

Connections

A quarterly newsletter for friends of IIT Gandhinagar



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INSTITUTE HIGHLIGHTS

FOUNDATION PROGRAMME 2021

IITGN welcomed the BTech batch of 2021 on Nov 22 with a virtual Foundation Programme. **Prof Sudhir K Jain**, Director, interacted with the new batch during the inaugural session. A total of 249 students from 18 Indian states, including two OCI students, have joined the batch. The programme was coordinated by **Profs Karthik Subramaniam Pushpavanam, Tanya Srivastava and Biswajit Mondal**.



FOUNDATION PROGRAMME-III FOR THE BATCH OF 2020

The Institute organised an in-person Foundation Programme (FP) III with a variety of interesting activities for the BTech batch of 2020 from Dec 13, 2021. After attending the first two parts of FP and other academic classes

in online mode due to the pandemic, students from the batch of 2020 could finally come to the campus for FP III. **Profs Tarun Agarwal, Sutapa Roy and Deepak Singhania** were coordinators of the programme.

AAROHAN 2022

The Institute welcomed the new batch of PhD and MTech students on Dec 20, 2021, and commenced their foundation programme "Aarohan". It was packed with exciting activities to integrate new students into the culture and ethos of IITGN. The two-week programme was coordinated by **Profs Jhuma Saha, Sameer Kulkarni and Utsav Mannu**.



WINTER ADMISSIONS FOR INTERNATIONAL STUDENTS

For the first time, IITGN introduced winter admissions for international students to its postgraduate programmes in Engineering, Science, and Humanities & Social Sciences for international students. So far, international admissions were limited to the first semester starting in July. However, this year the Institute decided to create an additional opportunity for international students because of their different graduation deadlines.

STUDENT WELL-BEING INITIATIVE

IITGN lives by its "students first" motto. To strengthen further its support for every single student of IITGN, the Institute has initiated a new enterprise named "Student Well-Being". As a part of this initiative, a team of committed faculty members offer a supporting hand to IITGN students for any of their concerns, be it academic or non-academic. The team also celebrated Student Well-Being Week during Nov 15-19, 2021, wherein students were encouraged to just walk-in and meet the team to talk and share any of their concerns.

Student Well-Being Initiative

Well-Being Week (November 15 – 19, 2021)
Venue: Chimair Common Room

We are here for you. Reach out to us and tell us how you are doing, in personal and professional walks of life.



LEH-LADAKH AND KARGIL DELEGATION

A 13-member delegation from Leh-Ladakh and Kargil visited IITGN on Oct 13, 2021, to understand wastewater management at the Institute, learn about the processes, and examine various eco-friendly and sustainable technologies which can be adopted to the extremely cold climate of their region. The group also visited the Water Treatment Plant and Sewage Treatment Plant of the Institute. **Prof Sudhir Kumar Arora** hosted the delegation along with other faculty members and officials from the Institute.

POST OFFICE ON CAMPUS

Adding a significant feature to the IITGN campus infrastructure, the Department of Post has set up a Sub-Post Office inside the Institute campus from Oct 29, 2021, to provide various postal and other services to the community. Not only this, the institute has also been allotted an exclusive Pin Code: 382055 to facilitate faster delivery of mails/posts.

PARTNERSHIP WITH DURHAM UNIVERSITY

IITGN and the University of Durham, UK have entered into a Memorandum of Understanding (MoU) on Nov 17, 2021, for cultural, educational and scientific cooperation. The MoU was signed by **Prof Claire O'Malley**, Pro-Vice-Chancellor (Global), the University of Durham and **Prof S P Mehrotra**, Professor-in-Charge (External Relations), IITGN, during a virtual ceremony. This new agreement will facilitate students, faculty, and knowledge exchange between both institutions. Immediately after the signing of the MoU, the two institutions hosted a joint seminar on "Understanding the challenges of world heritage sites and the role of Archaeology in the global context".

SUPPORT FOR THE INSTITUTE

NISHA AND VIPIN JAIN SCHOLARSHIP

Dr Shruti Jain, a BTech alumna of 2013, has set up **Nisha and Vipin Jain Scholarship** in honour of her parents. This scholarship of Rs 1 lakh per year will support students at IITGN. After graduating with a BTech in Chemical Engineering with a President's Gold medal from IITGN, Shruti joined the University of Texas at Austin as a PhD scholar. She is currently working as a RET Design Engineer at Micron Technology, USA.



