

Connections

A quarterly newsletter for friends of IIT Gandhinagar



2021-2022, Volume XIV, Issue IV
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INSTITUTE HIGHLIGHTS



COMMISSIONING OF 'PARAM ANANTA' AT IITGN

'PARAM Ananta', a supercomputing facility under the National Supercomputing Mission (NSM), was commissioned at IITGN on May 30, 2022. **Smt Sunita Verma**, Group Coordinator and Scientist G, MeitY, commissioned the facility in the presence of **Prof Amit Prashant**, Officiating Director, IITGN; along with senior officials from MeitY, DST, C-DAC, and IITGN. It will serve the scientific community at IITGN as well as neighbouring academic institutions and industries.



INAUGURATION OF MAKER BHAVAN

Advancing its active and project-based learning approach, IITGN inaugurated Maker Bhavan, a multidimensional academic makerspace, on Apr 09, 2022. **Dr Hemant Kanakia**, Founder of the Maker Bhavan Foundation and the leading supporter behind the creation of this makerspace at the Institute, inaugurated the world-class facility that will nurture innovative thinking among students and motivate them to convert their ideas into actual prototypes.



VISIT TO THE USA AND NEW COLLABORATIONS

A team of faculty members from IITGN, comprising **Profs Amit Prashant, Ashutosh Srivastava, Jaison Manjaly, Neeldhara Misra, Nithin George, and Pratik Mutha** visited several cities in the USA to promote international collaborations, expand institutional networks and strengthen alumni and well-wisher networks from May 30 to June 18, 2022. Meetings and events were held in Boston, Seattle, San Francisco, San Diego, Tampa, New Jersey, and Washington DC. During the visit, IITGN entered into a Memorandum of Understanding (MoU) with the **Department of Mechanical Engineering, University of Washington, Seattle**, on June 01, 2022, to promote global educational and research opportunities for students and faculty, and foster a spirit of collaboration and cooperation. Another agreement was signed with the **University of Miami** on June 10, 2022, to facilitate student exchange and academic and research collaboration between the two institutes.

UK DELEGATION AT IITGN

A 15-member UK delegation, led by British Deputy High Commissioner to Gujarat and Rajasthan, **Mr Peter Cook**, visited IITGN on June 9, 2022, and

held deliberations with IITGN faculty for academic and R&D collaborations. The delegation included senior officials and functionaries from the Department of Education, UK Government; University of Birmingham; University of Glasgow; University of Southampton; University of Portsmouth; De Montfort University; and the officials of the British Council in India.



PARTNERSHIP WITH IIT MADRAS

IIT Gandhinagar and **IIT Madras** entered into an MoU on May 12, 2022, to initiate a project titled "Kotak-IITM Save Energy Mission (KISEM) - IITGN" to promote decarbonisation of the Indian industries. As a part of this MoU, both the institutes will collaborate on research, consultancy, education, and training through various modes of engagement.

MoU WITH DIRECTORATE OF ARCHAEOLOGY AND MUSEUMS

IIT Gandhinagar has signed an MoU with the **Directorate of Archaeology and Museums**, Sports, Youth and Cultural Activities Department, Government of Gujarat, on May 20, 2022, to share mutual expertise, resources and commitment to the protection and preservation of historical and cultural environments and to conduct quality research and development in conservation, heritage management, and relevant archaeological sciences.

AESA AWARD 2022

Adding one more feather in its cap, IITGN has won 'AESA Award 2022' in the non-residential institutional category for the 'Central Arcade' building on June 03, 2022.

SUPPORT FOR THE INSTITUTE

SHREE JANARDAN TALDEVKAR SCHOLARSHIP

Madan Taldevkar, a BTech alumnus of 2015, has set up **Shree Janardan Taldevkar Scholarship** in honour of his late father. The scholarship of Rs 1 lakh per year will support students at IITGN. Madan was the recipient of the Merit-cum-Means scholarship at IITGN while pursuing his BTech

in Mechanical Engineering. After graduation, he joined Tata Motors as a Manufacturing Engineer. He completed his master's in Industrial Engineering from Texas A&M University in 2020 and currently works as a Senior Industrial Engineer at Tesla, USA.



