IITGN 10TH ANNIVERSARY

INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

भारतीय प्रौद्योगिकी संस्थान गांधीनगर

10 ON 10
FOUNDATION BLOCKS OF EXCELLENCE

As IITGN celebrates its 10th anniversary in 2018-2019, we look back at its greatest accomplishments during the first decade.

1 GLOBALIZATION
2 **CUTTING-EDGE CURRICULUM**
3 WORLD CLASS FACULTY
4 **DIVERSITY**
5 INTERDISCIPLINARITY
6 **STUDENT EMPOWERMENT**
7 SOCIAL ENGAGEMENT
8 **PHILANTHROPY**
9 NIMBLE & INNOVATIVE
10 **AWARD WINNING CAMPUS**

Cover: PhD students Neetu Varun (left) and Beena Kumari (right) at the Central Instrumentation Facility.
Right: 2011 Convocation ceremony of the pioneering batch; BTech student Shashank P Naphade, demonstrates his research project.

1

GLOBALIZATION

IITGN is among the most globalized campuses in India with vibrant study abroad and visiting faculty exchange programs across all continents.

———————

40% OF UG STUDENTS

receive study abroad opportunities in the form of semester overseas, research internships, summer programs, etc., which is three times the average at U.S. universities.

80% OF FACULTY

has overseas degree or postdoc experience.

15% OF FACULTY

are visiting faculty from India and abroad.

EXCHANGES ACROSS ALL CONTINENTS

California Institute of Technology, Duke University, The New School, Texas A&M and SUNY Buffalo in USA; University of Saskatchewan, Canada; Japan Advanced Institute of Science & Technology; ISCTE University Institute of Lisbon, Portugal, etc.

Visiting international students at an IITGN event.

CANADA
UNIVERSITY OF SASKATCHEWAN
BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
SAINT MARY'S UNIVERSITY
UNIVERSITY OF ALBERTA
UNIVERSITY OF BRITISH COLUMBIA
UNIVERSITY OF VICTORIA
UNIVERSITY OF OTTAWA

GERMANY
INNOVATIONS FOR HIGH PERFORMANCE MICROELECTRONICS - IHP GMBH
FRIEDRICH-SCHILLER-UNIVERSITÄT JENA
OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG
RWTH AACHEN UNIVERSITY
TECHNISCHE UNIVERSITÄT MÜNCHEN

UK
UNIVERSITY OF MANCHESTER
UNIVERSITY OF STRATHCLYDE
LOUGHBOROUGH UNIVERSITY
UNIVERSITY COLLEGE OF LONDON
UNIVERSITY OF NORTHAMPTON
UNIVERSITY OF SOUTHAMPTON
UNIVERSITY OF WARWICK

PORTUGAL
UNIVERSITY INSTITUTE OF LISBON

CHINA
CONFUCIUS INSTITUTE HEADQUARERS

JAPAN
JAPAN ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY
RICOH COMPANY LTD
KYUSHU UNIVERSITY

SOUTH KOREA
SEOUL NATIONAL UNIVERSITY

PAPUA NEW GUINEA
PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

USA
AMERICAN INST OF CHEMICAL ENGINEERS
CALIFORNIA INSTITUTE OF TECHNOLOGY
COLUMBIA UNIVERSITY
NIELSEN
SUNY ALBANY
TEXAS A&M UNIVERSITY
THE NEW SCHOOL, NEW YORK
UNDERWRITERS LABORATORIES INC.
US AGENCY FOR INTL DEVELOPMENT
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
UNIVERSITY OF COLORADO
UNIVERSITY OF ILLINOIS
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
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
WASHINGTON STATE UNIVERSITY
WASHINGTON UNIVERSITY IN ST. LOUIS

SWITZERLAND
EPFL - ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

FRANCE
INSTITUT SUPÉRIEUR 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
UNIVERSITY OF LILLE
UNIVERSITY OF MONTPELLIER
UPMC - UNIVERSITY PIERRE AND MARIE CURIE