EXTENSION OF TML-FAP

TATA Motors Limited has extended its grant support for the TATA Motors Limited - Financial Aid Program (TML-FAP) at IITGN for one more year. TML-FAP was introduced in 2016 and provides financial assistance to students from economically weaker background. Once the beneficiary students are financially independent, they are expected to donate the money back to IITGN to support other students.

CSR DONATIONS

- Ingersoll Rand (India) Limited made a CSR donation for providing laptop devices to needy students at IITGN
- CSI Engineering Software Pvt Ltd has made a donation to IITGN towards General Excellence



FACULTY NEWS

AWARDS AND RECOGNITIONS

- Prof Sudhir K Jain**, Director, was bestowed with the prestigious Padma Shri award for Science and Engineering, for the year 2020, by President of India **Shri Ram Nath Kovind** on Nov 08, 2021.
- Prof Amit Prashant**, Professor, Civil Engineering, and Dean, Research and Development, has been selected for the prestigious Gopal Ranjan Technology Award 2021 by IIT Roorkee, for his significant research contributions in the field of civil engineering, ranging from fundamental soil mechanics to applied work on various geotechnical structures.
- Prof Atul Dixit**, Associate Professor, Mathematics, has won the prestigious Swarnajayanti Fellowship in the category of Mathematical Sciences for the year 2020-21, for his research project that broadly lies at the interface of Analytic Number Theory and Special Functions.
- Prof Vimal Mishra**, Associate Professor, Civil Engineering, has been elected as a Fellow of the prestigious National Academy of Sciences, India (NASI), in recognition of his noteworthy research contributions

in advancing the understanding of land-atmospheric coupling and its role on hydro-climatic extremes.

- Prof Manish Jain**, Teaching Professor and Head, Centre for Creative Learning (CCL), has been selected as a member of the National Curriculum Frameworks' National Focus Group on Mathematics Education. He will play a pivotal role in the development of a Position Paper on Mathematics Education and Computational thinking.

PATENTS FILED

- An Indole-based Kinase Inhibitor and a Process for its Preparation: Inventors include **Prof Sivapriya Kirubakaran**, **Prof Vijay Thiruvenkatam**, and **Delna Johnson**.
- Benzimidazole-based Compounds and a Process of Preparation Thereof: Inventors include **Prof Sivapriya Kirubakaran**, **Prof Vijay Thiruvenkatam**, and **Haritha Dilip**.

SPONSORED AND CONSULTANCY PROJECTS

Please follow this link to find the list of sponsored and consultancy projects: https://iitgn.ac.in/newsletter/projects/q4_2021 or scan the QR code.



NEW FACULTY

Name	Designation	Discipline	PhD/Last Degree	Date of Joining
Dr S R Gandhi	Visiting Professor	Civil Engineering	IIT Madras	25/10/2021
Dr Utsav Mannu	Assistant Professor	Earth Sciences	ETH Zurich, Switzerland	03/11/2021
Dr Gadadhar Misra	Visiting Professor	Mathematics	Stony Brook University, USA	11/11/2021
Dr Pankaj Khanna	Assistant Professor	Earth Sciences	Rice University, USA	02/12/2021

ACTIVITIES AT IITGN

JEE OPEN HOUSE

With an aim to guide JEE (Advanced) qualified students and their parents about different engineering branches at IITs, various career opportunities, and help them better understand the IIT system, IITGN hosted a live JEE Open House on Oct 23, 2021. The virtual event included interactive sessions with **Prof Sudhir K Jain**, Director, Deans of Academic and Student Affairs, Student Leadership, and Alumni of the Institute. The participants were also provided information about the academic course structure, various opportunities, activities and student life at IITGN.