OUTREACH

- **Prof Karla Mercado-Shekhkar**, Assistant Professor, Biological Engineering, was invited as a guest speaker by GBRC to deliver a talk as part of their initiative PRABODH (Promoting Research Awareness in Biotechnology for Development of Human Resources), on Apr 26, 2022. She, along with **Prof Himanshu Shekhar**, Assistant Professor, Electrical Engineering, was also invited to deliver a seminar at IIT Delhi.
- **Prof Gadadhar Misra**, Visiting Professor, Mathematics, was invited as

one of the speakers to speak on “Recent Advances In Mathematical Analysis and Applications” at the National Conference of Academy for Progress of Mathematics, organised by DST-CIMS, Institute of Science, Banaras Hindu University (BHU), Varanasi, during May 7-8, 2022.

- **Prof Amit Prashant**, Officiating Director and **Prof Dhiraj Bhatia**, Assistant Professor, Biological Engineering, were invited to present institutional talks in the PDF Satellite Meeting 2022, the 2nd chapter of “14th Young Investigators’ Meeting 2022”, organised by India Bioscience on May 11, 2022.
- **Prof Emila Panda** was awarded ‘JSPS (Japan Society for the Promotion of Science) Invitation Fellowship for Research in Japan’ (short term) in the category of Engineering Sciences.

FACULTY NEWS

AWARDS AND RECOGNITIONS

- **Prof Sivapriya Kirubakaran**, Kankuben Bakshirambhai Gelot Chair Associate Professor, Chemistry, has been featured among India’s top 25 scientists in a book titled ‘India’s Science Geniuses’ for her work on ‘H. pylori’.
- **Prof Anirban Dasgupta**, N Rama Rao Chair Professor of Computer Science & Engineering, IITGN, has been selected as an Advisory Committee Member at Infosys Centre for Artificial Intelligence, IIT Delhi.
- **Prof Arka Chattopadhyay**, Assistant Professor, HSS, has been selected as the ‘2022-23 Charles Wallace India Trust Fellow’ by the Institute for Advanced Studies in the Humanities, the University of Edinburgh.
- A book titled ‘Glass Crafts in Northern India’, authored by **Dr Alok Kumar Kanungo**, Assistant Research Professor, HSS (Archaeological Sciences Centre), was released by the Honourable Governor of Uttar Pradesh, **Smt Anandiben Patel**.

PATENTS GRANTED

A Filter for Water Purification and a Process for its Manufacture: Inventors include **Prof Chinmay Ghoroi** and **Dr Deepa Dixit**. The patent number is 397587.

PATENTS FILED

A Universal IoT-based Smart Energy Management Device: Inventors include **Prof Naran Pindoriya**, **Anand Singh Chauhan**, **Ravindra Kuhada**, and **Bablesh Kumar Jha**.

SPONSORED AND CONSULTANCY PROJECTS

Please follow this link to find the list of sponsored and consultancy projects: https://iitgn.ac.in/newsletter/projects/q2_2022 or scan the QR code.



NEW FACULTY

| Name | Designation | Discipline | PhD | Date of Joining |
|---------------------------------|----------------------------|--------------------------------|---|-----------------|
| Dr Aashish Xaxa | Assistant Professor | Humanities and Social Sciences | Tata Institute of Social Sciences | 06/04/2022 |
| Dr Jonathan Mark Kenoyer | Fulbright-Nehru Specialist | - | University of California, Berkeley | 13/05/2022 |
| Dr Rajkrishna Dutta | Assistant Professor | Earth Sciences | Princeton University, New Jersey | 26/05/2022 |
| Dr Subramanian Sankaranarayanan | Assistant Professor | Biological Engineering | University of Calgary, Canada | 09/06/2022 |
| Dr Mukesh Dhanka | Assistant Professor | Biological Engineering | IIT Bombay | 10/06/2022 |
| Dr Don Wallace Freeman Dcruz | Assistant Professor | Humanities and Social Sciences | University of Hyderabad | 14/06/2022 |
| Dr Rusa Mandal | Assistant Professor | Physics | The Institute of Mathematical Sciences, Chennai | 30/06/2022 |

ACTIVITIES AT IITGN

SRIP 2022

IITGN kick-started its flagship Summer Research Internship Programme (SRIP) 2022 on May 06, 2022. The 12th edition of the eight-week SRIP received a whopping more than 24,000 applications from across the country. Out of these, around 155 student interns were selected from various institutes and colleges across the country, who worked on about 115 research projects offered by 54 faculty members of IITGN. The interns concluded their internship with a poster presentation competition on July 02, 2022. The programme was coordinated by **Prof Iti Gupta** and **Vineet Vashista**.



