumulated during the course to address a research problem. The new programme aims to produce well-rounded engineering leaders who are ready for careers in research, academics or industry. A part-time M. Tech. Programme will also be available. The group of faculty members who developed the details comprised **Prof. Sameer Dalvi, Prof. S. L. Narayanamurthy, Prof. Surendra Ranganath and Prof. Murali Damodaran**.

Welfare Initiative at IITGN

IITGN witnessed the birth of **Nyasa**, a new initiative that focuses on the welfare of the on-site construction workers and their families, and, in particular, their children. The project, led by **Prof. Mukta Tripathy**, aims to raise social awareness within the IITGN community. Every week a team of students, staff and faculty organize learning and play sessions for the children who are mostly between three and ten years old. Nutritious food including fruits and dairy products are distributed during these sessions. The team distributed woollen clothes for the children in winter and organized a community lunch for the workers and their families (about 400 people) on Republic Day (January 26, 2011). Several people support these activities either through generous donations or through active participation. In this regard the effort and dedication of **Monica Yadav, N. C. Puneeth and Manish Saini** in particular are highly commendable and worthy of emulation.



Activities at IITGN

New Building Inaugurated

A new 1000 sq. m. building constructed on the VGEC campus was inaugurated by **Prof. S. L. Narayanamurthy**, Dean (Academics) IITGN and **Prof. M. R. Patel**, Principal VGEC, on February 10, 2011. The building has been constructed by CPWD Gandhinagar and will be used to accommodate new classrooms, faculty cabins and the Institute Library.

Courses on Extracurricular Topics

Several short courses, each comprising eight to ten one-hour lectures, were conducted during this quarter. The courses saw

enthusiastic participation from students and academics from IITGN and various other institutes in Ahmedabad. The students of IITGN earned one credit for attending each course. The courses are as follows:

- ▲ **The Promise of Molecular Programming** by **Mr Niranjan Srinivas**, California Institute of Technology, January 1-2, 2011.
- ▲ **Technical Innovation** by **Dr C. V. Natraj**, IISc Bangalore, **Dr M. V. Shankar**, Honeywell Technology Solutions Lab Pvt Ltd, Bangalore, and **Dr Balachandar Ramadurai**, Mind Tree, Bangalore, January 15-16, 2011.

- ▲ **Case Studies in Converting Technical Innovation in to Sustainable Business Success** by **Dr Nikhil Balram**, President of Ricoh Innovations, USA, and Guest Professor at IIT Gandhinagar, March 18-19, 2011.

Symposia/Workshops/Seminars

- ▲ On March 12, 2011 a mini-symposium on **Prospects of Nuclear Power in India** was organized by **Prof. Manmohan Pandey**. **Prof. S. P. Sukhatme**, former Chairman AERB, former Director IIT Bombay, and a Distinguished Honorary Professor of IITGN, was the Chief Guest. Other speakers included **Mr S. S. Bajaj**, **Mr S. A. Bhardwaj**, **Dr Rakesh Chawla**, **Dr J. B. Doshi**, **Dr Manfred Groll**, **Dr Kannan N. Iyer**, **Dr Corey McDaniel**, and **Mr Gary T. Urquhart**. The symposium was sponsored by the Board of Research in Nuclear Sciences, Atomic Energy Regulatory Board, Council of Scientific and Industrial Research, Hindustan Construction Company and Westinghouse Electric Company.

