MALAVIYA MISSION TEACHER TRAINING PROGRAMME

शिक्षा मंत्रालय
MINISTRY OF EDUCATION

सत्यमेव जयते

ज्ञान-विज्ञान विमुक्तये

# NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

An Institute of National Importance

## MALAVIYA MISSION TEACHER TRAINING CENTRE

Established under the Scheme of MMTTP, University Grants Commission (UGC), Ministry of Education, Government of India

### 12-Day (Hybrid) Refresher Course on

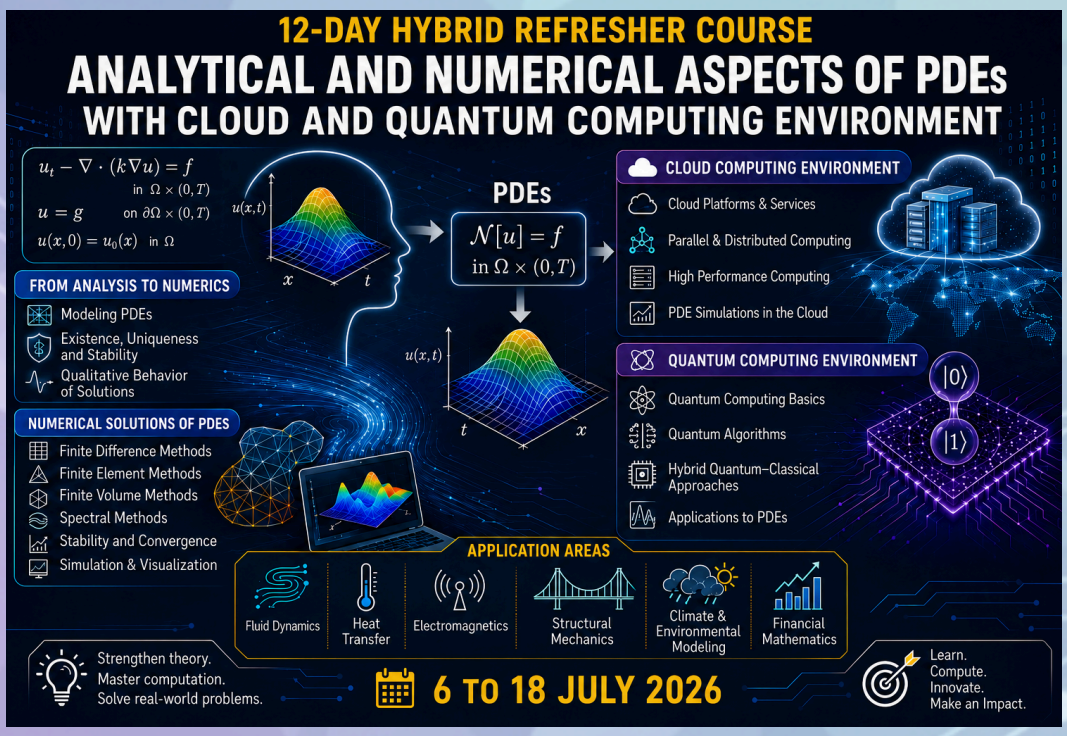
(6 July-11 July Residential and 13 July-18 July Online)

# Analytical and Numerical Aspects of PDEs with Cloud and Quantum Computing Environment

## 6 - 18 July 2026

## Course Description:

This refresher course on "Analytical and Numerical Aspects of PDEs with Cloud and Quantum Computing Environment" aims to provide participants with an understanding of modern theoretical and computational approaches for partial differential equations (PDEs). The course will begin with the analytical aspects of PDEs and gradually extend to their numerical solutions using various computational techniques. The second week will focus on cloud and quantum computing environments, highlighting their potential applications in PDE-based simulations and scientific computing. Through lectures and hands-on sessions, participants will gain exposure to emerging computational technologies and their role in advancing research in applied mathematics and engineering sciences.




Scan the QR code to Register

**Last date for Registration: 20-06-2026**

**NO REGISTRATION FEE**

**Course Content**

- Existence, uniqueness, and regularity analysis of solutions to PDEs
- Asymptotic behavior and stability analysis of differential systems
- Analytical techniques involving variational methods and functional analysis
- Finite Difference, Finite Element, and Spectral methods for solving PDEs
- Stability, consistency, and convergence analysis of numerical schemes
- Boundary layer phenomena and singular perturbation problems
- Introduction to Cloud Computing
- Cloud-based Numerical Computing Environments
- FDM/FEM on Cloud
- Parallel Computing for PDEs
- Introduction to Quantum Algorithms
- Programming on Quantum Computers
- Design and Analysis of Quantum Algorithms for Solving PDEs
- Case Study: Large Scale PDE Simulation
- Applications of PDEs in fluid dynamics, materials science, biology, and engineering

**Resource Persons for this Program**

Faculty members from IITs, IISc, TIFR, and NITs will be invited to deliver lectures in the program.

**Course Duration**

There will be 12-days (72 hours) of engagement including live sessions, Hands-on sessions, assignments, etc.

**Certification Criteria**

The participants must maintain 80% of Attendance. Candidates will be issued certificates on successful completion of the course.

**Who can Apply ?**

Faculty members in Central, State, Deemed to be Universities, Private Universities, Institutions of National Importance, Colleges and other HEIs; Contractual, Ad-hoc, Guest faculty Teachers and Research Scholars (Ph.D. level) in HEIs etc. are eligible.

**Selection Criteria**

Selection will be done based on first-come first-served to a maximum number of 50 Faculty/industry participants. PhD scholars are allowed to participate. The list of selected participants will be intimated through e-mail. There is **No Registration Fee** to attend this program.

**Note: This Program shall be considered for regularization/ Career Advancement Scheme (CAS). As per UGC guidelines, attending the Courses under MMTTP, UGC will be treated as on duty/duty leave.**

## About MMTTC of NIT Warangal

The Malaviya Mission Teacher Training Centre (MMTTC) was established at NIT Warangal in the year 2015 under the scheme "Malaviya Mission on Teacher Training Programme (MMTTP)" sponsored by the University Grants Commission (UGC), Ministry of Education, Government of India. Since its inception, the Centre has successfully organized various programs in the form of NEP Orientation programs, Short-term programs, Refresher Courses, FDP programs and one-month duration Faculty Induction Program (FIP) for Higher Education Faculty in various theme areas of Science and Technology, Humanities and Social Sciences from which more than 8000 participants have benefitted. Other activities of the MMTTC include offering online courses, curriculum design, carrying out research in educational technology and pedagogy and integrating ICT into the Teaching-Learning process. The MMTTC NIT Warangal has been conducting various programs, online and offline following MMTTP Guidelines and UGC Regulations.

## How to Apply ?

Interested participants are required to register by using the Google Form provided below, on or before **20th June, 2026**. There is **NO REGISTRATION FEE.** It is mandatory to submit the **Nomination Form** from your organization to consider your application.

**Google Form:** **https://forms.gle/3Z9U3JQU7keDQKAx9**

## Accommodation

Accommodation can be provided at the Institute Visitor's Block for a maximum of 20 participants from the programme, on a first-come, first-served basis. Over and above this, accommodation will be provided at the Institute Outreach Centre (NITW). For further details, please contact **0870-2462686.**

## Program Coordinators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**Prof. Hari Ponnamma Rani**
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## Important Dates:

**Last Date of Registration: 20 June 2026**

**Intimation of Selection: 22 June 2026**

# MALAVIYA MISSION TEACHER TRAINING CENTRE

## NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL


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