One Week STTP on "AI, Vision, and Quantum Computing for Robot Integration: Theory and Practice"

10-15 December 2026

Physical Mode

ABOUT THE INSTITUTE AND PROGRAM

Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram (IIITDM Kancheepuram) is an Institute of National Importance established in 2007 by the Ministry of Education, Government of India, to pursue design and manufacturing-oriented engineering education and research and to promote competitive advantage of Indian products in global markets. The institute is presently offering various B.Tech programs in Computer Science and Engg., Electronics and Communication Engg., Mechanical Engg., and Smart Manufacturing, M.Tech & DD programs, and inter-disciplinary Ph.D programs in core and applied areas of engineering. In addition, a new DD program in B.Tech Mechanical Engineering and M.Tech in "AI and Robotics" has been launched from AY 2024-25.

The **Centre for AI, IoT, and Robotics** was established by the Institute and inaugurated by the Hon'ble Finance Minister of India, Smt. Nirmala Sitharaman on 10th Sep. 2022. The vision of this interdisciplinary Centre is to enhance the skill sets of researchers, engineers, students, and faculty in AI, Robotics & Automation, IoT, and allied areas. The Centre supports various GoI schemes such as Skill India, Make in India, Digital India, Start-up India, Smart City Scheme, NEP2020, and National Quantum Mission.

The curricula of various engineering programs at many universities in India are being updated to meet the challenging demands of industry and society, especially in emerging areas such as Robotics, Drones, AI, Data science, GenAI, Quantum Computing etc. To meet such demands, faculty and researchers must continuously upgrade their skills and knowledge, which will ultimately support students in learning and fostering a productive culture. Hence, this **STTP** aims to upskill the fundamental knowledge and the practice required to learn, understand, and teach Advanced AI, Robotics, and Quantum Computing.

TOPICS TO BE COVERED (Tentative)

- Introduction to AI, ML, CV
- Pattern Recognition and Applications
- Linear & Non-Linear Classifier: Theory & Practice
- Image Processing: Theory & Practice
- Robot Kinematics: Theory & Practice
- Simulation of Robot Mechanisms
- Fundamentals of Quantum Computing
- Quantum Intelligence: Materials to Systems
- Quantum Circuits & Algorithms: Theory & Practice
- Quantum Machine Learning
- Hands-on Experience on Quantum Summation (Qiskit)
- Integration of AI and Quantum for Robot Control
- Yoga, NEP2020

WHO CAN ATTEND

- Faculties from technical institutions
- Research scholars / PG & UG (Pre-final/Final year) students
- Scientists/Professionals from R&D institutions/industries

KEY FACILITATORS

Prof. Sreekumar M
Dept. of ME

Dr. Umarani J
Dept. of CSE

Dr. Tejendra Dixit
Dept. of ECE

ORGANIZED BY

Centre for AI, IoT, and Robotics
Department of Mechanical Engineering
Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai – 600127

REGISTRATION FEE

Category	Amount (Rs.) #
a) Students & Full-time Ph.D. Scholars	4,000
b) Faculty/Academic/Research Staff	6,000
c) Participants from Industry/R&D Organization	10,000

GST 18 % Extra

- Registration fee includes a registration kit, lunch and refreshments on all five days, special dinner on one day, and participation certificates
- Applicants are requested to pay the registration fee by https://www.onlinesbi.sbi/sbicollect/icollecthome.htm?corpID=634626 [Payment Category: "AI and Robotics 2026"]. Then, submit the online registration form along with payment proof using the following link: https://forms.gle/AqCg9XGS1Tu4cTpa8.

IMPORTANT DATES

Payment of Fee/Registration (Online)

Begin - End : 01/08/2026 - ~~31/10/2026~~ 25/11/2026

Payment Link **Registration Form**

Contact: Prof. M. Sreekumar, Centre for AI, IoT, and Robotics, Dept. of Mechanical Engg., IIITDM Kancheepuram, Off Vandalur – Kelambakkam Road, Chennai – 600127
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