Lectures and Visitors at IITGN

The following lectures were delivered in the Institute by invited speakers:

- ▲ **India as a World Power: Potential and Realities** by **Prof. Rajmohan Gandhi**, Research Professor at the University of Illinois at Urbana-Champaign, USA, a former Rajya Sabha member, and grandson of Mahatma Gandhi and C. Rajagopalachari, January 4-5, 2011.
- ▲ **Engineering of Advanced Particulate-based Materials for Pharmaceutical and other Industries** by **Prof. Rajesh N. Dave**, Distinguished Professor of Chemical, Biological and Pharmaceutical Engineering, New Jersey Institute of Technology, USA, January 10, 2011.
- ▲ **Enhancing Research Innovation by Applying the Axiomatic Design Principles** by **Prof. Vipin Kumar**, University of Washington, Seattle, USA, January 13, 2011.
- ▲ **Career Development for IIT Students** by **Prof. Ravi Bhaskaran**, formerly of IIT Kharagpur, January 17, 2011
- ▲ **Women and Witch Hunt** by **Prof. Soma Chaudhuri**, Michigan State University, January 19, 2011.
- ▲ **UL-IITGN Research Collaboration** by **Dr Pravinray D. Gandhi**, Underwriters Laboratories Inc., Chicago, USA, January 26, 2011.
- ▲ **A Writer's Journey** by **Prof. Chitra Banerjee Divakaruni**, University of Houston, January 27, 2011.
- ▲ **Science and the Sacred** by **Prof. Ravi Ravindra**, Dalhousie University, Halifax, Canada, January 28, 2011.
- ▲ **Imagining the Future World of Engineering** by **Prof. K. D. P. Nigam**, Indian Institute of Technology Delhi, February 8, 2011.
- ▲ **Importance of Engineering for the Future** by **Prof. Jean-Claude Badoux**, formerly with Ecole Polytechnique Federale

- ▲ **Creating Comics: The Power of Visual Communication** by **Prof. Suchitra Mathur**, IITGN Guest Professor on March 19, 2011.
- ▲ **A National Seminar on Enigma of Health: Maladies and Politics of Healing** was organized by **Prof. Koshy Tharakan** in collaboration with the Balvant Parekh Centre for General Semantics and Other Human Sciences, Baroda during March 25-26, 2011.
- ▲ A self-financed course on **Geotechnical Aspects of Earthquake Engineering** was organized by **Prof. Amit Prashant**, **Prof. Ajanta Sachan**, **Prof. Sudhir K. Jain** of IIT Gandhinagar, and **Prof. Debasis Roy** of IIT Kharagpur during March 8-11, 2011. The course attracted 109 professionals from organizations such as, NTPC, NPCIL, AFCONS, Gammon India, L&T, Reliance, HCC, Royal-Haskoing, HPCL, BARC, NHPC, PWD, CPWD, TCE, DMRC and EIL. Students and teachers of some engineering colleges also attended the course.

de Lausanne, Switzerland and United Nation Economic Commission for Europe (UNECE), February 25, 2011.

- ▲ **Switchgrass for Biofuels** by **Dr Gautam Sarath**, Research Molecular Biologist, Grain, Forage and Bioenergy Research Unit, University of Nebraska, USA, February 28, 2011.
- ▲ **Sustainable Development: Engineering, Biology, & Medicine** by **Prof. Anupam Madhukar**, Kenneth T. Norris Professor of Engineering, Departments of Biomedical Engineering, Chemical Engineering, Materials Science and Physics, University of Southern California, USA, March 17, 2011.
- ▲ **Do Current Engineering Paradigms Have a Future?** by **Dr Vijay K. Stokes**, formerly with IIT Kanpur (1964-1978) and General Electric, USA (1978-2002), March 24, 2011.
- ▲ **Democratic Participation Among Poor Women Workers in India and Impact of the Indian Diaspora on Indian development** by **Prof. Rina Agarwala**, Johns Hopkins University, USA, March 24, 2011.

The other eminent persons who visited the Institute during this period are as follows:

Prof. C. S. Desai, University of Arizona USA; **Prof. Nitish Thakor**, Johns Hopkins University USA; **Prof. Shyam Sundar**, Yale University, USA; **Prof. D. V. S. Jain**, Punjab University Chandigarh; **Prof. Dipan Ghosh**, **Prof. Shiva Prasad** and **Prof. Kushal Deb**, IIT Bombay; **Prof. Lilawati Krishnan**, **Prof. Ashwini Kumar** and **Prof. Maninder Agarwal**, IIT Kanpur; **Prof. Mihir Ravel**, Olin College, USA; **Prof. S. P. Shah**, Northwestern University, USA; **Prof. Sandeep Gupta**, Arizona State University, USA; **Dr Praveen K. Malhotra**, Strong Motions Inc., USA; **Dr Karen Chad** and **Ms Peggy Schmeiser**, University of Saskatchewan, Canada; **Prof. M. V. Pitke**, formerly of TIFR Mumbai.

