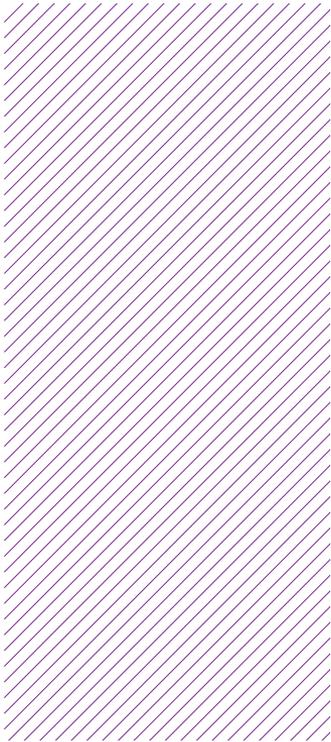# World Class Faculty

Global Aspirations

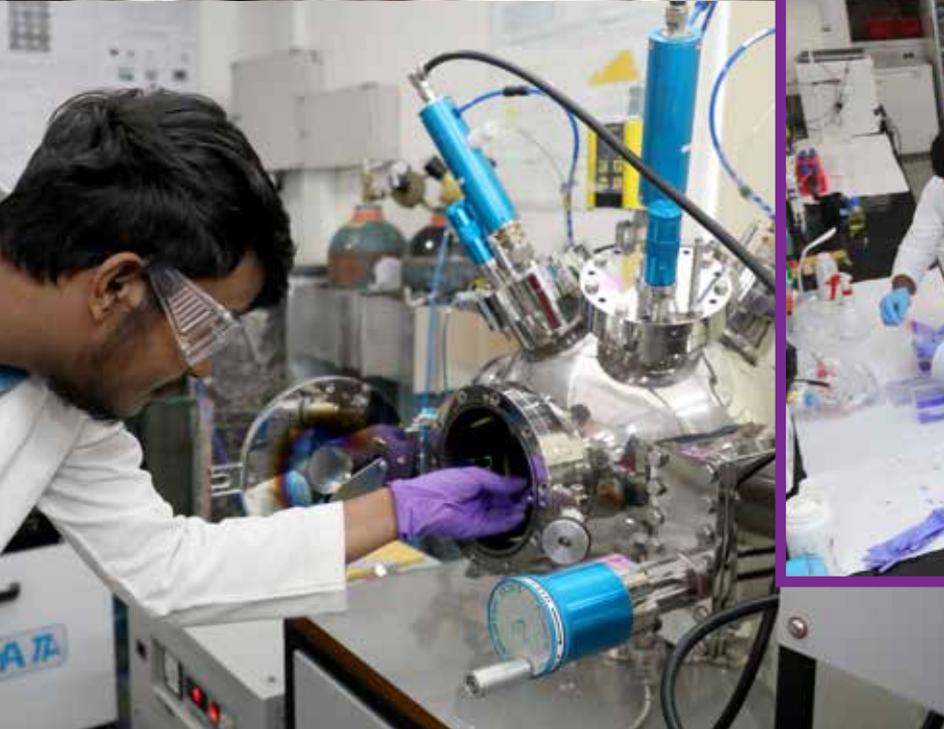**Indian Institute of Technology Gandhinagar**

IIT Gandhinagar (IITGN) has been making impactful strides in the domains of academics, research, industry collaborations, and innovation. It has embarked on an ambitious journey to become among the best research-intensive educational institutions globally. The Institute has created an ecosystem where inclusivity, diversity, equity, merit, and flat governance structures are prioritized.