CERTIFICATION IN SCIENTIFIC WRITING

IITGN's Certification in Scientific Writing course is receiving encouraging responses from students. This time, as many as 108 PhD students from various disciplines participated in the course, which was conducted by **Prof Karla Mercado-Shekhar** (Programme Coordinator) and **Dr Maria Joao Amante** (Programme Advisor). More details about this initiative can be found here: <https://initiatives.iitgn.ac.in/scientificwriting/certification/>

TALK ON SCIENCE AND SCIENTISTS



On Nov 12, 2021, the Institute hosted a talk by **Prof Ashutosh Sharma**, former Secretary, Department of Science and Technology, Government of India, and Professor, Department of Chemical Engineering, IIT Kanpur, on 'Science and Scientists in the New Millennium'. He also inaugurated the Institute's "**Grantopedia**" site, which is a one-stop destination for researchers to explore multiple opportunities for research grants, funding calls, fellowships, conferences, industry-academia partnerships, and so on.

HISTORY OF IDEAS

The Institute has started a new lecture series called 'History of Ideas', which aims to discuss the historical evolution of prominent ideas and fundamental breakthroughs in science. It also examines the influences and reactions of the community as well as the broader society of that time. The first edition of this series was held on Nov 20, 2021, with two talks: (i) "Conception (1900) to Birth (1926) of Quantum Mechanics" by **Prof Ravinder Puri** (IITGN) and (ii) "Soft Matter: A History of Ideas" by **Prof Gautam Menon** (Ashoka University). The series is being coordinated by **Prof Sudipta Sarkar**.

CONFERENCE ON MATHEMATICS AND PHYSICS OF FLUIDS

The Physics and Mathematics disciplines at IITGN jointly organised a conference on 'Mathematics and Physics of Fluids' from Nov 01-03, 2021. The conference featured invited talks, contributed talks and poster sessions, and was attended by nearly 100 researchers and students from India and abroad. **Prof Sutapa Roy** and **Prof Satyajit Pramanik** coordinated the conference.

INT'L CONFERENCE ON COMPLEX FLUIDS

IITGN and the Indian Society of Rheology (ISR) together organised an 'International Conference on Complex Fluids and Soft Matter' during Dec 13-15, 2021. A total of 350 people, including faculties, scientists, students, and industry partners, participated in the virtual conference, which featured online lectures, simulated poster sessions, and exhibitors' floor. **Prof Prachi Thareja** and **Prof Dhiraj Bhatia** were the convenor and the co-convenor of the conference, respectively.

CONFERENCE ON MOBILITY AND MULTILINGUALISM

IITGN was one of the co-organisers for an online international conference on 'Mobility and Multilingualism in South and Southeast Asia: Impacts of Global Ecological Change on Local Society', which was organised at Cotton University, Assam, from Dec 27 to 29, 2021. The conference was attended by over 100 participants. **Prof Nishaant Choksi** (IITGN), **Prof Manjil Hazarika** (Cotton University), **Mr Phanindra Talukdar** (PCCR), **Prof J A H Khatri** (Navrachana University) were the conveners of the conference.

WEBINAR ON CLIMATE ACTION

Dr Kiran C Patel Centre for Sustainable Development (KPCSD) at IITGN, in collaboration with PricewaterhouseCoopers (PwC) and with support from Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ) GmbH, New Delhi, organised a webinar on 'Advancing Frontiers of Knowledge on Climate Action: Cross-sectional Approaches for Mitigation and Resilience' on Oct 20, 2021. The e-webinar was attended by nearly 100 scientific audience and practitioners from different parts of the globe. **Prof Vimal Mishra**, Co-coordinator of KPCSD, hosted the event.

INDOML

IITGN and IIT Kharagpur jointly organised the second edition of the 'Indian Symposium on Machine Learning (IndoML)' during Dec 16-18, 2021, on the theme "AI for Data and Data for AI". It served as a forum to discuss state-of-the-art machine learning research through invited talks from leading experts from India and abroad. **Profs Anirban Dasgupta, Mayank Singh,** and **Udit Bhatia** from IITGN and **Profs Animesh Mukherjee** and **Niloy Ganguly** from IIT Kharagpur organised the event.

