



# MALAVIYA MISSION TEACHER TRAINING CENTRE

**IIITDM Kancheepuram**

## Short Term Programme

**Quantum Intelligence:  
Merging Quantum Computing with  
Artificial Intelligence for Next-Gen Problem Solving**

**23<sup>rd</sup> Aug to 28<sup>th</sup> Aug 2025**

**Mode: Online**

**Registration Fees:**

**NIL**

### **About MMTTC:**

The Malaviya Mission Teacher Training Center (MMTTC) at IIITDM Kancheepuram is funded by the Ministry of Education (MoE) under the Malaviya Mission Teacher Training Programme. The mission aims to transform higher education by integrating Indian values and ethos into teaching, research, publications, patents, and institutional development. Established as one among the 116 centers in the country, the MMTTC at IIITDM Kancheepuram focuses on design and manufacturing education. It develops e-learning materials, low-cost laboratory instruction modules, and innovative projects for students and teachers.



### **About the Programme:**

The swift advancement of technology indicates that the integration of Quantum Computing and Artificial Intelligence (AI) is set to transform problem-solving approaches in multiple fields. Quantum Intelligence refers to the potent amalgamation that utilises the distinctive properties of quantum technology to augment AI algorithms and processes. Traditional computer systems face escalating complexities, while the intrinsic parallelism and extensive processing capacity of quantum systems present unparalleled prospects for innovation. This collaboration not only accelerates data processing and enhances decision-making but also addresses challenges previously considered intractable. Quantum Intelligence leads in quantum material production, device technology, and the enhancement of machine learning models, facilitating a future when intelligent systems may fully exploit quantum events. As we explore this revolutionary domain, we reveal the significant consequences and opportunities that emerge from the integration of these two innovative technologies.

## Topics Covered:

- ❖ Harnessing Quantum Ultrafast Lasers: Innovations and Applications in AI-Driven Technologies – **Prof. Sivarama Krishnan, Professor, Department of Physics, IIT Madras**
- ❖ Quantum Fabrication Techniques: Bridging Quantum Computing and Device Technology for Enhanced Performance – **Dr. Kolla Lakshmi Ganapathi, Assistant Professor, NIT Kurukshetra**
- ❖ Organic Semiconductors in Quantum Applications: Exploring Their Role in Next-Gen AI Solutions – **Dr. Vipul Singh, Professor, IIT Indore**
- ❖ Spin and Photon-Based Quantum Technologies: Revolutionizing Data Processing in Artificial Intelligence - **Dr. Vidya Praveen Bhallamudi, Associate Professor, Department of Physics, IIT Madras**
- ❖ Quantum Machine Learning: Algorithms and Applications for Solving Complex Problems – **Prof. Masilamani V, Professor, Department of Computer Science and Engineering, IIITDM, Kancheepuram**
- ❖ Quantum Cryptography: Securing AI Systems in the Age of Quantum Computing – **Dr. M. Subramani**
- ❖ Plasmon-induced brightening of dark excitons in mono-layer 2D materials for quantum optoelectronics- **Assistant Prof. Ankit Arora, ECE, IIT BHU**
- ❖ Advancements in Quantum Infrared Detection – **Raghvendra Sahai Saxena, Solid State Physics Laboratory (SSPL), DRDO, New Delhi, India**
- ❖ Quantum Optical Materials enhancing innovative Quantum Properties – **Prof. Naveen Kumar, Professor, Department of S&H, IIITDM, Kancheepuram**

## Registration:

1. Register and login as a participant in [mmc.ugc.ac.in](http://mmc.ugc.ac.in) 
2. In the dashboard click on “Apply for Other programmes”
3. Select Apply for “Short Term Programme” and from the dropdown select the Programme Name and Center Name as “Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram (23/08/2025-28/08/2025)”
4. Choose the title from the dropdown menu and enter the remaining personal information including year of joining, total years of experience etc.
5. Upload the NOC on Institute/College/University letterhead as per the format provided [here](#) 
6. Click on Submit to complete the registration process.



## Resource Persons :

The course content will be delivered by resource persons from leading and prestigious academic institutions, research labs and industry.

## Eligibility:

Faculty members working in universities and colleges that are included under Section 2(f) of the UGC Act are eligible to attend STP.

This programme shall be taken into consideration for fulfillment of the requirements as laid down in Career Advancement Scheme as per UGC Regulations.

## Coordinators:

**Dr. Tejendra Dixit,**  
Assistant Professor,  
Electronics and Communication Engineering,  
Email: [tdixit@iiitdm.ac.in](mailto:tdixit@iiitdm.ac.in)

**Dr. Priyanka Kokil,**  
Associate Professor,  
Electronics and Communication Engineering,  
Email: [priyanka@iiitdm.ac.in](mailto:priyanka@iiitdm.ac.in)  
Contact: +91-44-27476360, +91-9344998831

**Dr. Vivek Kumar,**  
Associate Professor,  
Department of Science and Humanities,  
Email: [vivek@iiitdm.ac.in](mailto:vivek@iiitdm.ac.in)  
Contact: 044-2747-6388