Here, faculty have the opportunity to build a world-class research program, experiment with innovative and impactful teaching, and contribute to institutional building through their service.
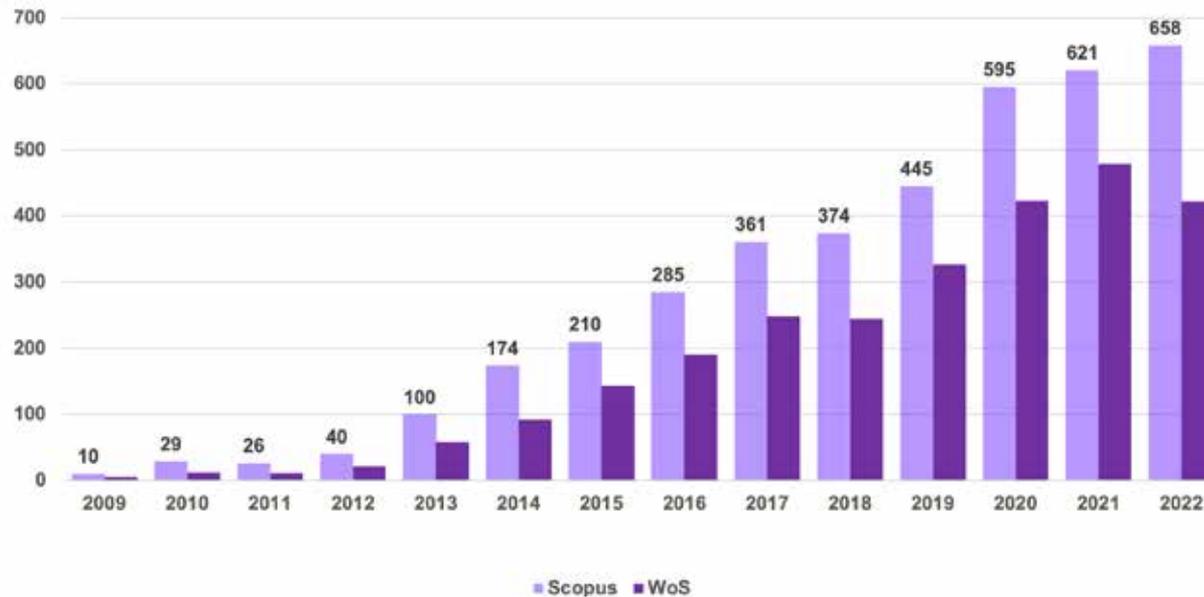
Excellence in Research

- Collaborative, interdisciplinary, and impactful research encouraged
- 7 Interdisciplinary Centres in Archaeological Sciences, Biomedical Engineering, Creative Learning, Cognitive and Brain Sciences, Design and Innovation, Safety Engineering, and Sustainable Development
- Publications in high-impact, peer-reviewed journals
- 54 patents filed, 13 granted
- Over 1000 sponsored projects of approximately Rs 160 crores in funding granted since 2017
- Close proximity to Gujarat International Fin-tech City (GIFT City) and prominent research institutions, industries, and higher educational institutes
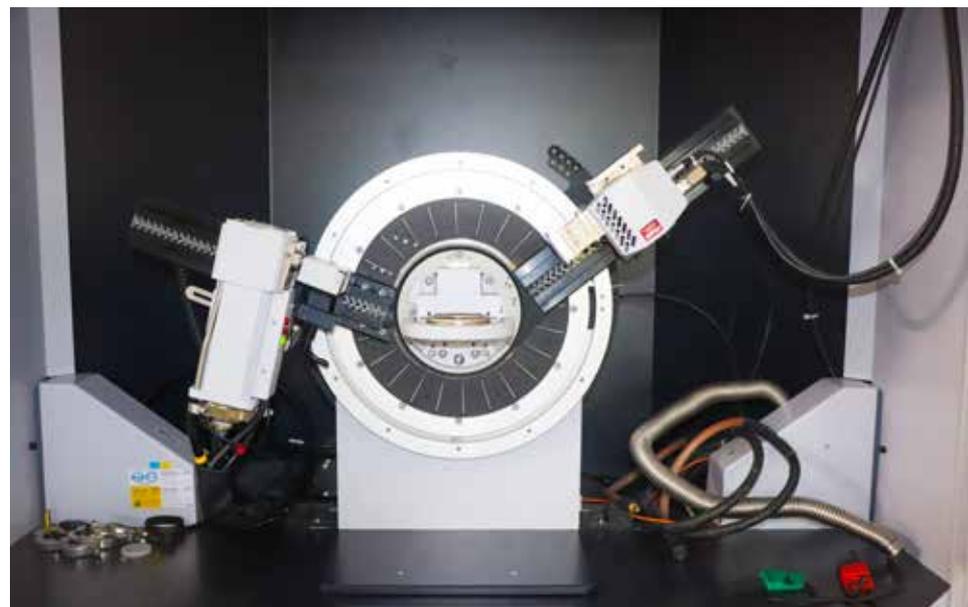
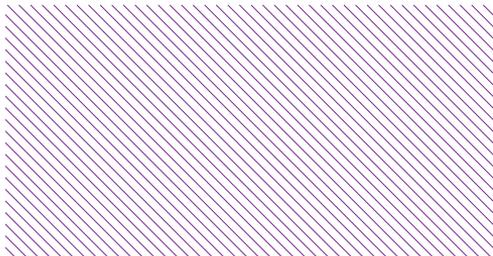**IITGN Research Publications (2009-2022)**