ISRAEL
ISRAEL INST OF TECHNOLOGY
BAR-ILAN UNIVERSITY
TEL AVIV UNIVERSITY

UAE
GLOBAL MARKETING SYSTEM DMCC

SRI LANKA
UNIVERSITY OF JAFFNA

BRAZIL
FEDERAL UNIVERSITY OF PARAIBA

MALAWI
UNIVERSITY OF MALAWI

SINGAPORE
NATIONAL UNIVERSITY OF SINGAPORE
A* STAR SINGAPORE
NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE UNIVERSITY OF TECHNOLOGY DESIGN

MALAYSIA
UNIVERSITY TEKNOLOGI PETRONAS

ITALY
SAPIENZA UNIVERSITY OF ROME
EUNICER - EURASIAN UNIVERSITY NETWORK- FOR INTERNATIONAL COOPERATION ON NVIRONMENTAL RISKS
ISTITUTO DI SCIENZA E TECNOLOGIE DELL'INFORMAZIONE
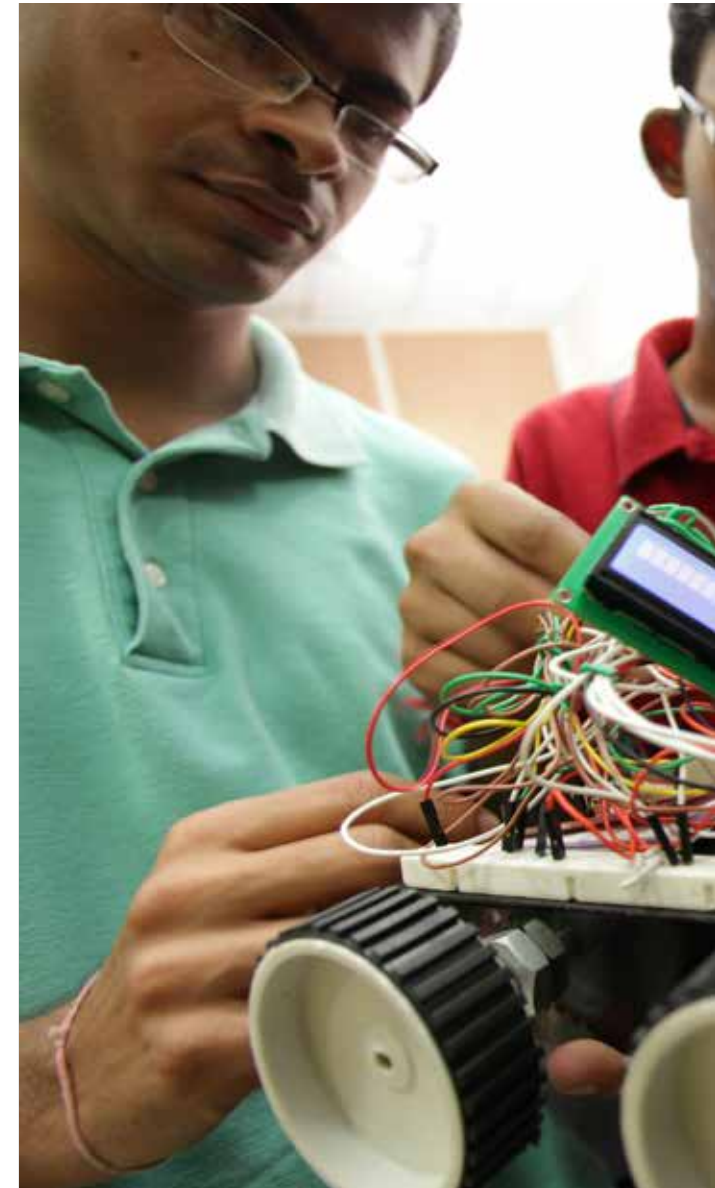UNIVERSITÀ DEGLI STUDI DEL PIEMONTE ORIENTALE

