

Connections

A quarterly newsletter for friends of IIT Gandhinagar

2022-2023, Volume XV, Issue II
October - December 2022

INSTITUTE HIGHLIGHTS



CHANGING OF THE GUARD

Prof Rajat Moona took charge as the Director of IITGN on Oct 3, 2022. **Prof Amit Prashant**, Officiating Director of the Institute, handed over the responsibility to Professor Moona in a brief formal ceremony, followed by a collective welcoming programme and a delightful interactive session between Professor Moona and the IITGN community.

FOUNDATION PROGRAMME 2022

A total of 288 students, recommended by JoSAA, including 58 female students and two OCI students from the USA, have joined the BTech and BTech-MTech Dual Degree programmes at IITGN this year. The Institute welcomed the incoming batch of students and kick-started its flagship Foundation Programme (FP) on Oct 20, 2022, to shape new students into well-rounded personalities through a host of exciting activities. **Prof Rajat Moona**, Director, spoke to the new undergraduate students through a video message and welcomed them to the Institute. FP 2022 was coordinated by **Profs Sameer Patel, Abinaya Sampath, Rusa Mandal, Mukesh Dhanka**, and **Subramanian Sankaranarayanan**.

A LANDMARK IN FUNDRAISING

IITGN has crossed Rs 100 crore milestone in philanthropic fund receipts since its inception in 2008. Recognised globally for its far-sighted academic innovations, research excellence for societal impact, and institutional governance, IITGN has reached this remarkable milestone with generous philanthropic support from its well-wishers spread across the globe.



EAT RIGHT CAMPUS AWARD 2022

IITGN has bagged the Eat Right Campus Award with a five-star rating from the Food Safety and Standards Authority of India (FSSAI) and created a hat-trick by winning the prestigious award for the third consecutive time.

SUPPORT FOR THE INSTITUTE

ANU AND B V JAGADEESH CHAIR

Shri B V Jagadeesh and **Smt Anuradha Jagadeesh**, US-based well-wishers of IITGN, have established **Anu and B V Jagadeesh Chair** at IITGN to support innovation and entrepreneurship activities at the Institute and create opportunities for students for hands-on learning, networking, and professional development in these areas to help them succeed in



US NEWS & WORLD REPORT RANKINGS

IITGN was ranked among the top 10 institutions in India in the Global Universities Rankings 2022-23 published by the US News & World Report, a Washington DC-based digital media company. The Institute ranked 7th in India and 725th globally of the 2000 institutions ranked across the world based on research performance and ratings by academics worldwide. See the US News report: <https://tinyurl.com/nyxbckn7>

MoUs WITH INDIAN AIR FORCE AND MPCST

IITGN inked two different Memorandum of Understandings (MoUs) with the **Indian Air Force** and **M P Council of Science & Technology (MPCST)**, an autonomous organisation of the Government of Madhya Pradesh. The former MoU involves collaboration in promoting the development of indigenous technologies and equipment through research and innovations in the key areas of material science, aerospace, nanotechnology, electrical systems, obsolescence management, upgradation and digitisation through indigenisation. As a part of the agreement with MPCST, the **Center for Creative Learning (CCL)**, IITGN, will facilitate establishment of a "Centre for Creative Learning" in Bhopal, with a focus on STEM sessions, exhibition of toys and models, and hands-on workshops.



A DECADE OF CSE AND OPENING OF A NEW LAB

The Centre for Safety Engineering (CSE), one of the seven interdisciplinary centres of IITGN, completed a decade of its service for public safety. Various stakeholders, including national and international partner industries and government representatives, convened at IITGN on Dec 3, 2022, to commemorate CSE's successes and discuss the way forward. On this occasion, CSE also inaugurated **Shah Bhogilal Jethalal Laboratory for Passive Fire System Testing**, a one of its kind advanced laboratory of international standards in the country, established with generous support from **Shri Mukesh Shah**, Managing Partner in the Ahmedabad-based Shah Bhogilal Jethalal & Bros (AAAG India).

the global economy. Smt Anuradha Jagadeesh is the founder of KonnectMe, a social networking platform that connects people with similar interests and goals. She has a strong background in engineering and is passionate about using technology to solve real-world problems. Shri B V Jagadeesh is a Silicon Valley-based entrepreneur with an outstanding track record of success in the technology industry. He has founded and funded many enterprise start-ups and is known for his innovative approach to problem-solving and his ability to bring new technologies to market. He is also actively involved in various philanthropic efforts.

