



**ISTE-BNY Knowledge Enhancement  
Programme 2026  
on**

***"Synergistic AI for Sustainable  
Innovation in Agriculture  
and  
Healthcare"***



**11- 16 May 2026**

**Platform: Online**

**Department of Applied Mathematics and Computational Science  
Thiagarajar College of Engineering, Madurai-15.**

# AboutTCE

Thiagarajar College of Engineering (TCE) is as a Government Aided Autonomous Institution, established in 1957 by the philanthropist Late Karumuttu Thiagarajan Chettiar. TCE is affiliated to Anna University, Chennai, and approved by All India Council for Technical Education (AICTE). TCE offers a wide array of Undergraduate, Postgraduate and Ph.D. Programs across various disciplines of Engineering, Architecture and Science. The campus is set within a serene and eco-friendly environment surrounded by dense vegetation and best infrastructure facilities.

Each academic Department at TCE is dedicated to a specific theme, fostering synergy between faculty and students in academic and research endeavours. These themes encompass diverse areas such as Eco-friendly Structures, Power and Energy, Automation, Automotive, Wireless Technologies, Distributed Computing, Database Management, Modelling and Simulation, Material Science, Green Chemistry, and Heritage.

TCE has consistently embraced reforms and upgrades in its Teaching-Learning processes. Noteworthy initiatives include the implementation of a Competency-Based Curriculum and Outcome-Based Education. Since 2018, TCE has adopted the Conceive Design Implement Operate (CDIO) framework, shaping curriculum design, pedagogical methods, and assessment techniques, with adequate hands-on training to students. The institution has also launched Massive Open Online Courses (MOOCs) in 2021 and introduced the Thiagarajar Research Fellowship (TRF) scheme for Ph.D. research scholars, furthering its commitment to academic excellence and research innovation.

TCE's active participation in the Technical Education Quality Improvement Programme (TEQIP) under the National Project Implementation Unit (NPIU) of the Ministry of Human Resource Development (MHRD) has led to innovative teaching and learning processes, faculty development programs, industry-supported research activities, and good governance initiatives.

TCE is involved in national and international ranking frameworks, showcasing its commitment to excellence and quality in education. The institution's programs have been accredited by NBA since 1998, indicating compliance with quality standards in technical education.

The programmes offered at institution has garnered numerous accolades, including accreditation by NAAC with a CGPA of 3.56 (out of 4.0) with A++ Grade in Cycle 2. Engineering departments have been recognized with the "Best Industry Linked Technical Institutions award" by AICTE and the Confederation of Indian Industries (CII). Faculty members have earned International Certification in Engineering Education by IUCEE, Cambridge International certification and Wipro Mission 10x. Dr. R. Vasudevan, Professor in the Chemistry Department, received the "Padma Shri" for his pioneering work on plastic roads. TCE students have actively participated and succeeded in events like the Smart India Hackathon (SIH), showcasing their talent and problem-solving abilities.

## About the Department

The Department of Applied Mathematics and Computational Science (AMCS) offers programmes in Data Science and allied areas. The department fosters research, innovation and industry collaboration in Artificial Intelligence, Machine Learning, Data Analytics and Computational Methods. It operates the Centre of Excellence in Information Management Systems and the Centre of Excellence in Generative AI, under the Centre for Continuing Education, TCE. The department strives for excellence through effective industry-institute collaboration and engaging in research and scholarly activities.

### **Vision**

To be a centre of excellence in Applied Mathematics and Computational Science, producing competent and socially responsible professionals.

### **Mission**

- » Evolve and inculcate experimental and effective teaching-learning processes.
- » Foster research and innovation in AI, Machine Learning and Data Science through effective industry-institute collaboration.
- » Engage in research and scholarly activities that achieve national and international recognition.
- » Nurture professionals with strong ethical values and commitment to sustainable development.
- » Achieve these through team effort and make the department a centre of excellence.

# ISTE-BNY Programme



The Indian Society for Technical Education (ISTE), New Delhi, in association with BNY, has sanctioned the Knowledge Enhancement Programme for Faculty 2026. The programme aims to update faculty knowledge, foster visionary thinking and promote industry-academia collaboration in emerging technologies

## About the Programme

Artificial Intelligence is reshaping Agriculture and Healthcare. This Faculty Development Programme brings together leading experts from India's premier institutions to provide an in-depth understanding of how synergistic AI systems drive sustainable solutions – from intelligent crop monitoring and precision farming to AI-assisted clinical diagnosis and patient care.

