



# REIMAGINING TECH EDUCATION AND RESEARCH



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## PLAKSHA UNIVERSITY

Situated at the foothills of the Himalayas in Chandigarh tricity, India, Plaksha University is a collective philanthropic initiative by a global community of 100+ reputed entrepreneurs, business leaders and academicians to reimagine technology education and research.

A greenfield university, Plaksha is developing a transformational model of engineering education and research that integrates technology, design, entrepreneurship, and liberal arts. Plaksha's mission is guided by an eminent Academic Advisory Board of distinguished leaders at top institutions and is anchored around three pillars:

1

## Reimagining technology education

Focused on **interdisciplinary technology curriculum**, **integrating liberal arts** and design with **experiential learning**

2

## Enabling industry innovation & start-ups

Instilling **entrepreneurial mindset**, mentoring start-ups and creating an **innovation ecosystem**

3

## Interdisciplinary research to address Grand Challenges

**Thematic research centers** with industry and government collaboration, **solving grand challenges** in India and the world

## ACADEMIC PARTNERSHIP

Our partners share our vision - to reimagine engineering education and research. Together, we work closely on curriculum design, delivery, faculty and student exchanges and collaborative research.



SRI International



# ACADEMIC PROGRAMS AT PLAKSHA

## 01 UNDERGRADUATE PROGRAM

Four Interdisciplinary undergraduate majors launched in 2021

### ◆ Computer Science & Artificial Intelligence

Computer Science core + elements of AI, machine learning, natural intelligence, human-computer interfaces, Natural Language Processing

### ◆ Robotics & Cyber-Physical Systems

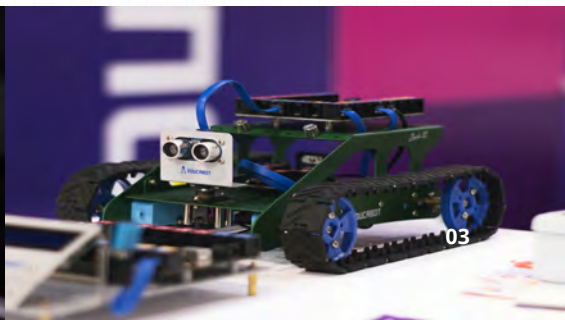
Electrical/computer engineering core + elements of robotics, autonomous systems, internet of things, sensors, cyber-physical systems

### ◆ Biological Systems Engineering

Engineering principles + power of biology to improve human health and planetary health. Latest advances in computing sciences combined with latest advances in life sciences

### ◆ Data Science, Economics & Business

Data science core interweaved with business, and economics. Paths in digital transformation, financial engineering, policy, and development



## 02 TECHNOLOGY LEADERS PROGRAM

Co-designed and co-delivered with SCET, UC Berkeley

- ◆ 1-year, fully residential postgraduate program that interweaves technology core with real-world applications
- ◆ Coursework includes 4 buckets: a) AI and ML (specialization), b) technical and social context, c) entrepreneurial and industry experiences, d) self and leadership

## 03 PH.D. PROGRAM

- ◆ Research emphasis on grand challenges including health, agriculture, water security, clean energy, that cut across several disciplines
- ◆ 1 full year of international fellowship at partnering institutions to undertake research

## 04 YOUNG TECHNOLOGY SCHOLARS PROGRAM

A two-week intensive residential summer program for students of grade 9<sup>th</sup> to 12<sup>th</sup>

- ◆ Students are exposed to real-world engineering and problem-solving and learn how to leverage technology to solve complex problems through hands-on learning and interdisciplinary coursework



# ACADEMIC ADVISORY BOARD •

Plaksha's academic programs are designed by eminent academicians and thought leaders across the world



**Dr. Abhijit Banerjee**

Nobel Laureate  
Professor of Economics,  
**MIT, Co-founder, J-PAL**



**Dr. Anant Agarwal**

CEO, **edX**  
Professor of EECS,  
**MIT**



**Dr. Arvind Raman**

Executive Associate Dean  
for Faculty, College of  
Engineering,  
**Purdue University**



**Dr. Ashish Nanda**

Former Director, IIM Senior  
Lecturer,  
**Harvard Business School**



**Dr. B N Jain**

Former Vice Chancellor,  
BITS Pilani  
Former Deputy Director,  
**IIT Delhi**



**Dr. Howard Griffiths**

Professor, Plant Ecology,  
**University of Cambridge**



**Dr. Frances Ligter**

Professor at NC  
State and,  
**UNC Chapel Hill**



**Dr. James Holloway**

Former Vice Provost for  
Global Engagement and  
Interdisciplinary Academic  
Affairs,  
**University of Michigan**