Faculty News

New Faculty

The following persons joined IITGN faculty during this quarter:

Name	Designation	Discipline	Ph. D.	Date of Joining
Ian F. C. Smith	Visiting Professor	Computer Science and Engineering	University of Cambridge, 1982	17.01.11
Suchira Sen	Assistant Professor	Chemical Engineering	RPI, New York, 2005	28.01.11
N. Kishore Kumar	Assistant Professor	Mathematics	IIT Kanpur, India, 2006	04.02.11

Faculty Activities

- ▲ **Prof. Joyce Meki** attended an International Conference on VLSI Design, in Chennai during January 2-7, 2011.
- ▲ **Prof. Abhijit Sarkar** presented a paper at the International Finance Conference 2011, IIM Calcutta, during January 9-12, 2011. He conducted a session on Panel Data at the National Symposium-cum-Workshop Amritsar during March 9-10, 2011.
- ▲ **Prof. Jagmohan Tyagi** gave an invited talk at Research Meet, Department of Applied Mathematics, M. S. University, Baroda on January 23, 2011.
- ▲ **Prof. N. Ramakrishnan** gave an invited lecture in the 2nd International Conference at Mundra Port, Kutch, Gujarat on January 28, 2011.
- ▲ **Prof. B. D. Agarwal** delivered an invited talk in the ASME's Student Leadership Seminar at SKIT, Jaipur on February 27, 2011.
- ▲ **Prof. Arup Lal Chakraborty** delivered an invited talk at the Annual Photonics Workshop, Cochin University of Science and Technology, Cochin, Kerala on February 28, 2011.
- ▲ **Prof. Naran Pindoriya** delivered a lecture at SRPEC, Mehsana, Gujarat, on March 10, 2011.
- ▲ **Prof. K. V. V. Murthy** delivered two invited extension-lectures at Swami Keshvananda Institute of Technology (SKIT), Jaipur on March 31, 2011.
- ▲ **Prof. Sudhir K. Jain** delivered an invited talk at the International Symposium on 2001 Bhuj Earthquake and Advances in Earthquake Science held at ISR Gandhinagar during January 22-24, 2011.

Reaching Out

A **Centre of Excellence** will be established at IITGN with major funding from **Gujarat State Government**. An MOU to this effect was signed during the Vibrant Gujarat events held during January 12–18, 2011. Four faculty members and ten students set up an information booth at the exhibitions to disseminate information about the Institute. The activity was coordinated by **Prof. Joyce Meki**.

Prof. Sudhir K. Jain participated in the 63rd annual meeting of the **Earthquake Engineering Research Institute (EERI)** in San Diego, USA during February 9-12, 2011. Prof. Jain also visited several universities to interact with potential faculty candidates and to explore opportunities for collaborations. The universities

Other Events

Life Skills Series

IIT Gandhinagar has introduced a **Life Skills Series** for its students. This initiative focuses on those integral aspects of our daily lives that, if handled a little thoughtfully, can make a big difference. The first workshop was held on **Time Management & Goal Setting** by **Ms Nidhi Shah** on March 28, 2011. About fifty students participated in the workshop. The series is coordinated by **Prof. Sharmita Lahiri**.



Career Development Workshop: 2011

A **Career Development Workshop** was organized by the Institute's **Student Placement Office** on February 26-27, 2011.

that Prof. Jain visited include Princeton University, New Jersey Institute of Technology, California Institute of Technology, University of Southern California, University of California at San Diego and at Berkeley, and Stanford University. Prof. Jain also participated in the launching event of **Pan-IIT Global Mentorship Programme** held at Bangalore on March 16, 2011.