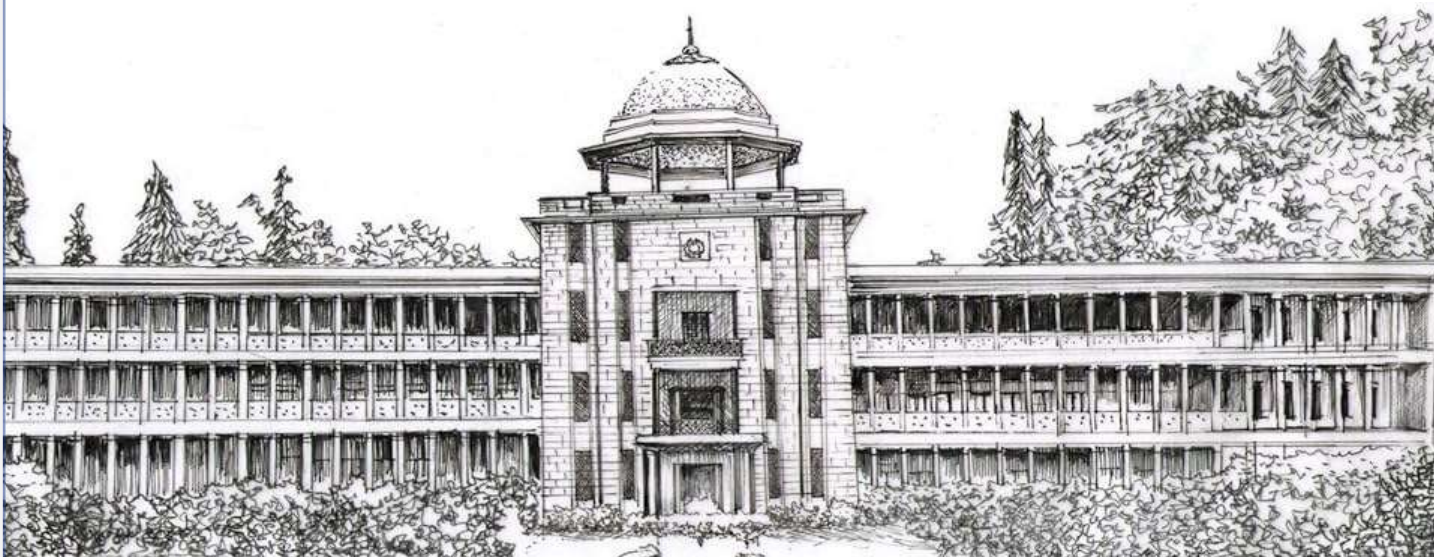
The programme equips faculty members with cutting-edge knowledge to integrate AI-driven pedagogy and research into their institutions and contribute to India's vision of technology-led sustainable development.

## **Topics Covered**

- Foundations of AI, Machine Learning & Deep Learning
- Precision Agriculture using AI & Remote Sensing
- Computer Vision for Plant Disease & Pest Detection
- Medical Image Analysis using Deep Learning
- NLP & AI for Clinical Text Mining and EHR
- Large Language Models & Generative AI Applications
- IoT & Edge AI for Smart Monitoring (Farm & Patient)
- Federated Learning & Privacy-preserving AI
- AI for Climate-Smart Agriculture & Food Security
- Responsible AI, Ethics & Explainability
- NEP 2020 & AI Integration in Higher Education
- Mental Well-being, Human Values & Stress Management

## Objectives of the Faculty Development Programme (FDP):

- » Update faculty with latest AI developments in Agriculture and Healthcare and foster a visionary research outlook.
- » Provide opportunity for interaction and exchange of ideas between eminent experts and faculty working in specialised areas.
- » Familiarise participants with modern AI-driven engineering practices and latest technological advances adopted by industry.
- » Open new frontiers in AI technology and identify challenges and opportunities ahead for dedicated research and innovation.
- » Enable identification of new areas for interdisciplinary research and innovative projects of societal relevance.
- » Promote industry-academia collaboration in the area of AI for Sustainable Development.



# Speakers



**Dr. Jagadeesh Kakarla,**  
Assistant Professor,  
Indian Institute of Information Technology, Design and Manufacturing,  
Kancheepuram.



**Dr.S.R.Balasundaram,**  
Professor,  
National Institute of Technology,  
Trichy.



**Dr. Sivagurunathan Shanmugam,**  
Associate Professor,  
The Gandhigram Rural Institute - Deemed University,  
Dindigul.