INVENTION FACTORY® INDIA 2022

After a gap of two years due to the global pandemic, IITGN hosted the third edition of the Invention Factory® India, a one-of-its-kind intensive

summer programme in inventing. 20 students from 10 IITs participated and worked in teams of two to conceive, prototype, and pitch ten unique inventions that addressed various societal and consumer needs, and filed the US as well as Indian provisional patent applications for their inventions, over seven weeks. The teams were directly mentored by **IITGN Professors Nithin George, Madhu Vadali, and Jaichander Swaminathan**, as well as the founders of the original programme in the US, **Cooper Union Professors Alan Wolf and Eric Lima**.

CERTIFICATION IN SCIENTIFIC WRITING

A total of 57 PhD students and 2 Postdoctoral Fellows were awarded the Certification in Scientific Writing in the recent cycle that concluded on May 06, 2022. This programme is conducted every semester by **Prof Karla Mercado-Shekhar** (Coordinator) and **Dr Maria Joao Amante** (Advisor). More details about this initiative can be found here: <https://initiatives.iitgn.ac.in/scientificwriting/>

CAMP INSPIRE

The Curiosity Lab hosted Camp Inspire 2022 for school students of classes 8 to 12, besides teachers, parents, and scholars of education, from June 03-05, 2022. It was the third camp of the Curiosity Camp series ideated by IITGN that brought together inspiring stories of some incredible individuals who took unique paths and chose to follow their passions despite obstacles. The event, attended by about 4000 participants, was coordinated by **Prof Jaison Manjaly**.



EXPOSURE CAMP FOR STUDENTS

The Humanities and Social Sciences discipline, in collaboration with a local educational organisation based in Chhota Udepur and the Azim Premji University, organised a three-day exposure camp on higher education opportunities for about 26 students of Chhota Udepur, a rural tribal district in Gujarat, from May 20 to 22, 2022. The residential workshop was designed to inform students pursuing higher secondary and undergraduate studies about various higher education opportunities and different career streams across disciplines. The workshop was organised by **Prof Nishaant Choksi**.

CHEMCATCON 2.0

The discipline of Chemistry organised the second edition of the 'Chemical Catalysis Conference' (ChemCatCon) in offline mode during May 14-15, 2022. The theme of the conference was 'Heterogeneous Catalysis: Mechanistic Investigations on Surface'. The two-day conference was followed by a one-day experiential workshop and was convened by **Prof Sudhansu Sharma**.

IITGN-IITK JOINT SYMPOSIUM

Faculty members of IITGN and IIT Kanpur came together for a Joint Symposium on Energy Technologies on Apr 15 and 16, 2022, to discuss research areas of mutual interest in the domain of energy technologies. The event provided a platform to identify potential joint research proposals and projects. **Prof Atul Bhargav** coordinated the event.



STUTI WORKSHOPS

IITGN successfully conducted two seven-day technical workshops-cum-hands-on training programmes on the DST-funded equipment under the 'STUTI' scheme. The first training session was held on 'Single Crystal X-Ray Crystallography' from Apr 18-24, 2022, under the supervision of **Prof Vijay Thiruvengadam**, Associate Research Professor, Biological Engineering;

and the second workshop on 'Analytical SEM' was held during Apr 25-May 01, 2022, under the supervision of **Prof Pradipta Ghosh**, Assistant Professor, Materials Engineering. Each workshop had more than 30 participants from about 15 different institutes across the country. The STUTI project at IITGN is being handled by **Prof Emila Panda**.

GIS APPLICATIONS IN SOCIAL SCIENCES

The Humanities and Social Sciences discipline and the Archaeological Sciences Centre jointly organised a two-day virtual workshop on 'GIS Applications in Social Sciences' during May 13-14, 2022. The workshop received nearly 90 applications from around the globe, out of which 20 applicants were selected to participate. Apart from lectures and hands-on training, the workshop included two keynote sessions and flash presentations by participants. PhD Scholars **Camellia Biswas** and **Ekta Gupta**, and **Profs Sharada CV** and **VN Prabhakar** organised the workshop.

KARYASHALA WORKSHOP

The Biological Engineering discipline, as part of the SERB-sponsored "Accelerate Vigyan" programme, organised a Karyashala Workshop & Hands-on Training on 'Application of MALDI-TOF Mass Spectrometry in Proteomics and Macromolecular Analysis' during June 14-21, 2022.