New Sponsored Projects

- ▲ **Engineering zymomonas mobilis for the efficient production of biofuels from lignocellulosic biomass**, Department of Biotechnology, Prof. Supreet Saini, Chemical Engineering.
- ▲ **Reprogramming cellular networks in salmonella enterica to develop novel vaccines**, Department of Biotechnology, Prof. Supreet Saini, Chemical Engineering.
- ▲ **Rapid precipitation of drug nanoparticles using ultrasonically-driven mixing device**, Department of Science and Technology, Prof. Sameer V. Dalvi, Chemical Engineering.
- ▲ **Quantitative near-and mid-infrared wavelength modulation spectroscopy for gas sensing applications**, Department of Science and Technology, Prof. Arup Lal Chakraborty, Electrical Engineering.
- ▲ **Development of 1-d thermal hydraulic code for computation of unsteady steam water flow and super critical water flow in horizontal and vertical channel type reactor**, Atomic Energy Regulatory Board, Prof. Manmohan Pandey, Mechanical Engineering.
- ▲ **Virtual Geotechnical Laboratory** Ministry of Human Resource Development, Prof. Amit Prashant, Civil Engineering.
- ▲ **Photo-processes of donor-acceptor substituted polyenes in ionic liquid media**, Department of Science and Technology, Prof. Sriram K. Gundimeda, Chemistry.
- ▲ **A cognitivist exploration of the concept of privacy behavior and experience**, Department of Science and Technology, Prof. Jaison A. Manjaly, Philosophy.

Awards and Recognition

Prof. Supreet Saini, Assistant Professor, Chemical Engineering was awarded the **Innovative Young Biotechnologist Award** for the year 2010 by the Department of Biotechnology, Government of India.



Mr Kush Shah and **Mr Gopesh Mittal**, both IIT Kanpur alumni, **Ms Nidhi Shah** and **Mr Avik Bhandari** of the Placement Cell helped about fifty 3rd year B. Tech. students to get "Job Ready" with events like Mock Interviews, Resume Check, and Career Options.

Classical Music Performance

On January 9, 2011 the Student Gymkhana presented an enthralling recital of Indian classical music by **Shri Salil Bhatt**, creator of the **Satvik Veena** and a musician of international renown.

Holi Get-together by Aarambh Ladies Club

Aarambh, the Ladies Club of IITGN, organized a get-together and dinner on the occasion of **Holi** on March 18, 2011.

Student Activities

Student Body Election

Office bearers for the Academic Year 2011-12 were elected by the students on March 3, 2011. The following students were declared elected:



Ajinkya Kulkarni (General Secretary) Dhruv Chokshi (Mess Secretary) Tarkeshwar Singh (Cultural Secretary) Vishvendra Joshi (Sports Secretary) Aditi Gupta (Technical Secretary)

Distinguished Achievements of Students

- ▲ **Sushant Kumar Suman** and **Arth Patel** of 2nd year Chemical Engineering, presented a paper titled **Celebrating A Common Culture - Humanity** at the international seminar **Celebrating Diversity: Increasing Inter-cultural Understanding Among Youth** organized by the World Organization of Students and Youth at Chandigarh, on February 19-20, 2011.
- ▲ **Susmitha Purnima Kotu** and **Shalinee Kavadiya** of 2nd year Chemical Engineering, won the first prize of Rs 12,000 for a model of a cooling tower at the product development event at the **Tech Fest of M. S. University, Baroda** on February 25, 2011.
- ▲ **Bhavin Chauhan** of 2nd year Mechanical Engineering, won the first prize in a rap song competition held at DAIICT, Gandhinagar on February 27, 2011.
- ▲ A robot designed by a team of six students (**Anirudh Singal, Akshay Navalakha, Shreyas Vaidya, Shubham Gupta, Varun Gupta** and **Ved Sahu**) made it to the round of sixty four at the 'Robowars' held at IIT Bombay Techfest during January 7-9, 2011.