AUSTRALIA
RMIT UNIVERSITY MELBOURNE
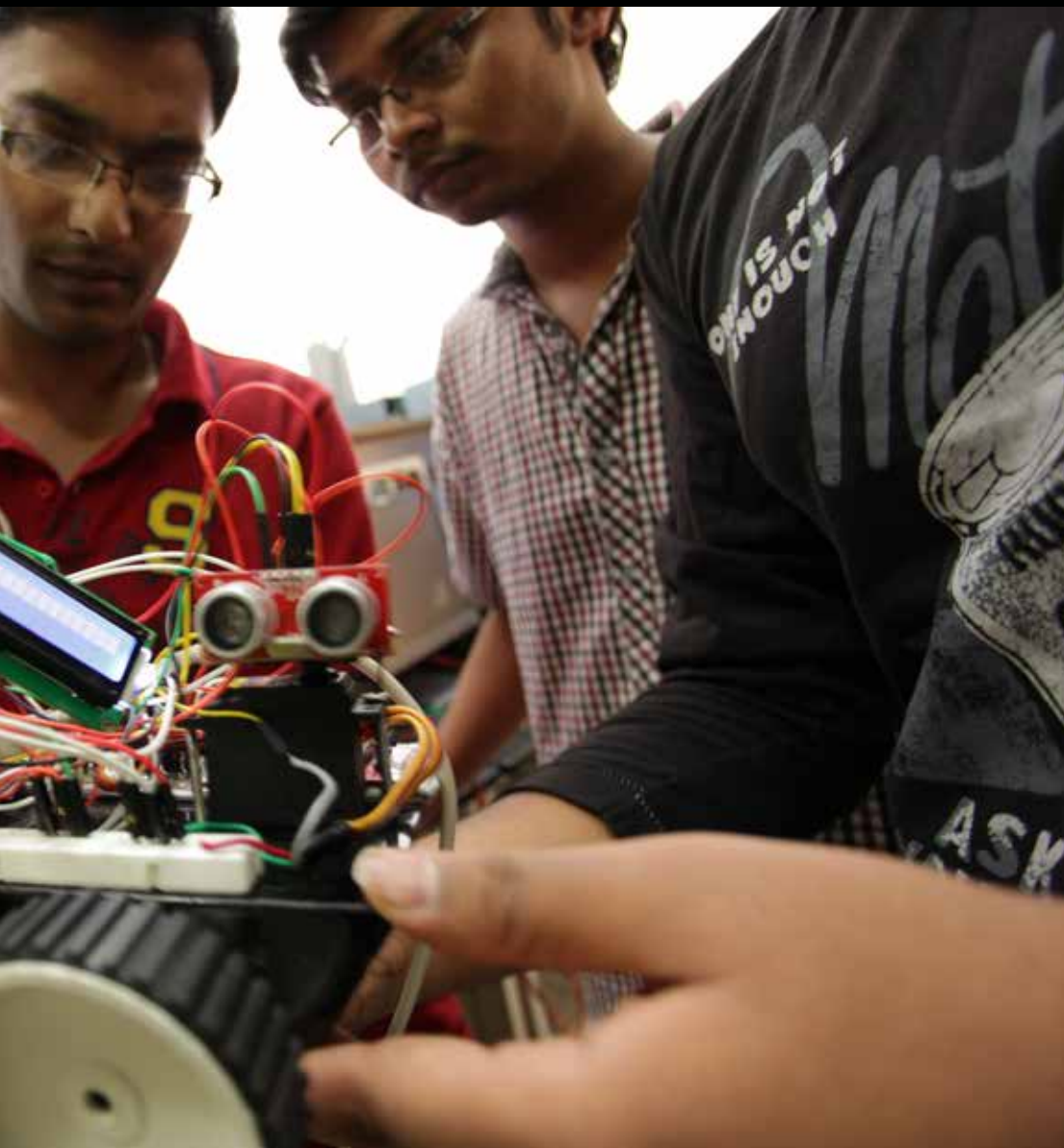UNIVERSITY OF NEW SOUTH WALES

NEW ZEALAND
THE UNIVERSITY OF CANTERBURY

INTERNATIONAL COLLABORATIONS
AT IIT GANDHINAGAR

Left: BTech student Aditi Sharma in the Chemistry Lab. Center: N R Narayana Murthy at inauguration of the 2011 Foundation Programme. Right: BTech students in the Electrical Engineering Lab.