PANDYA-SHIVPURI CHAIR IN POPULATION DYNAMICS

Dr Darshan Pandya of Milwaukee, Wisconsin, USA, along with his wife, **Dr Chandra Shivpuri**, has extended generous support to establish the **Pandya-Shivpuri Chair in Population Dynamics** at IITGN to promote excellence and leadership in interdisciplinary research through various scholarly activities in the field of population dynamics. Dr Darshan Pandya is an IT industry stalwart and philanthropist. He pursued his BSc (Honours) and PhD in Chemical Engineering, followed by an MSc in Operational Research and Management Studies, all from Imperial College, London. He has worked with British Petroleum in London, National University of Singapore, and IT industries in Canada and USA. Dr Chandra Shivpuri is a neonatal medicine specialist with over 51 years of experience in the medical field. She graduated from Jawaharlal Nehru Medical College, AMU and completed her residencies in Psychiatry at Oklahoma State University and in Pediatrics at Case Western Reserve University in Cleveland, Ohio, followed by a fellowship in neonatal-perinatal medicine.



(SRIP) through three awards, one each in Engineering, Natural Sciences, and Humanities & Social Sciences. Dr Amit is Senior Vice President in Quantitative Analysis at D E Shaw & Co. He completed his BS and MS in Computer Science from MIT, and PhD in Mathematics from the University of California, Berkeley. Ms Vidya is a Data Scientist in the healthcare sector and works on analytics with clinical perspectives to make people's lives better. She holds a BS and MA in Neuroscience from Caltech and Washington University, St Louis, respectively, and a Master's in Software Engineering and a Certification in Data Sciences from Harvard University.

ERACH AND MEHEROO MEHTA DAKSHANA MEMORIAL SCHOLARSHIP

Mr Ruyintan (Ron) E Mehta, a New Jersey-based serial entrepreneur, has set up the **Erach and Meheroo Mehta Dakshana Memorial Scholarship** in honour of his late parents. The scholarship of Rs 1 lakh per year aims to support academic excellence at IITGN and will be given for four years to five students from the cohort participating in the Dakshana Scholars Programme organised by IITGN. Mr Ruyintan Mehta did his B.Tech from IIT Bombay and master's degree in Chemical Engineering from the University of Connecticut. He is passionate about giving back to several educational and social causes in India.



BHALODIA-KHETAN SUMMER RESEARCH EXCELLENCE AWARD

New Jersey-based well-wishers of the Institute, **Ms Vidya Bhalodia** and **Dr Amit Khetan**, have set up the **Bhalodia-Khetan Summer Research Excellence Award (SREA)** in honour of their parents. The SREA will recognise excellence in research conducted each year during IITGN's flagship Summer Research Internship Programme



COLLABORATION WITH HILTI

IITGN and **HILTI India Private Limited** have joined hands to enhance test facilities for 'Passive Fire Protection Systems'. This academia-industry collaboration will also help in elevating the understanding of Passive Fire protection measures to contain the fire in place of its origin. The facility at IITGN will enable researchers to closely study different design aspects, materials, and other related factors under Indian operating conditions and also enable the testing of products to specific national and international standards.



OUTREACH

- An IITGN team comprising **Prof Vinod Narayanan**, **Prof Pankaj Khanna**, **Mr Saumil Shah**, and **Mr Vijay Sutreja** participated in the UNESCO India-Africa Hackathon in New Delhi on Nov 22-23, 2022, which hosted more than 600 innovators, students, educators, teachers, and the research community from 20+ countries.

- Prof Rajat Moona**, Director, was invited as the Guest of Honour at the 9th Convocation of NIPER-Ahmedabad on Dec 24, 2022, and as the Chief Guest for the 20th Convocation of Mahatma Jyotiba Phule Rohilkhand University, Bareilly, on Dec 29, 2022. Professor Moona was also invited to the launch of Madhya Pradesh Science Technology & Innovation Policy MPSTIP-2022 in Bhopal on Dec 26, 2022.