State-of-the-Art Facilities

- Supercomputing Facility with PARAM Ananta, VEGA and ANEESUR supercomputers, and several high-end CPU and GPU workstations
- A Central Instrumentation Facility equipped with advanced analytical instruments (TEM, FE-SEM, XRD etc.)
- Library with a comprehensive physical and digital repository and fully automated services

Support and Engagement

- Flexible and need-based Start-up Grants and Research Excellence Fellowship for early career faculty
- Travel support (national and international), Professional Development Allowance
- Institute Excellence Awards for Research, Teaching, Institution Building, and Outreach
- Support for organizing conferences, workshops, invited visits, and retreats
- Chair Professorships
- Liberal maternity and paternity leave
- Research Engagement and Outreach through dedicated External and Internal Communication Teams

Collaborations

- Vibrant state-wide research ecosystem with funding from agencies like Gujarat State Biotechnology Mission, Gujarat Council on Science and Technology, Gujarat Biotechnology Research Centre, and Gujarat Urja Vikas Nigam Limited
- Fruitful partnerships with national and international organizations such as Department of Science and Technology, Science and Engineering Research Board, ISRO, and corporates such as AAAG India, Underwriters Laboratory, HILTI, L&T Technology Services, Centre for Development of Advanced Computing (C-DAC), and more

CANADA
- University of Saskatchewan
- Saint Mary's University
- Simon Fraser University
- British Columbia Institute of Technology
- University of Alberta
- University of British Columbia
- University of Victoria
- University of Ottawa

GERMANY
- Innovations For High Performance Microelectronics-IHP Gmbh
- RWTH Aachen University
- Friedrich-Schiller-Universität Jena
- Technische Universität München
- Otto Von Guericke Universität Magdeburg

UK
- University of Durham
- University of Manchester
- University of Strathclyde
- Loughborough University
- University College of London
- University of Northampton
- University of Southampton
- University of Warwick

JAPAN
- Japan Advanced Institute of Science and Technology
- Ricoh Company Ltd
- Kyushu University

CHINA
- Confucius Institute Headquarters

SOUTH KOREA
- Seoul National University

SCOTLAND
- University of Strathclyde

PAPUA NEW GUINEA
- Papua New Guinea University of Technology

PORTUGAL
- University Institute of Lisbon
- Instituto Superior Tecnico

USA
- California Institute of Technology
- American Inst of Chemical Engineers
- Columbia University
- Nielsen
- SUNY Albany
- Texas A&M University
- The New School, New York
- US Agency For Intl Development
- Underwriters Laboratories Inc.
- Wheels Global Foundation Inc.
- Arizona State University
- Brown University
- California Polytechnic State Univ
- Clemson University
- Colorado School Of Mines
- Duke University
- Johns Hopkins University
- Kettering University
- Massachusetts Inst Of Technology
- Ohio State University
- Pennsylvania State University
- Purdue University
- Rutgers University
- University of Colorado
- University of Illinois
- University of Miami
- University of Michigan
- University of Notre Dame
- University of Southern California
- University of Washington Seattle
- University of Wisconsin Madison
- Vanderbilt University
- Wesleyan University
- Yale University