2

CUTTING-EDGE CURRICULUM

───────

FOUNDATION PROGRAMME

Transformative 5-week immersion program for incoming first-year students focused on creativity, leadership & communication, ethics, social awareness, and physical fitness. The program has been widely lauded and increasingly emulated.

PROJECT ORIENTED LEARNING

Emphasis on learning by doing; 20% coursework in the humanities; core requirements in the life sciences, design and innovation.

CHOICE AND FLEXIBILITY

Options of dual majors, minors, honors; program and course flexibility and range, short courses. Co-curricular opportunities, such as Tinkerer Lab, Makers Space, projects, Innovation and Entrepreneurship Centre, etc.

ADMISSIONS SELECTIVITY

Undergraduate selectivity at all IITs, governed by the JEE, is under 2%. PhD selectivity at IITGN is just 1%.

3

WORLD CLASS FACULTY

Novel initiatives, such as endowed faculty chairs, fellowships, attractive research support, international post doc faculty opportunities, etc. have attracted world class faculty to IITGN.

60% OF FACULTY

have PhD from leading overseas institutions, such as Cambridge, Harvard, MIT, Urbana, Uppsala, etc.

80% OF FACULTY

have graduate degree or post doc experience abroad.

3.2 PUBLICATIONS PER FACULTY

Average publications record in 2017. Rs 80 lakhs in sponsored projects per faculty.

NATIONAL RECOGNITION

6 Ramanujan Fellows, 2 Ramalingaswami Fellows, and 9 Inspire Fellows.

Prof Vineeth Vashista with researchers at the Human-Centered Robotics Lab.