FACULTY NEWS

AWARDS AND RECOGNITIONS

- Prof Subramanian Sankaranarayanan**, Assistant Professor, Biological Engineering, has been selected for the prestigious 'DBT Ramalingaswami Re-entry Fellowship' (2021-22) by the Department of Biotechnology, Ministry of Science and Technology, GoI.

Derivatives: Inventors include **Prof Sivapriya Kirubakaran**, **Prof Vijay Thiruvankatam**, **Javeena Hussain**, **Althaf Shaik**, and **Siddhant Bhoir**. The patent number is 411214.

- Ring Disk Puzzle: Designed by **Prof Manish Jain**. The design number is 327111-001.

PATENTS GRANTED

- A Process for the Preparation of N-Substituted Phenothiazine

SPONSORED AND CONSULTANCY PROJECTS

Please follow this link: https://iitgn.ac.in/newsletter/projects/q4_2022 or scan the QR code to find the list of sponsored and consultancy projects.



NEW FACULTY

Name	Designation	Discipline	PhD	Date of Joining
Dr Pallavi Bharadwaj	Assistant Professor	Electrical Engineering	IISc Bangalore	10/10/2022
Dr Harmeet Singh	Assistant Professor	Mechanical Engineering	Virginia Polytechnic Institute and State University, USA	16/12/2022
Dr Sushobhan Sen	Assistant Professor	Civil Engineering	University of Illinois at Urbana-Champaign, USA	27/12/2022

SCHOLAR-IN-RESIDENCE

Name	Discipline	Affiliation	Date of Joining
Dr Kamiar Aminian	Cognitive Science	École polytechnique fédérale de Lausanne (EPFL), Switzerland	31/10/2022
Dr Massimo Vidale	Humanities and Social Sciences	Istituto Universitario Orientale (IUO), Naples, Italy	29/12/2022

ARTIST-IN-RESIDENCE

Name	Discipline	Last Degree	Date of Joining
Mr Argha Manna	Humanities and Social Sciences	University of Calcutta	13/10/2022

ACTIVITIES AT IITGN



REGIONAL CHILDREN SCIENCE CONGRESS

IITGN hosted a five-day Regional Children Science Congress of 73 Jawahar Navodaya Vidyalayas of the Pune Regional Office of the Navodaya Vidyalaya Samiti from Nov 16 to 20, 2022. A total of 146 high school students, 40 teachers, and support staff from 73 districts of Maharashtra, Gujarat, Goa, and Diu, Daman and Dadra Nagar Haveli, attended the event. The programme exposed students to a plethora of activities, and was coordinated by **Prof Sriram Kanvah**.

GIAN COURSES

IITGN organised two Global Initiative of Academic Networks (GIAN) courses in Dec 2022. The first one on 'Randomized Methods for Approximation and Parameterized Algorithms' was conducted in hybrid mode by **Prof Daniel Lokshtanov**, Professor, Department of Computer Science, the University of California Santa Barbara, during Dec 5-9, 2022. It was organised by **Prof Neeldhara Misra**. The second GIAN course on 'Derrida's Moderns: How to use Deconstruction in the context of Modernism' was held online during Dec 19-23, 2022. It was conducted by **Prof Jean-Michel Rabaté**, Professor, English and Comparative Literature, University of Pennsylvania, and organised by **Prof Arka Chattopadhyay**.

IITGN IN IINVENTIV 2022

Faculty members, PhD students, along with the Dean, R&D and representatives of IITGN Research Park and IIT Gandhinagar Innovation and Entrepreneurship Center (IIEC), participated in 'IInvenTiv 2022', a first-of-its-kind mega Research & Development fair of all 23 IITs. IITGN researchers **Prof Emila Panda** and her PhD student **Ravi Teja Mittireddi**; **Prof Kabeer Jasuja**, **Prof Chinmay Ghoroi**, and **Dr Harini Gunda**; and **Prof Shanmuganathan Raman** and his PhD student **Ashish Tiwari**, showcased their innovations at the fair.

