Electronics & ICT Academy IIT Roorkee

An Initiative of
Ministry of Electronics & Information Technology (MeitY)
Government of India

A Joint Faculty Developmet Programme

on

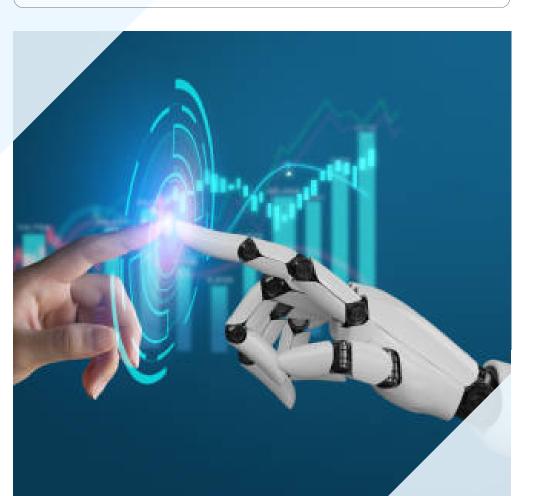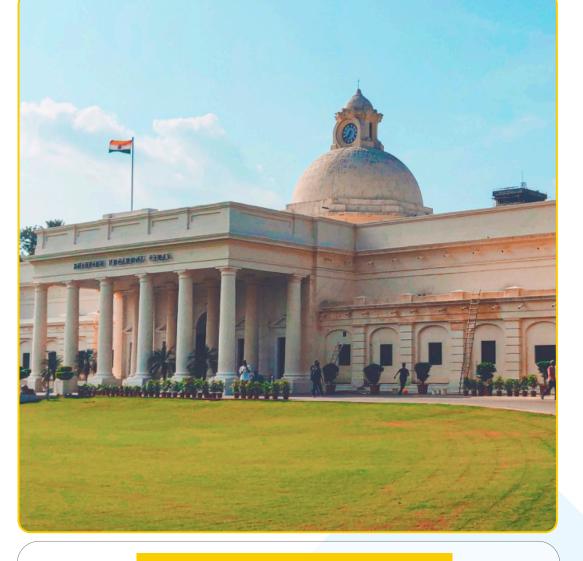## Human–Robot Interaction and Assistive Technologies

In association with

June 02 – June 16, 2025
Register Before: May 31, 2025

Mode of Delivery is Online

Course Outcomes

- Understand key concepts in HRI and assistive robotics.
- Analyze user needs for designing assistive systems.
- Apply AI techniques to enhance human-robot collaboration.
- Develop and test interaction models using simulation platforms.
- Address challenges in safety, ethics, and usability.
- Guide interdisciplinary student projects in robotics and healthcare.
- Align academic research with real-world assistive solutions.

About E&ICT Academy

Electronics and ICT Academy is an initiative of Ministry of Electronics & Information Technology (MeitY), Govt. of India for conducting various Faculty/ Research Scholar Development Programme. Academy has planned short-term training programs on fundamental and advanced topics in IT, Electronics & Communication, Product Design, and Manufacturing with hands-on training and project work using the latest software tools and systems. In addition, the Academy will conduct specialized/customized training programs and research promotion workshops for corporate sector & educational institutions.

Prerequisites

Basic knowledge of semiconductor physics, electronic circuits, and familiarity with simulation or programming tools.

Experts from Academia/Industry

Who Should Register?

Any Interested Faculty/PhD-Scholars
UG/PG/ & Industry Persons can register

Registration Fee

Fees: ₹ 500/- Faculty/Research Scholar/ Students
₹ 1000/- Industry/Others
Note: Refund will be done in case of course cancellation only, with in 20 working days

How to make Payment

Please make the payment first using the below link upload the payment receipt when filling out the Google registration form.

https://eict.iitr.ac.in/instruction-for-payment/

Conference Code: EICTIITR-JFDP-NKN-06

Registration Link

https://forms.gle/7sfe9fY8xr8yyUYH6

Scan QR for registration
Register before:
May 31, 2025

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Objectives of the course

- To introduce principles and frameworks of Human-Robot Interaction (HRI)
- To explore assistive technologies for healthcare, elderly care, and rehabilitation
- To understand the cognitive, social, and emotional aspects of HRI
- To expose participants to design and control of assistive robotic systems
- To familiarize faculty with simulation platforms and experimental tools
- To bridge interdisciplinary research in robotics, AI, and human factors
- To prepare educators to guide research and innovation in human-centric robotics

Focus Areas

- Fundamentals of HRI and user-centered design.
- Assistive robotics for mobility, therapy, and support.
- Human intention recognition and adaptive interfaces.
- Sensor integration and real-time feedback systems.
- AI, machine learning, and emotion recognition in robotics.
- Ethical, legal, and societal implications of assistive technologies.
- Simulation tools (ROS, Gazebo) and hardware prototyping.

Course Features

- 40 Hours of Lectures, Hands-on, and Pedagogy/Industry sessions.
- Lectures from Expert Speakers, Hands-on from industry/Academia experts.
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

Principal Coordinator

Prof. VK Gupta , IIITDM Jabalpur

Joint Principal Coordinator

- Prof. Sanjeev Manhas, IIT Roorkee
- Dr. Tharun Kumar Reddy, IIT Roorkee
- Dr. J P Singh & Prof. M P Singh, NIT Patna

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