WORKSHOP ON INSTRUMENTATION AND SIGNAL PROCESSING

IITGN conducted a seven-day virtual workshop titled 'Instrumentation and Signal Processing in Biomedical Imaging and Rehabilitation' from Oct 22-28, 2021. In addition to speakers from IITGN, the workshop featured presentations from 12 eminent speakers from the Indian Institute of Science, IIT Madras, IIT Delhi, IIT Kharagpur, IIT Hyderabad, and IIT Palakkad. **Profs Himanshu Shekhar, Uttama Lahiri,** and **Karla Mercado-Shekhar** were the coordinators of the workshop.

INT'L WORKSHOP ON QUANTUM INFORMATION

IITGN, along with the University of Lethbridge, Canada; University of Cape Town, South Africa; and Pacific Lutheran University, USA, organised a three-day international workshop on 'Applications of Quantum Information in QFT and Cosmology' from Nov 22-24, 2021. The online workshop was attended by about 100 people from across the world. **Profs Arpan Bhattacharyya** (IITGN), **Saurya Das** (University of Lethbridge), **Shajid Haque** (University of Cape Town), and **Bret Underwood** (Pacific Lutheran University) co-organised the event.

BOOK DISCUSSION

Ahead of the World Wildlife Conservation Day, IITGN hosted a discussion session on Nov 23, 2021, on '*Tigers Are Our Brothers: Anthropology of Wildlife Conservation in Northeast India*', a book penned by **Prof Ambika**



Aiyadurai and recently published by Oxford University Press. **Prof Sarit Kumar Chaudhuri**, Professor of Anthropology, Rajiv Gandhi University, Itanagar, joined the event virtually as the discussant, and **Prof Alok Kumar Kanungo** moderated the session.

CREATIVE LEARNING WITH CCL

CCL-IITGN conducted several educational activities to promote the joy of learning Science and Maths. The team launched Cubical Diwali Lamps video series and taught making 20 kinds of DIY mathematical paper lamps for 20 days, from the day of Dussehra to Diwali. CCL was part of the 7th edition of the 'India International Science Festival' (IISF), held in Goa during Dec 10-13, 2021. It was also invited as a resource agency to conduct workshops on arts and sports integrated pedagogy for Trained Graduate Teachers (TGTs) of Jawahar Navodaya Vidyalaya at Navodaya Leadership Institute in Goa and Noida during Dec 14-15, 2021 and Dec 21-23, 2021.

ADVISORY COUNCIL OF IIEC AND RESEARCH PARK

The 6th meeting of the Advisory Council of IIEC and the Research Park was held on Dec 9, 2021, under the chairmanship of **Shri Kris Gopalakrishnan**. For the first time, this event was held at the newly built permanent Research Park building.

STARTUP'S ACHIEVEMENT

MiCoB, a young startup owned by IITGN alumni and incubated at IIT Gandhinagar Innovation and Entrepreneurship Center (IIEC), has raised 0.5 million USD in a seed round from 3Lines Venture Capital, a venture capital firm from Denver, Colorado, USA. The startup provides speedy, higher quality, and relocatable 3D concrete printing solutions for various construction segments, including military, residential, commercial, infrastructure, and architecture.



SKILL DEVELOPMENT BY NEEV

Continuing its commitment to impact the surrounding communities through skill development, NEEV-IITGN conducted four training courses in Basic Computer Skills, Tally Skills, and Stitching (in Ratanpur and Basan villages) from Sep to Dec 2021, and three training courses in Basic Computer Skills, Stitching (in Basan village), and Vocational Skills (wiring and CNC machining) during Nov and Dec 2021. A total of 118 rural women and youth were impacted through these trainings.

NYASA DONATION DRIVES

The team Nyasa called for donations from the IITGN community and conducted distribution drives for the donated items like clothes, winter wears, toys, umbrellas, footwear, bags etc. for on-campus workers (like housekeeping staff, mess staff etc.) and construction workers. They also distributed T-shirts to all contractual staff. On the occasion of Diwali pooja, Nyasa volunteers distributed sweets and new dresses among the children of construction workers. Overall, these efforts provided monetary relief to more than 1000 construction workers.