ICVGIP 2022

IITGN hosted the 13th edition of the Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP) during Dec 8-10, 2022. More than 300 delegates, including students, faculty members, and industry experts from India and abroad, participated in the conference, which was organised in association with the Indian Unit for Pattern Recognition and Artificial Intelligence (IUPRAI). The event was coordinated by **Prof Shanmuganathan Raman**.

IEEE ANTS 2022

The 16th edition of the IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS 2022) was held at IITGN during Dec 18-21, 2022, on the theme 'Scalable Secure and Sustainable Connectivity'. Around 150 researchers from industry and academia participated in the premier conference. The conference was coordinated by **Prof Sameer Kulkarni** and co-coordinated by **Prof Shanmuganathan Raman**.

PRE-IIGF EVENT AT IITGN

IITGN hosted a pre-event of the India Internet Governance Forum (IIGF) 2022 on Dec 2, 2022, on the theme of "Multilingual Internet". The virtual and open-for-all event was lined-up with scholarly talks by eminent subject experts of Computer Science and Engineering, Data Science, and Artificial Intelligence (AI) from industry and academia. The event was coordinated by **Prof Mayank Singh**.

WINTER SCHOOL ON ICME

A Winter School on Integrated Computational Materials Engineering (ICME) was organised at IITGN during Dec 5-10, 2022. Speakers from IITGN and IIT Kharagpur covered the basics of various computational modelling techniques and their applications to real-life problems. The event was coordinated by **Prof Amit Arora**.

INDOML 2022

IITGN, in collaboration with IIT Kharagpur, organised the third edition of the 'Indian Symposium on Machine Learning' (IndoML) during Dec 15-17, 2022. More than 300 participants, eminent international speakers, researchers, and industry personnel attended IndoML 2022 which highlighted the intersection of Artificial Intelligence (AI) and Machine Learning (ML) with other fields of research. The event was coordinated by **Prof Anirban Dasgupta**, **Mayank Singh**, and **Udit Bhatia**.



EMBO MEETING

IITGN hosted the India - European Molecular Biology Organization (EMBO) lecture series on 'Non-invasive Brain Stimulation (NIBS): Advances in Research and Clinical Practice' during Dec 12-17, 2022. The meeting, supported by EMBO and **Mr Kris Gopalakrishnan**, Co-founder of Infosys, brought together some of the top researchers in this field from around the world. The meeting was coordinated by **Prof Pratik Mutha**.

YOUNG THEORETICAL PHYSICISTS' MEET

IITGN organised a Young Theoretical Physicists'

Meet during Dec 13-15, 2022, with speakers from various prestigious organisations/universities from around the world, including Harvard University; Central European Institute for Cosmology and Fundamental Physics (CEICO), FZU Prague; University of Cambridge; among others, to facilitate an intense academic discussion on various areas of theoretical physics. The meeting was coordinated by **Prof Sudipta Sarkar**.

MALAVIKA MEMORIAL LECTURE

In the loving memory of **Prof Malavika Subramanyam**, the discipline of Humanities and Social Sciences at IITGN has initiated the 'Malavika Memorial Lecture Series', which was inaugurated by her parents, **Dr A V Subramanyam** and **Mrs Srilatha Subramanyam** on Nov 15, 2022. **Dr Purnima Menon**, a Senior Research Fellow at the International Food Policy Research Institute, delivered the inaugural keynote talk, and Professor Subramanyam's collaborators, **Dr Mala Ramanathan**, **Dr Rajan Sankar** and **Dr Mukta Gundi**, spoke about their experiences working with her.

FACULTY DEVELOPMENT PROGRAMME

The discipline of Biological Engineering, IITGN, with support from the Gujarat State Biotechnology Mission (GSBTM), conducted a week-long 'Faculty Development Programme (FDP) on Protein Biology and Proteomics' on Nov 9, 2022, aimed at equipping faculty members of colleges and universities of Gujarat with specific skill sets. The event was coordinated by **Prof Sharad Gupta**.

ACTIVITIES BY NEEV

NEEV, IITGN had an eventful quarter as it organised four skill development courses, three awareness seminars, and an entrepreneurship development workshop for rural and peri-urban youth and women from Oct to Dec 2022. With training courses in stitching, beautician skills, computer, and computer hardware, and an entrepreneurship development workshop, NEEV impacted the lives of 220 people, with support from the **Desai Foundation Trust**.