TRAINING PROGRAMME WITH GUVNL

IITGN, in collaboration with Gujarat Urja Vikas Nigam Limited (GUVNL) and Gujarat Energy Training & Research Institute (GETRI), conducted a two-week advanced training programme on "System Operation and Commercial Aspects of Power Purchase, Open Access, & Energy Accounting" for senior officers/engineers of the state electricity companies from June 27 to July 08, 2022. The valedictory session of this residential workshop was held in the presence of **Shri Jai Prakash Shivahare** (IAS), Managing Director, GUVNL. The workshop was coordinated by **Profs Anand Kumar** and **Naran Pindoriya**.

ACTIVITIES BY CCL

The **Centre for Creative Learning (CCL)** conducted workshops for more than 300 teachers, students, and science communicators from Apr to June 2022. These workshops were focused on implementing the National Education Policy (NEP) 2020 at the classroom level; integrating sports and arts with curriculum; the scope of activities, models, etc. to make classrooms engaging; and making science experiential at science community centres. The Centre has also established a STEM lab for all 746 KGBV schools of UP and was visited by a team from the Ministry of Education, Bihar on May 27-28, 2022.

STARTUP MENTORSHIP BY IIEC

During May 03-07, 2022, the **IIT Gandhinagar Innovation and Entrepreneurship Center (IIEC)** organised 'Build your Startup with **B V Jagadeesh**', a highly regarded serial entrepreneur, mentor, and angel investor, to help the participants understand the fundamentals of the entrepreneurial journey. In addition, the participants also received entrepreneurial lessons from other successful entrepreneurs such as **Mr Jimmy Padia**, Founder & CEO, Floatbot; **Mr Sharad Sanghi**, Managing Director & CEO, NTT Ltd, India; and **Mr Naveen Varma Alluri**, Co-founder, My Ally.

COMMUNITY OUTREACH BY NEEV

NEEV-IITGN trained 145 rural youth and women in six skill development courses, including Stitching Skills, Beautician Skills, Basic Computer Skills, Spoken English Skills, Tally Skills, and Vocational Skills of wiring and CNC machining. These courses are offered entirely free of cost with philanthropic support from the **Desai Foundation Trust**. NEEV also conducted a Menstrual Health Management Seminar along with Menstrual Day Celebrations with 61 women from nearby villages on May 31, a Career Development Seminar on June 04 with 43 participants, and a five-day Entrepreneurship Development Workshop for 42 youth and women from rural and peri-urban areas of Gandhinagar-Ahmedabad during June 20-24, 2022.

NYASA SUMMER CAMP

Nyasa, IITGN successfully conducted a 10-day summer camp from May 30 to June 08, 2022, for about 90 children from neighbouring villages and construction workers' colonies of IITGN. About 40 mentors, including

students, faculty, and community members of IITGN, along with about 50 student volunteers conducted various sessions to help these kids explore their hobbies and hidden talents with a plethora of exciting activities and learning modules.

WORKSHOPS

- Crawling Creatures by **Mr Rohit Harip**, Industrial Designer, Apr 09, 2022.
- Theatre Workshop by **CA Aaditya Trivedi**, a Chartered Accountant and theatre practitioner, Apr 10, 2022.
- Ideating and Conceptualising through Sketching by **Mr Niravkumar Patel**, Industrial Designer, Design and Innovation Centre (DIC), IITGN, June 17, 2022.
- Art of Painting Workshop by **Anisha Mohanty**, MA student, Humanities and Social Sciences, IITGN, June 17, 2022.

SHORT COURSES

- An Insight into Next-generation Data Centers by **Mr Harsh Mehta**, Director Technology and Solutions, India & SAARC Arista Networks, Apr 16 to May 15, 2022.
- Brush up Your Grammar: A Course for Beginners by **Dr Monal K Desai**, Teaching Associate, Writing Studio, IITGN, June 20, 22, 24, 27 & 29, 2022.
- Geospatial data analysis using open-source software QGIS by **Dr Sonam**, a CSIR Research Associate, Earth Sciences, IITGN and **Dr Ekta Gupta**, Early Career Fellow

at Archaeological Sciences Centre, IITGN, June 27 to July 01, 2022.