4

DIVERSITY

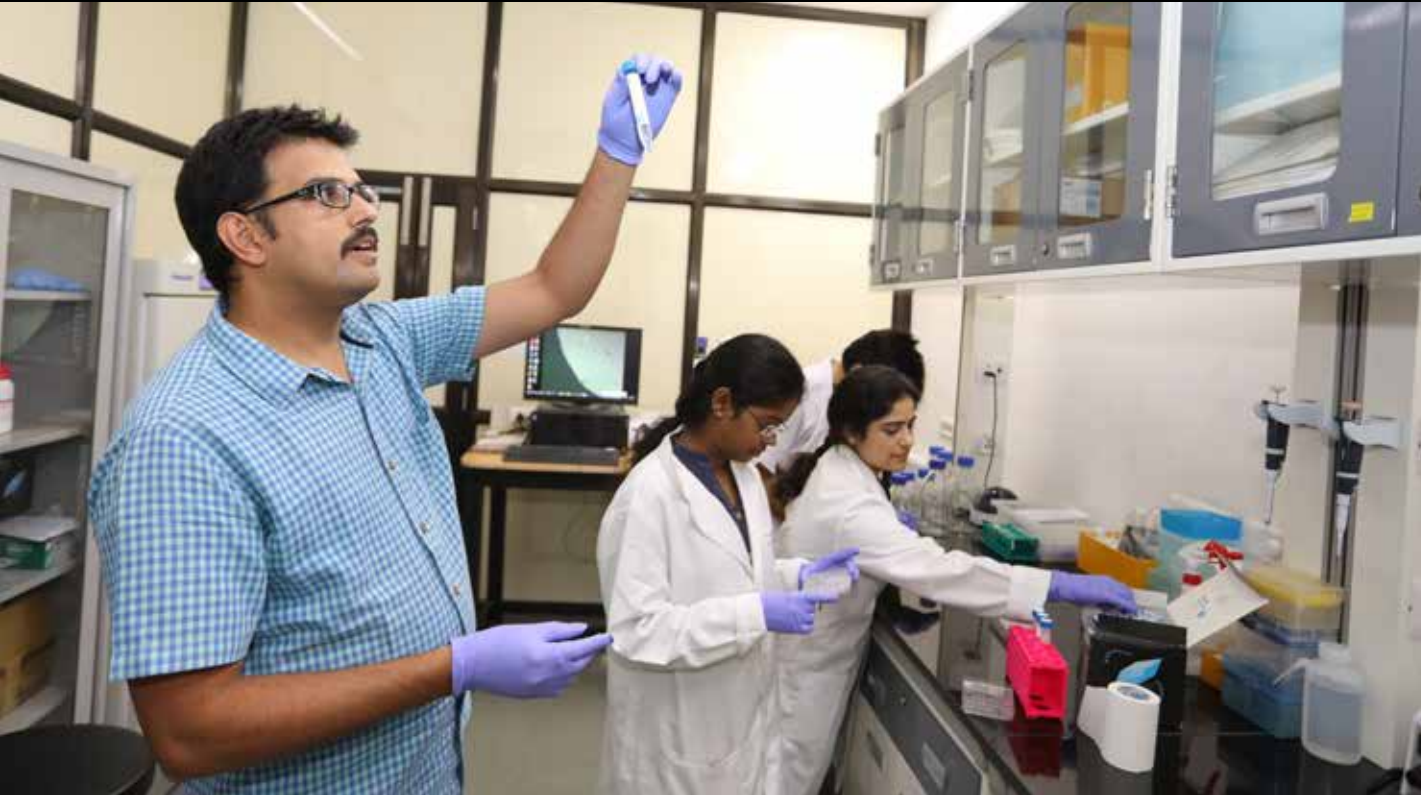
90% OF GRADUATE STUDENTS

from out of state, representing 28 states/union terrritories and 5 countries. 85% of undergraduate students from out of state from 26 states and union territories.

34% OF STUDENTS FEMALE

34% of graduate students and 20% of faculty female.

15% OF FACULTY

visiting faculty from all over India and abroad. 95% of all faculty from out of state; average distance 1424 kms. 6% of regular and contractual faculty international.

Top: Prof. Vijay Thiruvenkatam with students working on macromolecular crystallography.
Bottom left: Prof Uttama Lahiri with students in the Intelligent Rehabilitation & Affective Computing Systems Lab.
Bottom Right: Ph.D students Shruti Goyal and Kishore Jagini in the Cognitive Science Lab.

5

INTERDISCIPLINARITY

10% OF FACULTY

with multi-discipline appointments.

14% OF PhD ADVISORS

from outside discipline.

13% OF PUBLICATIONS

with interdisciplinary authors. 21% of projects with Principal Investigator/Co-PI from multiple disciplines.

6 INTERDISCIPLINARY CENTRES

in Archaeological Sciences, Biomedical Engineering, Cognitive Science, Design & Innovation, Safety, Sustainable Development.

HARD-WIRED INFRASTRUCTURE

Interdisciplinarity hard-wired in academic infrastructure. No department buildings, no heads of departments; physical distribution of faculty offices in interdisciplinary clusters; research infrastructure commonly shared, not monopolized by departments.

MTech student Sudeshna Dhar in the Materials Science & Engineering Lab.

Top: Students at the Jal Mandap at IITGN.
Bottom: BTech students Sahil Jain and Rohan Gupta travelled the length and breadth of India on the Explorer's Fellowship.

6

STUDENT EMPOWERMENT

IITGN empowers students to pursue their passion with the most liberal branch change policies, flexibility in the curriculum, leadership, self-governance and exciting extracurricular opportunities.

―――――――

SELF-GOVERNANCE

Participatory student governance structures in all aspects of Institute affairs, including academic and student life and discipline.

EXPLORER FELLOWSHIP

Six week summer fellowship for students to discover India's cultural diversity by visiting minimum six states (atleast one each in North, South and Northeast), on a shoestring budget of Rs 900/day for travel, accommodation, food, and other living expenses.

EXTRA CURRICULAR GROWTH

Internships, conferences and study opportunities, nearly 40% overseas; Incubation and Entrepreneurship Centre for student startups; Earn While You Learn Program; Student-managed technology conclave Amalthea, etc.