ACTIVITIES BY CCL

CCL-IITGN conducted a plethora of workshops and activities for internal and external audiences, including; 'CCL D20', a YouTube video series from Dussehra to Diwali; creation of portraits of Dr A P J Abdul Kalam and Dr Srinivasa Ramanujan with Rubik's cubes and a 10 feet IITGN logo with string art; workshop with 800+ DIET Teachers in Patna, Bihar; four STEM workshops for 250 high school teachers of Punjab, Haryana, Rajasthan and Jharkhand with support from American India Foundation; a session for 800 CBSE school principals in Vadodara, Gujarat; and a six-day workshop for 300 science school teachers from 300 government secondary schools through SSA, Gujarat; among others.

ACTIVITIES BY LDI

The **Leadership Development Initiative (LDI)** organised 'Simply Speaking' and 'Dynamic Duo' on Oct 14-15 and Dec 3, 2022, respectively. Simply Speaking encouraged PhD scholars to explain their research in an easy-to-understand format. The Dynamic Duo event gave a unique platform to PhD scholars and their faculty mentors to showcase the significance of a healthy PhD mentor-scholar relationship.

RESEARCH PARK AND IIEC

- **7th Advisory Council Meeting:** The

7th meeting of the Advisory Council of the **IIT Gandhinagar Research Park** and **IIT Gandhinagar Innovation and Entrepreneurship Center (IIEC)** was held on Nov 22, 2022. Distinguished council members discussed various strategic points to scale up industry engagement and entrepreneurship programmes at the Institute.

- **Build Programme:** IIEC partnered with Boeing India to conduct the second edition of an innovation scouting programme called 'Boeing's University Innovation Leadership Development' (BUILD). As part

of the programme, an intensive five-day Boot Camp was organised at IITGN during Dec 5-10, 2022, for select students and early-stage startup teams, who then get shortlisted to compete at the regional and national levels.

- **Start-Up's Achievement:** **MiCoB**, a 3D concrete-printing start-up incubated at IITGN, received the 'Innovation for Defence Excellence Award' from the Ministry of Defence, Government of India, for developing 3D-printed bunkers and habitats along the Indo-Chinese borders.

WORKSHOPS

- AI Reflections and Applications in Emerging Economies, co-organised by **Federal University of Goiás, Brazil; Microsoft; NVIDIA; IIT Kanpur;** and **IIT Gandhinagar**, Oct 1-2, 2022.
- Ayurvedic Phytochemicals: Recent Research and Clinical Implications, coordinated by **Prof Ashutosh Srivastava** and **Prof Sairam Mallajosyula**, Oct 8, 2022.
- Redundantly Actuated Robots and their

Human-centered Applications, organised by **Prof Vineet Vashista**, Oct 8-9, 2022.

- Karyashala Workshop on AI-based Approaches in Addressing Issues Related to Cognitive Health, co-organised by **Prof Uttama Lahiri** and **Prof Nithin George**, Nov 15-21, 2022.
- Two-dimensional Materials-based Devices and their Applications, co-organised by **Prof Tarun Kumar Agrawal, Nihar Ranjan Mohapatra,** and **Jhuma Saha**, Dec

3-4, 2022.

- Printed Electronics by **Mr Kiran Soni**, Founder, Evnzee, Dec 12, 2022.
- ACM India CS Education, in partnership with **ACM India** and **NPTEL**, coordinated by **Prof Neeldhara Misra**, Dec 23, 2022.
- Cyber Critical Technologies and Ethics: In the Perspective of Financial Services and Manufacturing in India, jointly organised by **IIT Gandhinagar; IIT Kanpur; La Trobe University, Australia; Government of**

India; and Department of Foreign Affairs and Trade, Australian Government, Dec 27, 2022.