Kite Club at the Institute

The **Kite Club** of the Institute was inaugurated by **Mr Peter Lynn**, New Zealand kite maker, engineer and inventor on January 14, 2011. **N. C. Puneeth, Harsh Paliwal, Ajinkya Kulkarni** and **G. Nithin Kumar**, all students of the Institute, developed a fixture to

attach a GoPro camera to a kite for taking aerial shots during Kite festival. It was used by **Aditi Desai**, a film-maker of Washington University, for her documentary **Uttarayan** on January 9, 2011 during the International Kite Festival at River Side, Ahmedabad in which kite fliers from forty three countries participated.

Republic Day Celebrations

The 62nd Republic Day was celebrated with a number of events on January 26, 2011. Faculty, staff and students participated in a **Green Run** at 6:30 am to promote awareness about preservation of our environment. The Tricolor was unfurled by the Director, Prof. Sudhir K. Jain. Later about fifty students participated in a discussion on **Higher Technical Education in India**.

Blood Donation Drive

In keeping with the practice of previous years, the students of the Institute, in association with the Red Cross Society of Ahmedabad, organized a blood donation camp on January 22, 2011 at the Institute. It was very encouraging to see sixty donors come forward in support of the noble cause.

Blithchron '11

Blithchron '11, the students' annual cultural festival, was organized during January 29-30, 2011. The theme of the event was chosen to be **Cinema through the Ages** to pay tribute to the spirit of the silver screen. The events were related to popular cinema of different periods and genres. Dr Kumar Vishvas' poetry struck a chord with the students. A German band, **Fire on Dawson**, a Kerala-based band, **Motherjane** and a Delhi based band, **Sifar** rocked the campus. Blithchron '11 was a huge success with the participation of 12,000 people during its events and shows.



Whizdom: Intra-IIT quiz event

On February 25, 2011 thirty five teams comprising students of all the batches participated in **Whizdom**, an intra-IIT quiz event, with questions spanning General Knowledge, Current Affairs, Sports and Music. The team of **Sarthak Jain, Saurabh Nagrecha** and **Nitish Ratan** was adjudged **Ultimate Whiz Trio** and won the Prize money of Rs 500.

Sports News

Petro Cup '11: January 30, 2011

- ▲ The Men's Basketball team won the **Petro Cup '11 Basketball Men's Championship** title by thrashing the PDPU (the home team) by 48-21. **Vishvendra Joshi, Suresh Chaudhary, Pankaj Yadav, Ravi Pal** and **Gaurav Rathore** were the star performers.
- ▲ The Women's Basketball team won the runners-up title at the **Petro Cup '11 Basketball Women's Championship**. **Garima Raghuwanshi, Divya Bansal,** and **Ritu Gavasane** put in impressive performances.
- ▲ The Men's Volleyball team won the runners-up title at the **Petro Cup '11 Volleyball Men's Championship**. **Bhuma Rajshekhar, Chetan Patil** and **Puneet Bhat** played very well.

Other Sports Events

In **Table Tennis** (men's), IITGN won against Pt Deendayal Petroleum University (3-0) on January 11, 2011. **Chetas Joshi, Mohit Verma** and **Spandan Jyoti Das** were the star performers. In **Volleyball** (men's), IITGN won against Pt Deendayal Petroleum University (2-1) on January 18, 2011. **Chetan Patil, Puneet Bhat** and **Bhuma Rajshekhar** formed a winning combination. In **Cricket** (men's), IITGN won against SGVP International School by 24 runs on January 21, 2011 with **Sujay Yadav, Aryan Kumar,** and **Kshirsagar Suryakant** scripting the win. In **Basketball** (men's), IITGN won against Pt Deendayal Petroleum University (38-32) on January 21, 2011. **Yogesh Goyal, Gaurav Rathore** and **Vishvendra Joshi** were outstanding in the match.