- Carnegie Mellon University
- Case Western Reserve University
- Cisco
- Citrix Systems Inc.
- Colorado State University
- EPIR Technologies
- Georgia Institute of Technology
- Harvard Medical School
- Harvard University
- Lehigh University
- Louisiana State University
- New York State Department of Health
- Pacific Northwest National Laboratory
- Rowan University
- SUNY Buffalo
- Syracuse University
- Texas Tech University
- University of Akron
- University of California, Merced
- University of Colorado Boulder
- University of Houston
- University of Illinois Urbana Champaign
- University of Maryland Baltimore
- University of Massachusetts Amherst
- University of Nebraska–Lincoln
- University of North Texas
- University of Rhode Island
- University of Rochester
- University of South Carolina
- University of Texas Southwestern
- University of Utah
- Washington State University
- Washington University In St. Louis

SWITZERLAND
- EPFL - École Polytechnique Fédérale De Lausanne
- ETH Zurich, Switzerland

FRANCE
- Institut Superieur D'electronique De Paris
- CRPG-CNRS Nancy
- Institut National Des Télécommunications
- Adera–Soutenir Les Acteurs De L'innovation
- École Nationale Supérieure D'arts Et Métiers
- National Institute for Research in Digital Science and Technology (Inria)
- University of Lille
- University of Montpellier
- University Pierre and Marie Curie

ITALY
- Sapienza University of Rome
- Eunicer–Eurasian University Network For Intl Cooperation on Environmental Risks
- Istituto Di Scienza E Tecnologie Dell'informazione
- Università Degli Studi Del Piemonte Orientale

TAIWAN
- National Sun Yat-sen University

SRI LANKA
- University Of Jaffna

BRAZIL
- Federal University of Paraiba

SINGAPORE
- National University of Singapore
- A* Star Singapore
- Nanyang Technological University
- Singapore University of Technology Design

MALAYSIA
- University Teknologi Petronas

AUSTRALIA
- Curtin University
- RMIT University Melbourne
- University of New South Wales
- Victoria University, Australia

ISRAEL
- Israel Institute of Technology
- Bar-Ilan University
- Tel Aviv University