7

SOCIAL ENGAGEMENT

SOCIAL CONTRACT

IITGN mission to be "an involved member of the community and a good neighbour"; explore ways to contribute to the local community … through formal and informal initiatives, outreach activities and educational engagement."

WORKERS WELFARE

Humane housing, safety commitments and health insurance for workers mandated in construction contracts. Financial assistance for medical emergencies and educational support for children of contract workers. IITGN student-run educational program Nyasa for construction worker's children.

IIT COUNCIL COMMENDATION

"The exemplary practices of IIT Gandhinagar (labour welfare & community outreach) should be introduced in all IITs." — *IIT Council*

GRASSROOTS PROGRAM

NEEV program offers entrepreneurship and skills development at the grassroots.

Children of construction workers at the student-led Nyasa educational program.

Tinkerers' Lab, established with donor support, is open to students 24x7.

8

PHILANTHROPY

IITGN defied convention that fundraising is impractical for new institutions lacking an alumni base. It leveraged innovative programs to build fundraising scale that matches many older IITs.

———————

RS 160 CRORE ENDOWMENT

Endowment funds deployed strategically to develop innovative programs, such as one of the largest study abroad program in the country, world class faculty recruitment and vibrant visiting faculty program.

RS 16 CRORE 2017 FUNDRAISING

from well wishers of the Institution.

23% OF ANNUAL BUDGET

from R&D and endowment income.

20% OF ALUMNI

contribute regularly. 50% contributed atleast once.

9

NIMBLE AND INNOVATIVE

IITGN's lean administrative structure is designed to make it nimble enough to leverage exciting opportunities and promote innovations.