LECTURES & SHORT COURSES

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

- 16 PhD scholars, namely **Abishek Sarkar** (ME); **Ankur Vinay Singh** (BioE); **Anshul Awasthi** (EE); **Aparna Rathi** (Phy); **Barat Suresh** (ME); **Dipesh Singh Chuphal** (CE); **Gaurav Rai** (Chem); **Hema Naveena A** (BioE); **Himanshu Beniwal** (CSE); **Indrani Zamindar** (Math); **Niyati Bhupendra Shah** (Phy); **Poonam Rani** (Math); **Rajnandan Borthakur** (ME); **Saikat Kumar Misra** (ES); **Shivani Sharma** (CS); and **Shrutimoy Das** (CSE); received the Prime Minister's Research Fellowship (PMRF) in the May 2022 cycle.
- **Satadru Chakrabarty**, PhD scholar (ChE), has won the highly-regarded 'Euraxess Science Slam India 2022'.
- **Camellia Biswas**, PhD scholar (HSS), has received the 'Earth Research Fellowship 2023'.
- **Poorva Salvi**, PhD scholar (HSS), has received the 'Center of Policy Research and Governance India - Indian Knowledge System Research Grant 2022'.



Research Showcase on Nov 18, 2022. Several IITGN undergraduate students made poster presentations of their research work to the Institute community. The event was a forum to actively engage in research discussions and receive feedback from a diverse audience.

HOMECOMING 2022

IITGN hosted the fourth edition of its annual alumni meet, 'Homecoming', during Dec 22-23, 2022. The event was a memorable affair as the Institute organised the first '**Young Alumni Excellence Awards**' ceremony felicitating alumni for achieving excellence in various fields early in their careers. The awards were conferred to: **Mr Sarthak Jain**, CEO, Nanonets, for Outstanding Entrepreneurship; **Mr Prathamesh Juvatkar**, CTO, Nanonets, for Outstanding Entrepreneurship; **Mr Kislay Pankaj**, Co-founder and CEO, Lectrix Technologies Pvt

Ltd, for Outstanding Professional Achievement, and **Mr Yogesh Goyal**, Assistant Professor, Northwestern University, (in absentia) for Outstanding Academic Achievement. The Institute organised a Grad Walk ceremony for the class of 2020 and 2021, who could not attend their Convocation physically owing to Covid situation in the country. **Dr Anil Bhardwaj**, Director, Physical Research Laboratory, was the Chief Guest on the occasion, and **Prof Rajat Moona**, Director, presided over the ceremony. The event also saw a Decennial Reunion of the Institute's Class of 2012. More than 300 alumni from different UG and PG batches gathered at the Institute from all over the world.

OUTBOUND TRAINING 4.0

To strengthen camaraderie among its staff members and help them take a break from their monotonous routine, IITGN's **Staff Development Cell** organised the fourth edition of its day-long Outbound Training Programme (OBT 4.0) on Dec 10, 2022. It facilitated experiential learning through activities designed to improve leadership, teamwork, and motivation among staff members.

UG RESEARCH SHOWCASE

The Institute organised an Undergraduate

SPORTS

AWARDS AND RECOGNITIONS

- The **girls' basketball team** and **girls' volleyball team** emerged as the winner and the first runner-up, respectively at Shaurya'22, the annual sports fest of IIM Ahmedabad.
- The **girls' basketball team** secured the first position in Concours'22 held at DAIICT.

INTER IIT MEETS

A total of 23 students represented IITGN in the 36th Inter IIT Aquatics Meet held at IIT Delhi.

Adit Rambhia, a BTech student at the Institute, bagged two gold medals in the 100m freestyle and 200m individual medley (M) race categories, and a silver medal in the 100m butterfly race.



About 132 IITGN students took part in the 55th Inter IIT Sports Meet organised at IIT Delhi and IIT Roorkee. While the women's basketball team secured the fourth position, the IITGN contingent was ranked third in the parade. A total of 49 IITGN staff and faculty members participated in several games at the 27th Inter-

IIT Staff Sports Meet held at IIT Delhi. IITGN secured bronze medals in men's cricket and women's shot put.

RUGBY CHAMPIONSHIP

The state-of-the-art Sports Complex of IITGN became a host to the 'Sub-Junior National Rugby Sevens Championship 2022' during Dec 21-22, 2022. U-14 teams from across India participated in the tournament. **Mr Rahul Bose**, a renowned Indian actor, director, screenwriter, and Rugby India's President, was present at the prize distribution ceremony.