UAE
- Global Marketing System Dmcc

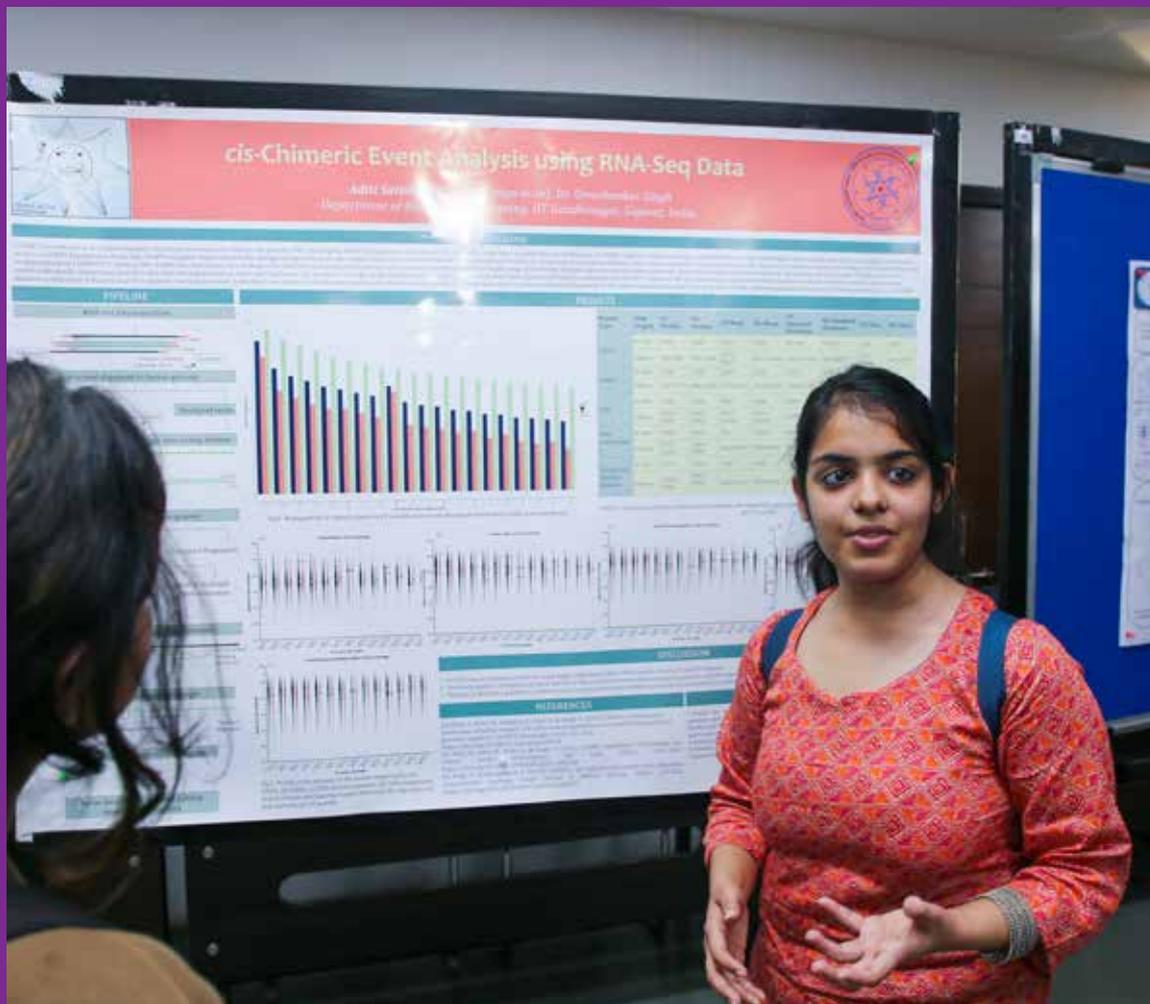# BANGLADESH
- North South University

NEW ZEALAND
- The University of Canterbury

Legend
- MEMORANDUM OF UNDERSTANDING
- VISITING FACULTY
- INTERNSHIPS/PHD SEMESTER/RESEARCH COLLABORATIONS

INTERNATIONAL COLLABORATIONS
AT IIT GANDHINAGAR

Research Ecosystem

- Access to high-quality PhD, undergraduate (UG), and postgraduate (PG) students with diverse representation
- Most PhD and PG students are supported with government/ institute fellowships. Flexibility to recruit UG/ PG / PhD students from other disciplines for interdisciplinary projects
- Postdoctoral fellowships / Early Career Fellowships supported by the institute
- Vibrant Summer Internship program
- Mechanisms to encourage international exposure through visiting positions and collaborations
- Seamless Academia-Industry connection facilitation through the IITGN Research Park
- Liberal norms for faculty engagement in consultancy with industries, and IP and technology transfer policies
- Mentorship through the IITGN Innovation and Entrepreneurship Center for incubation, patenting, startups, and technology transfer

High Impact Research

ACS Catalysis

Electrooxidation of Hydrazine Utilizing High-Entropy Alloys: Assisting the Oxygen Evolution Reaction at the Thermodynamic Voltage

Nirmal Kumar Katiyar, Shikha Dhakar, Arko Parui, Pooja Gakhad, Abhishek Kumar Singh, Krishanu Biswas, Chandra Sekhar Tiwary, and Sudhanshu Sharma

ACS NANO

Geometry of a DNA Nanostructure Influences its Endocytosis: Cellular Study on 2D, 3D, and *in vivo* Systems

Anjali Rajwar, Shravani Reddy Shetty, Payal Vaswani, Vinod Morya, Amlan Barai, Shamik Sen, Mahendra Sonawane, and Dhiraj Bhatia

IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE

Depthwise Spatio-Temporal STFT Convolutional Neural Networks for Human Action Recognition

Sudhakar Kumawat, Manisha Verma, Yuta Nakashima, and Shanmuganathan Raman

PNAS Proceedings of the National Academy of Sciences of the United States of America