—————
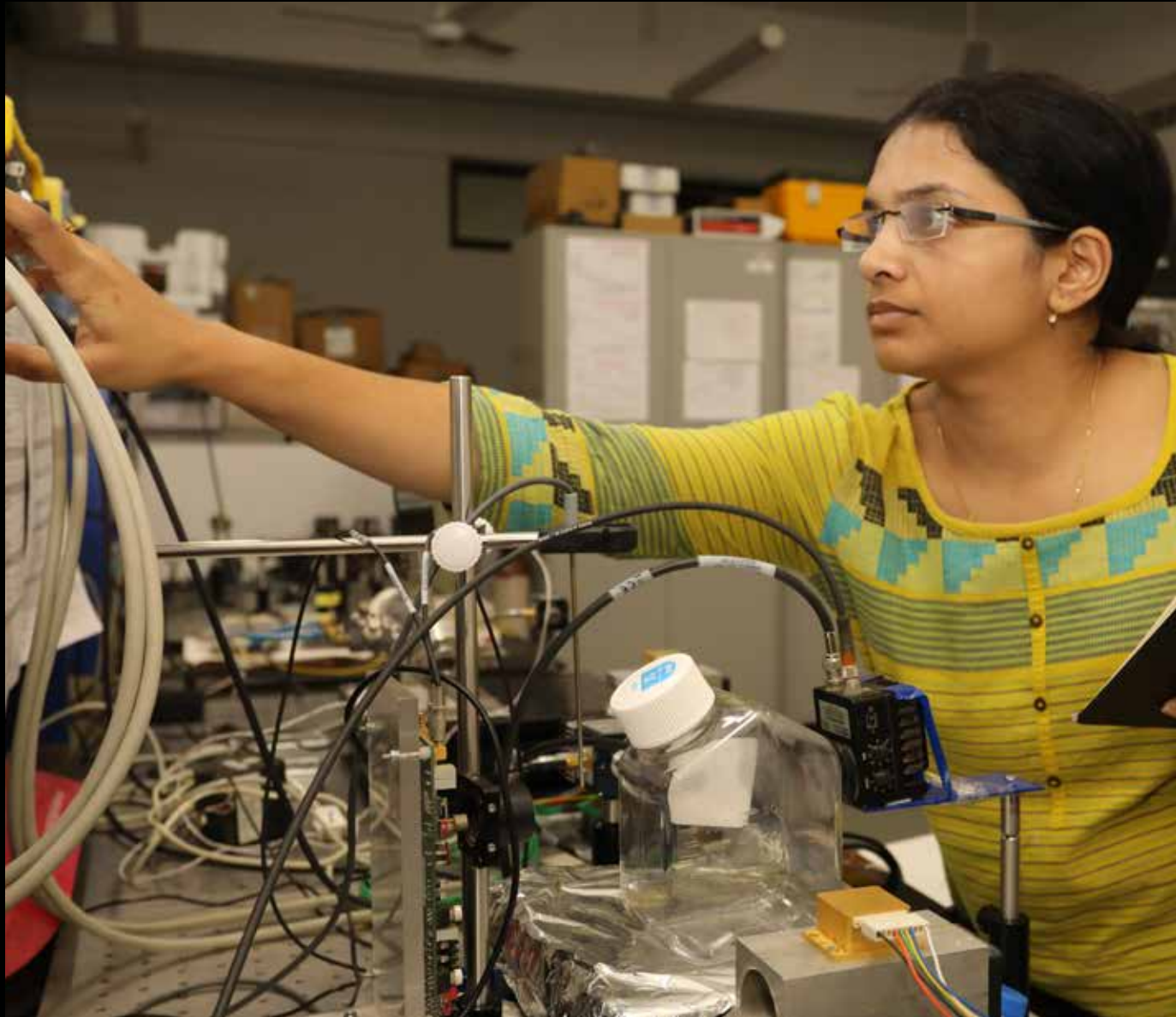
BUILT NEW CAMPUS IN THREE YEARS

Built and moved to its new campus within three years of allocation of land.

ACTIVE RESEARCH PARK

with several premiere corporate clients, such as BBC, NASSCOM, WIN Foundation, E-Infochips, etc. Additional 200,000 sq ft of new space for the park is under construction.

ROOM FOR TALENT

Flexible structures enable institute to recruit world renowned visiting and guest faculty, industry associates, research scholars, and academic thought leaders to contribute to enhance the intellectual life of the Institute and offer consultancy services.

PhD student Zarin A. S. at the Photonic Sensors Lab.

10

AWARD-WINNING CAMPUS

---

5 STAR GRIHA LD RATED

India's first 5-star GRIHA LD rated campus for minimizing the impact on the environment.

3 HUDCO NATIONAL AWARDS

Best Practices for Improving Living Environment (2013); Design Award for Cost-effective Disaster Resistant Housing (2015); Design Award for Green Buildings (2016); Yes Bank Natural Capital Awards 2018 - Eco Campus.

CONFINED MASONRY FIRST

First large-scale Indian project in Confined Masonry.

GREEN CAMPUS

Zero-discharge campus; Jal Mandaps, rainwater harvesting (with storage capacity of 5 million litres). Comprehensive solid waste management system; 500-KW Solar PV, solar water heaters, biogas plant, waterless urinals, central water treatment plant; No backyards and no walls within campus; jaalis and natural ventilation.

GLOBALLY RANKED

IITGN ranked 7th in India and among top 600 institutes globally in the Times Higher Education World University Rankings 2020

Indian Institute of Technology Gandhinagar

RANKED =7th
IN INDIA

THE WORLD UNIVERSITY RANKINGS 2020

www.thewur.com

Indian Institute of Technology Gandhinagar

RANKED 501–600

THE WORLD UNIVERSITY RANKINGS 2020

www.thewur.com

IIT Gandhinagar

• • •

The Indian Institute of Technology Gandhinagar strives to offer the best undergraduate and graduate education in India with unmatched innovations in curriculum. It is committed to promoting excellence in science, technology, as well as the humanities and social sciences and to the development of rounded and nuanced minds.

IITGN was founded in 2008 and is located in Palaj, Gandhinagar, on the banks of Sabarmati River, in close proximity of an international airport and Ahmedabad, India's only UNESCO World Heritage city.

_____

Indian Institute of Technology Gandhinagar
Palaj, Gandhinagar, Gujarat 382355, India
iitgn.ac.in | Tel: +91 79-2395-2800
development@iitgn.ac.in