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

- 11 IITGN students, namely **Prajwal Kumar Singh**, Computer Science and Engineering; **Chandni Thakkar**, Mathematics; **Sreejith A Nair**, Physics; **Falak Vats**, Civil Engineering; **Ganeshkumar V**, Mechanical Engineering; **Om Maheshwari**, Electrical Engineering; **Siddhi Balu Ambhore**, Mathematics; **Prachi Sharma**, Materials Engineering; **Ratnadeep Samanta**, Materials Engineering; **Abira Rashid**, Materials Engineering; and **Vishakha Takhar**, Physics; have received the coveted Prime Minister's Research Fellowship (PMRF) in the December 2021 cycle.
- **Dr Rahul Kumar**, PhD alumnus, Mathematics, has received the Fulbright-Nehru Postdoctoral Research Fellowship 2022-23.
- **Rishiraj Adhikary**, PhD scholar, Computer Science and Engineering, has been awarded the Fulbright-Nehru Doctoral Research Fellowship 2022-23.

UDAAN 2022

IITGN hosted its signature farewell programme, "Udaan", for the graduating students on Apr 13, 2022. The farewell evening became memorable with speeches and anecdotes shared by students and faculty members.

AAGMAN 2.0

The Staff Development Cell organised the second edition of Aagman, the

staff induction programme of IITGN, to welcome new staff members to the Institute during Apr 29-30, 2022. The newly joined 25 staff members had an opportunity to interact with their colleagues and other officials of the Institute to familiarise themselves with IITGN's working pattern, culture and ethos.

STUDENTS' ACTIVITIES

The **Design and Innovation Centre** organised two exhibitions to celebrate and showcase the work of students who had opted for two design courses - 'Playing with Possibilities: Gaming New World' and 'Creativity, Design and Doing' during the third week of April. Additionally, **Palette**, the art club of IITGN, organised Exhibit 2.0 on Apr 19, 2022, to showcase more than 60 paintings and sketches made by the IITGN community. The **Quizzing Society at IITGN**, in collaboration with **IIT Hyderabad's Quiz Club**, conducted a pan-India quiz competition on the theme 'Anime Quiz'.

LONG SERVICE AWARDS

In a unique way to recognise the services of its employees, IITGN has established 'Long Service Award' for the employees who satisfactorily serve the institute for a period of ten years. The maiden event for this award was organised on Apr 16, 2022, wherein 57 employees, including 28 faculty and 29 staff members, were felicitated. **Prof Sudhir K Jain**, Founding Director of IITGN and incumbent Vice-Chancellor of Banaras Hindu University, was the Chief Guest at the ceremony and presented the awards to all recipients.

SPORTS

A DAY WITH A CHAMPION

The Institute also hosted World No 1 girls junior badminton player **Ms Tasnim Mir** on May 2, 2022. She visited IITGN's newly built Sports Complex, interacted with the Institute community in a Q&A session, and played an exhibition match in the new badminton court.

IITGN CRICKET LEAGUE (ICL)

On May 30, 2022, IITGN commenced the IITGN Cricket League (ICL) with the objective to bring together cricket enthusiasts from different corporates and institutions in the vicinity and give them a memorable experience of playing a professional tournament. The 18-matches league was played between 12 teams in the new cricket ground at IITGN. ONGC emerged as the winner of the league in the final match played with Gujarat Secretariat on June 28, 2022.

INTERNATIONAL DAY OF YOGA

The IITGN community celebrated the 8th International Day of Yoga with great energy. The demonstration and practice of *yogasanas* in the morning was followed by two insightful sessions on "Relevance of Yoga in Everyday Life" by **Prof Nitin Padhiyar**, IITGN and **Hemant Shah**, an independent

yoga instructor.

LEAGUE OF RESIDENTS

The Physical Education section organised a League of Residents for the IITGN staff, faculty members and their families from May 06-08, 2022. The three-day event included several sports and games such as football, cricket, badminton, table tennis, walkathon, sack race, relay race, parent-kid doubles badminton championship, tour de IITGN cyclothon, parent-kid table tennis doubles, etc.

SQUASH COACHING CAMP

IITGN organised a one-month Squash Coaching Camp from May 23 to June 23, 2022, at the newly built Sports Complex of the institute. For the first time, the coaching camp and squash courts at the Institute were made available for external participants as well, including participants from neighbouring villages. The one-month-long squash camp was led by **Mr Mukesh Rai**, a Squash Racket Federation of India (SRFI) certified coach from Delhi.