Mechanistic Determinants of Effector-independent Motor Memory Encoding

Adarsh Kumara, Gaurav Panthi, Rechu Divakar, and Pratik K Mutha,

nature COMMUNICATIONS

Selective Transport of Water Molecules through Interlayer Spaces in Graphite

Lalita Saini, Siva Sankar Nemala, Aparna Rathi, Suvigya Kaushik, and Gopinadhan Kalon
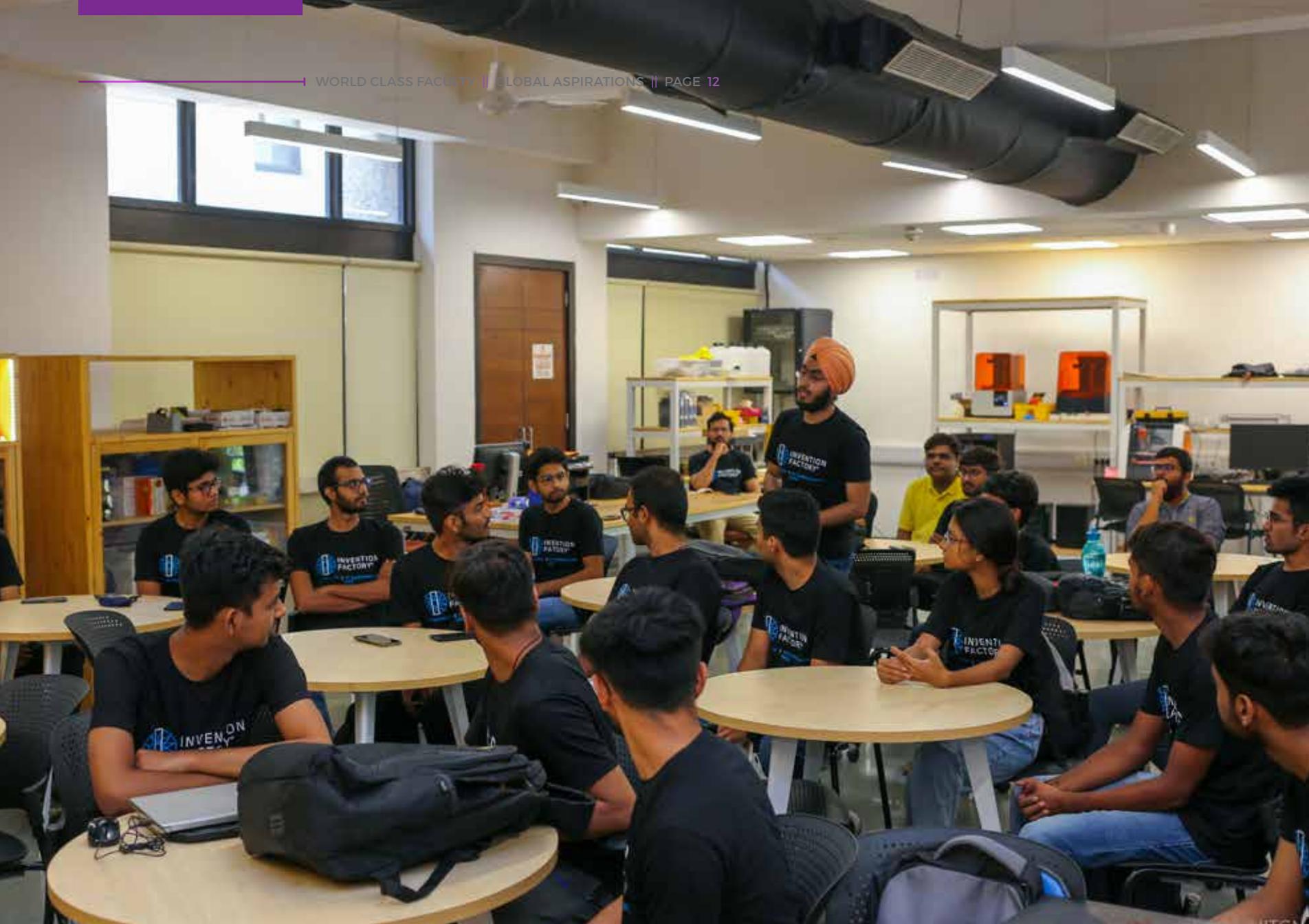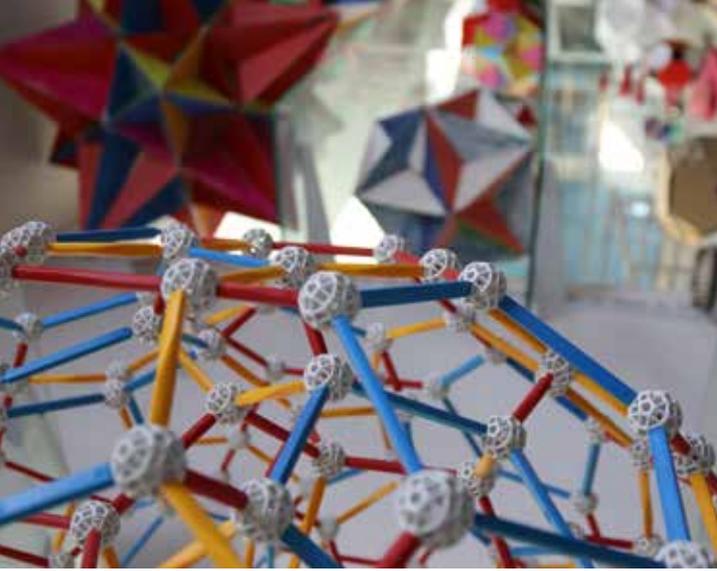
IEEE TRANSACTIONS ON AFFECTIVE COMPUTING