**Dr. Jennifer Cochran**

Shriram Chair of the  
Department of  
Bioengineering,  
**Stanford University**



**Dr. Julia Ross**  
Dean of Engineering  
**Virginia Tech**



**Dr. Kaushik Basu**  
Professor of Economics  
and Carl Marks Professor of  
International Studies,  
**Cornell University**



**Dr. Krishna Palepu**  
Senior Advisor to President,  
**Harvard University**



**Dr. Pankaj Jalote**  
Founding Director,  
**IIT Delhi**



**Dr. Rajesh Gupta**  
Co-Director, Halicioğlu Data  
Science Institute,  
**UC San Diego**



**Dr. Sanjay E. Sarma**  
Fred Fort Flowers and Daniel  
Fort Flowers Professor of  
Mechanical Engineering, **MIT**



**Dr. Shankar Sastry**  
Former Dean of  
Engineering,  
**UC Berkeley**



**Dr. Sharad Malik**  
Chair, Department of  
Electrical Engineering,  
**Princeton University**



**Dr. Sriram Rajamani**  
Distinguished Scientist  
Managing Director,  
**Microsoft Research India**



**Dr. Vijay Kumar**  
Professor, Nemirovsky  
Family Dean,  
**University of  
Pennsylvania**



**Dr. Yannis C. Yortsos**  
Dean, Viterbi School of  
Engineering,  
**University of Southern  
California**



# ADDRESSING GRAND CHALLENGES THROUGH INTERDISCIPLINARY RESEARCH & INNOVATION

## Data Science Institute

- 2
- 3
- 7
- 8

Digital Terrascope

### Core Labs

- 1 CRISPR-Cas Lab
- 2 IoT & Sensors Tech Lab
- 3 Robotics & Automated Vehicle Lab
- 4 Micro-Climate Lab
- 5 Clean Energy Lab
- 6 Water Technology Lab
- 7 Metaverse Lab
- 8 AI/ML/DS Lab (High Performance Cloud Computing)



## Center for Clean Energy & Climate

2 4 5 8

- *Clean Urban Climate*
- *Smart Buildings*



## Center for Digital Agriculture

1 2 3 8

- *Crop Health & Yield Prediction*
- *New Plant Breeds*



## Center for Digital Health

1 2 8

- *Digital Transformation of Primary Healthcare Centers*
- *Digital Twins of Humans*



## Center for Water Security

2 6 8

- *Circular Economy of Wastewater*

# ACADEMIC LEADERSHIP ●



## **Prof. Rudra Pratap**

Founding Vice Chancellor

### **Past Associations**

Former Deputy Director, **Indian Institute of Science (IISc), Bangalore**

Founding Chairperson & Professor, **(CeNSE), IISc Bangalore**

Assistant Professor, **Cornell University, USA**

Elected Fellow, **National Academy of Engineering & National Academy of Science**

### **Area of Expertise**

MEMS Technology, Mechanics and Mechanobiology

### **Education**

Ph.D, **Cornell University**

MS, **University of Arizona**

B.Tech, **IIT Kharagpur**



**Prof. BL Ramakrishna**

Chief Academic Advisor,  
Professor, **Arizona State University**

Ph.D, **IIT Madras, India**



**Prof. Uday Desai**

Honorary Distinguished Professor,  
Founding Director, **IIT Hyderabad**

Ph.D, **Johns Hopkins University, USA**



**Prof. M. Balakrishnan**

Distinguished Visiting Professor,  
Professor, Computer Science Engineering, **IIT Delhi**