ONLINE WORKSHOPS

- Workshop on Natural Dye by **Nirav Patel**, Designer, Design and Innovation Centre, IITGN, Oct 02, 2021.
- Clay Studio Workshop for Beginners and Prakriti: Terracotta Mural Workshop by artists **Nehal Rachh** and **Nilaooy Nandi**, Oct 05 and Oct 05-07, 2021, respectively.
- Zentangle Workshop by **Prof Aditya Mehta**, Assistant Professor, GLS Institute of Design, Ahmedabad, Oct 09, 2021.
- SciFinder-n- Database: Your Key to Unlocking R&D Productivity by **Mr Visit Kunte**, Customer Success Specialist, ACS International, Ltd - Representing CAS, Oct 13, 2021.
- IEEE Xplore (Digital Library) Publications: How to Shape Your Future in the Fourth Industrial Revolution by **Mr Dhanukumar Pattanashetti**, Senior

IEEE Client Services Manager, IEEE India, Oct 14, 2021.

- Preparing Effective Graduate School Applications by **Prof Himanshu Shekhar**, Assistant Professor, Electrical Engineering, IITGN, Oct 16-17, 2021.
- Craft of Interactive Handmade Pamphlets by **Ms Aditi Babel**, Founder and Head Designer, Aditi Babel Design Studio, Oct 30, 2021.
- PCB Prototyping by **Dr Sanket B Kasturiwala**, Research Project Scientist, Technovator Innovations Pvt Ltd, Nov 01-02, 2021.
- Scientific Writing by **Dr Ajay Kumar Jha**, Development Editor, ACS Omega, ACS Publications, Nov 29, 2021.
- Workshop on Embedded AI by **Mr Rohit Prajapati**, Technical Manager, DigiToad Technologies, Dec 02, 2021.
- Design Thinking Workshop by **IBM**

India Software Labs, in collaboration with **KPCSD** and **IEEC**, Dec 08, 2021.

ONLINE SHORT COURSES

- Electricity Regulations in India by **Prof Anand Kumar**, Professor of Practice, Electrical Engineering, IITGN, every Tuesday and Friday from Oct 15 to Nov 16, 2021.
- Homogeneous Electrocatalysis for Energy Conversion and Electro-organic Synthesis by **Prof Biswajit Mondal**, Assistant Professor, Chemistry, IITGN, Nov 09, 17, 20, 22 & 23, 2021.
- Organic Electronics by **Prof Anirban Mondal**, Assistant Professor, Chemistry, IITGN, Nov 09, 17, 19, 22 & 23, 2021.
- C*-algebra by **Prof S Sundar**, Associate Professor, Department of Mathematics,

IMSc, Chennai, every Wednesday, Saturday, and Sunday from December 04-26, 2021.

- Scientific Writing by **Dr Monal K Desai**, Teaching Associate, Writing Studio, IITGN, every Tuesday and Wednesday from Dec 14, 2021 to Jan 12, 2022.
- Writing Mathematics in the Sciences by **Dr Monal K Desai**, Teaching Associate, Writing Studio, IITGN, every Thursday and Friday from December 16, 2021, to January 13, 2022.

ONLINE LECTURES & COLLOQUIA

Follow this link: <https://events.iitgn.ac.in/> or scan the QR code to see the lectures held at IITGN.