Gaze-Sensitive Virtual Reality Based Social Communication Platform for Individuals with Autism

Pradeep Raj Krishnappa Babu, Poojan Oza, and Uttama Lahiri
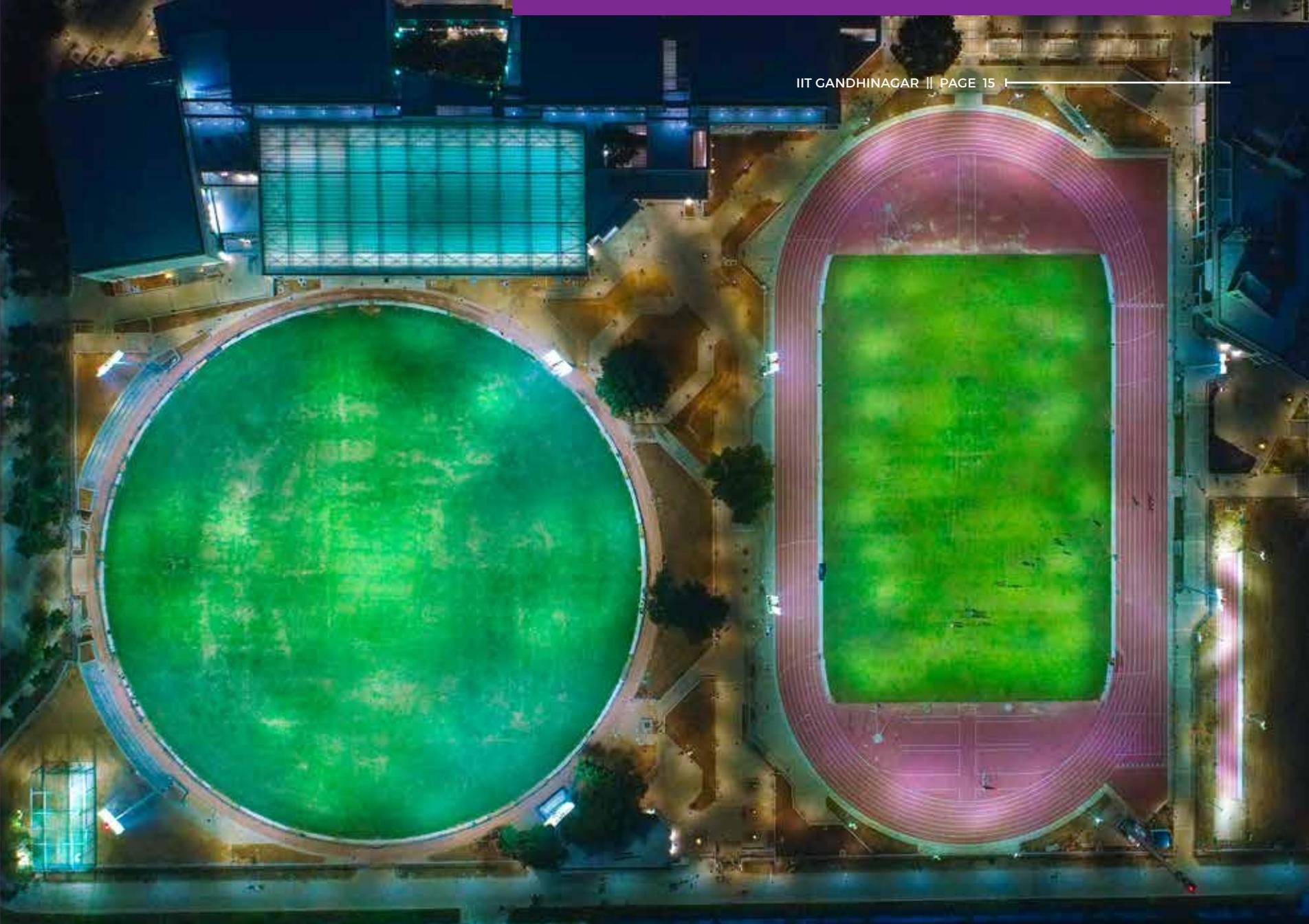
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Unique Curriculum