Ph.D, **IIT Delhi, India**

# PLAKSHA FACULTY •



**Dr. Aditya Malik**

Social Sciences

*Ph.D - Heidelberg University*



**Amit Sheth**

Design Thinking

*M.Phil. IIT Bombay*



**Dr. Amrik Sen**

Applied Math

*Ph.D. - University of Colorado*



**Dr. Amruta Behera**

MEMS Technology

*Ph.D - IISc Bangalore*



**Dr. Brainerd Prince**

Dialogical Hermeneutics

*Ph.D - OCNS*

*Oxford-Middlesex University*



**Dr. Dhiraj Sinha**

Electrical Engineering

*Ph.D - University of Cambridge*



**Dr. Kanchi Gopinath**

Computer Science

*Ph.D - Stanford University*



**Dr. Kriti Khanna**

Economics

*Ph.D - University of Houston*



**Dr. Manoj Kannan**

Engineering Education

*Ph.D - BITS Pilani*



**Dr. Monika Sharma**

Computational Biology

*Ph.D - IIIT Hyderabad*



**Dr. Navjot Kaur**

Bioengineering

*Ph.D - IISc Bangalore*



**Dr. Nitin Upadhyaya**

Physics

*Ph.D - University of Leiden*



**Dr. Prashanth S. Kumar**

Water Technology

*Ph.D - Delft University of Technology*



**Dr. Rupesh Deshmukh**

Genomics

*Ph.D - SBTM University*



**Dr. Rucha Joshi**

Engineering Education

*Ph.D - Purdue University*



**Dr. Saikat Chakraborty**

Bio Systems Engineering

*Ph.D - University of Houston*



**Dr. Sandeep Manjanna**

Robotics & Applied ML

*Ph.D - McGill University*



**Dr. Sanjay Bose**

Electrical Engineering

*Ph.D - Stony Brook University*



**Dr. Saumya Jetley**

Computer Science

*Ph.D - University of Oxford*



**Dr. Shashank Tamaskar**

Robotics & Automation

*Ph.D - Purdue University*



**Dr. Shashikant Pawar**

Environmental Sciences

*Ph.D - IISc Bangalore*



**Dr. Srikant Srinivasan**

IoT & Sensor Technologies

*Ph.D - Purdue University*



**Dr. Subhasis Ray**

Computational Neuroscience

*Ph.D - NCBS, TIFR Bangalore*



**Dr. Vishal Garg**

Smart Buildings

*Ph.D - IIT Delhi*

# FACULTY CAREER AT PLAKSHA

We are enabling a thriving research and innovation ecosystem at Plaksha University and are looking for top notch faculty to join our mission across diverse interdisciplinary domains such as computer science, AI/ML, data science, cyber-physical systems, robotics, digital transformation, and design thinking, along with applied areas such as mathematics, economics, energy, cyber security, smart agriculture, digital health, and engineering education.

- ◆ Opportunity to build an institution, curriculum, and research lab from scratch; faculty could have fast-tracked opportunities for academic leadership positions
- ◆ Attractive salary structure
- ◆ Highly attractive Start-up research grants and Professional Development Allowance; meritocratic increments and growth
- ◆ Consulting opportunity for 1 day a week with 90% revenue share to faculty; support with making industry connections in leading corporates and start-up
- ◆ 2 summer months as mini-sabbatical anywhere in the world supported for tenure-track assistant professors
- ◆ Support for research & teaching for Ph.D students with attractive university fellowship
- ◆ High degree of freedom, flexibility & autonomy to define curriculum and pedagogy

# FLEXIBLE CAREER TRACKS

- ◆ Tenure-track/tenured position at Professor / Associate Professor / Assistant Professor level
- ◆ Professor of Practice
- ◆ Visiting and Adjunct positions
- ◆ Research Scientist
- ◆ Joint industry appointments



## Roles & Responsibility

The responsibilities include teaching at the undergraduate, graduate, and doctoral level, conducting research and building research centers and laboratories of global eminence along with innovative curriculum and pedagogy.

- ◆ To teach up to a maximum of 6 contact hours per week (lectures/labs) at the UG level or (4+3) contact hours per week (lectures/labs) at the PG level.
- ◆ To develop and conduct a world class research program that will involve supervising PhD students, post-doctoral fellows, and developing a thriving scientific ecosystem in allied areas of scientific research.
- ◆ To raise research funds through government and private agencies and international consortiums



# APPLICATION PROCESS

Applications for faculty positions are open throughout the year. Interested applicants are encouraged to visit [www.plaksha.edu.in/faculty](http://www.plaksha.edu.in/faculty) or reach out to [academic.relations@plaksha.edu.in](mailto:academic.relations@plaksha.edu.in) for more information.

Plaksha University is supportive of dual-careers and is an equal opportunity/affirmative action employer. We are committed to maintaining diversity and welcome applications from all nationalities, and encourage women, members from LGBTQ+ community, persons with disabilities, and other diverse communities

Citizenship of India is not a requirement. Foreign nationals with fluency in English are encouraged to apply.



Scan to know  
the recruitment  
process



Scan to apply  
online