STUDENTS AND STAFF

AWARDS AND RECOGNITIONS

- **Dr Chandan Kumar Jha**, a PhD alumnus and now a Postdoctoral Fellow at IITGN, has won the prestigious INAE Young Innovator & Entrepreneur Award 2021 for developing a highly sensitive and reliable instrumented glove that is helpful in faster therapy and rehabilitation of patients suffering from disabilities due to stroke and cerebral palsy.
- As many as 11 PhD scholars from IITGN have been selected for the prestigious Prime Minister's Research Fellows (PMRF) scheme in the May 2021 cycle. These PhD scholars include **Alok Kumar Thakur**, Earth Sciences; **Gokul Krishna B**, Physics; **Indra Mani Tripathi**, Earth Sciences; **Malay Vyas**, Mechanical Engineering; **Rishiraj Adhikary**, Computer Science and Engineering; **D Sharda Devi**, Electrical Engineering; **Shruti Singh**, Computer Science and Engineering; **Suraj Shamrao Borate**, Mechanical Engineering; **Surbhi Khewle**, Chemical Engineering; **Uthara Brahadeesh**, Cognitive Science; and **Vivek Kumar Singh**, Materials Engineering.
- Three research scholars from IITGN have won Gandhian Young Technological Innovation Awards 2021. **Harini Gunda**, a PhD scholar of Chemical Engineering, has won SRISTI-GYTI Award 2021 for developing 'Novel Boron Nano-additives for Improving the Performance of Solid Propellants'. **Yogesh Singh**, a PhD scholar of Mechanical Engineering, and **Dr Chandan Kumar Jha**, a PhD alumnus and now a postdoctoral fellow in Electrical Engineering, have won the BIRAC SITARE-GYTI Appreciation Awards 2021 for developing 'Wearable Interactive Parkinson's disease Assistive Device (WIPAD)' and 'An Intelligent Hand Rehabilitation and Assessment System for Stroke Patients', respectively.
- Four of IITGN students - **Deep Dave** (Mechanical Engineering), **Dhruv Menon** (Materials Engineering), **Eshika Pathak** (Electrical Engineering), and **Praveen Venkatesh** (Electrical Engineering) - have been selected for the prestigious 'O P Jindal Engineering and Management Scholarship (OPJEMS) 2021'.

CULTURAL COUNCIL

The **Cultural Council** organised an interesting line-up of activities during this quarter, including 'Fin-e-Quiz', a quiz competition on finance, on Oct 08, 2021; 'TechnoWiz' (in collaboration with the Technical Council) on Oct 24, 2021; and 'Another Lie', a horror video-making competition by Abhinaya - the drama club. Besides, the council also organised 'IITGN's Got Talent' (IGT) from Oct 28 to Nov 14, 2021, which featured various competitions for creative expressions.

AMALTHEA 2021

IITGN students organised the 12th edition of Amalthea during Dec 9-12, 2021, on the theme - "Unifying Minds, Fostering Ingenuity". The annual

student-run technical festival of the Institute was held virtually with an array of exciting events, competitions, webinars, symposiums, and tech expo. The acclaimed line-up of speakers for this year included Mr Amit Kaushik, Chief of Unit, International Solar Alliance; Mr J D Patil, Whole-Time Director, L&T, Defence & Smart Technologies; Mr Kirk Borne, Chief Science Officer, DataPrime; Ms Mitika Bajpai, Sustainability manager, Reliance Industries; among others.

STRIDES 5.0

The fifth edition of 'Strides', an annual cultural function for IITGN staff and their family members, was held on Oct 23, 2021. The programme is aimed at celebrating each staff member and recognises their qualities, talents, hobbies and interests. The IITGN staff members made the evening bright with their dance, music, and poetry performances.

ESIC WORKSHOP FOR OUTSOURCED WORKERS

The Outsourced Workers Outreach Programme Committee at IITGN organised a workshop for the outsourced workers of the Institute, including housekeeping staff, solid waste management staff, horticulture staff, maintenance staff, office boys, supervisors, and hostel caretakers, on Dec 4, 2021, to make them aware of ESIC (Employees' State Insurance Corporation) benefits and proper procedures to avail the same.

SPORTS

RUN IN MEMORY OF LATE CDS GEN BIPIN RAWAT

The **Physical Education Section** organised a 3 km run event on the campus on Dec 31, 2021, in memory of the Chief of Defense Staff late **General Bipin Rawat**. The initiative aimed to pay respect and tribute to the departed souls. Several community members participated in the event with all safety precautions.

MR DEVENDRA JHAJHARIA AT IITGN

Renowned Indian Paralympic javelin thrower **Mr Devendra Jhajharia** visited IITGN on Dec 30, 2021, as the Chief Guest in the closing ceremony of FP Sports 2021. Mr Jhajharia interacted with the students and motivated them to make sports an essential part of their routine. He also presented Champions and Runners-up trophies to Team Akash and Team Prithvi, respectively.

HALLA BOL 2021

Halla Bol, an annual student-run gaming event, was held from Oct 14-26, 2021, and saw participation from more than 750 community members of the Institute. A total of ten games were played during the course of 13 days with the teams consisting of students, faculty, and staff. The event serves as a forum to nurture healthy interaction and interpersonal relations among the community members.