- Emphasis on Active Learning pedagogy and flexible curriculum design
- Academic activities supported by Maker Bhavan, Tinkerers Lab, Writing Studio, and Center for Creative Learning

Faculty Achievements

Numerous faculty achievements such as the

- Shanti Swarup Bhatnagar Award
- National Teachers' Award
- Gábor Szegö Award
- INAE Young Engineer Award
- NASI - Platinum Jubilee Young Scientist Award
- Merck Young Scientist Award
- IEEE UFFC Star Ambassador Award
- American Geophysical Union Devendra Lal Memorial Medal
- Google Research Award
- Padma Shri
- Ramanujan Fellowship
- Swarnajayanti Fellowship
- Ramalingaswami Fellowship
- Inspire Fellowship
- Tata Innovation Fellowship
- Har Govind Khorana IYB Award
- JSPS Invitation Fellowship
- IUSSTF Fellowship, and more

Smart Campus

- World-class riverfront residential campus
- Good accessibility to the Airport, Railway Station, Hospitals, Ahmedabad city, and the upcoming Metro rail
- 24x7 Medical Center with tie-ups with the leading hospitals in Ahmedabad and Gandhinagar
- Smart and networked classrooms, air-conditioned hostels, well-furnished Guest House
- Green Campus with Five-Star GRIHA-LD rating for sustainability
- State-of-the-Art Sports Complex which received the AESA Award 2023
- A Central Arcade-Student Activity Centre that won the 32nd JK Architect of the Year Award
- Presence of spacious Auditoriums and Amphitheatres, an all-purpose Art Studio, a Clay Studio, activity rooms, and more
- Aesthetically constructed academic and housing infrastructure that has won 3 HUDCO national design awards
- Elegantly designed housing complex that is functional, sustainable, and promotes community interaction

Life@IITGN

- Located in Gandhinagar an extremely safe and well-planned city with wide roads and sparse traffic
- Pollution-free campus with vast green covers and a high biodiversity index
- Speed limit-enforced roads, safe kids' play areas, pedestrian-friendly walkways, numerous parks, and high security
- Excellent on-campus daycare, morning and after-school programs
- Career opportunities for family members through institutions, organizations, industries, and GIFT City
- Zero discharge campus, comprehensive solid waste management, and sustainability practices
- Multiple shops and cafeteria on campus, laundromat, availability of house help
- On-campus Post Office and Bank
- Wi-Fi campus with 24x7 broadband facilities and internet connectivity
- Vibrant campus life with a warm and welcoming community
- Diverse cultural, technical, and sports events with active community participation

**INDIAN INSTITUTE
OF TECHNOLOGY
GANDHINAGAR**

PALAJ, GANDHINAGAR 382 055

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faculty.recruitment@iitgn.ac.in