**Dr. E. Srie Vidhya Janani,**  
Assistant Professor,  
Anna University Regional Campus  
Madurai.



**Dr.Venkateshwaran Loganathan,**  
Director of Engineering,  
ConverSightAI,  
Coimbatore.



**Dr. Ramanujam E,**  
Assistant Professor,  
National Institute of Technology,  
Silchar.



**Dr.R.Murugan,**  
Associate Professor,  
National Institute of Technology  
Puducherry.



**Dr. Malaya Kumar Nath,**  
Head & Assistant Professor,  
National Institute of Technology,  
Puducherry.



**Dr.Rajesh Kaluri,**  
Professor,  
Vellore Institute of Technology  
Vellore.



**Dr.W.Wilfred Godfrey,**  
Associate Professor  
Indian Institute of Information Technology and Management,  
Gwalior.



**Dr.Ghanapriya Singh,**  
Assistant Professor,  
National Institute of Technology  
Kurukshetra.



**Dr.Devika,**  
Professor & Head,  
Karpagam Academy of Higher Education  
Coimbatore - 625104



**Mr.S.Maheswaran**

Senior R&D Manager and Site Reliability Engineering (SRE) Leader,  
Aptean Technologies,  
Madurai.



**Dr.S.Jeyavel**

Professor,  
Central University of Karnataka.



**Dr.SomSubra Chakraborty**

Associate Professor,  
Indian Institute of Technology,  
Kharagpur



**Dr.S.Sumithra**

Professor,  
Indian Institute of Space Science and Technology,  
Thiruvananthapuram

# Schedule of FDP

ISTE-BNY Online Six-Day Faculty Development Programme 2026   Thrust Area: AI for Sustainable Development   11-16 May 2026						
FDP Title: Synergistic AI for Sustainable Innovation in Agriculture and Healthcare						
Time Slot	Day 1 11 May (Monday)	Day 2 12 May (Tuesday)	Day 3 13 May (Wednesday)	Day 4 14 May (Thursday)	Day 5 15 May (Friday)	Day 6 16 May (Saturday)
9:30-11:00 AM	<b>Session 1: Inaugural</b> <b>Topic:</b> Welcome Address   FDP Overview   Invited Inaugural Talk	<b>Session 4</b> <b>Topic:</b> Kolmogorov-Arnold Neural Network Model for Real-World Agricultural Data <b>Dr. Ramanujam E</b> Asst. Prof., NIT Silchar	<b>Session 7</b> <b>Topic:</b> Sequential Modelling: Recurrent Neural Networks <b>Dr. Devika</b> Prof. & Head, Dept. of Computer Applications, Karpagam Academy	<b>Session 10</b> <b>Topic:</b> Regularization Techniques in Deep Learning <b>Dr. W. Wilfred Godfrey</b> Assoc. Prof., IIITM Gwalior	<b>Session 13</b> <b>Topic:</b> Optimization Techniques for Deep Learning Models <b>Dr. Malaya Kumar Nath</b> Head & Asst. Prof., NIT Puducherry	<b>Session 16</b> <b>Topic:</b> Mental Health and Stress Management <b>Dr. S. Jeyavel</b> Professor, Central University of Karnataka
11:30 AM-1:00 PM	<b>Session 2</b> <b>Topic:</b> Role of AI in Healthcare and Agriculture <b>Dr. Jagadeesh Kakarla</b> Asst. Prof., IIITDM Kancheepuram	<b>Session 5</b> <b>Topic:</b> Future of Computer Vision in Medical Field <b>Dr. S.R. Balasundaram</b> Professor, NIT Trichy	<b>Session 8</b> <b>Topic:</b> Deep Feedforward Networks <b>Dr. R. Murugan</b> Assoc. Prof., NIT Puducherry	<b>Session 11</b> <b>Topic:</b> Agentic AI <b>Dr. E. Srie Vidhya Janani</b> Asst. Prof., Dept. of CSE, Anna Univ. RC Madurai	<b>Session 14</b> <b>Topic:</b> Computer Vision for Brain Images <b>Mr. S. Maheswaran</b> Sr. R&D Manager & SRE Leader, Aptean Technologies, Madurai	<b>Session 17</b> <b>Topic:</b> Role of Computer Vision in Agriculture <b>Dr. SomSubra Chakraborty</b> Associate Professor, IIT Kharagpur
2:30-4:00 PM	<b>Session 3</b> <b>Topic:</b> NEP 2020 <b>Dr. S. Sivagurunathan</b> Assoc. Prof., Gandhigram Rural Institute, Dindigul	<b>Session 6</b> <b>Topic:</b> Role of Generative AI in Healthcare <b>Dr. Venkateshwaran Loganathan</b> Director of Engg., ConverSight AI, Coimbatore	<b>Session 9</b> <b>Topic:</b> AI-Driven Healthcare towards Sustainable and Smart Systems <b>Dr. Rajesh Kaluri</b> Professor, VIT Vellore	<b>Session 12</b> <b>Topic:</b> Feature Engineering <b>Dr. Chanapriya Singh</b> Asst. Prof., NIT Kurukshetra	<b>Session 15</b> <b>Topic:</b> Machine Learning for Smart Healthcare <b>Dr. S. Sumithra</b> Professor, IIST Thiruvananthapuram	<b>Session 18 &amp; Valedictory</b> <b>Online Quiz</b> Valedictory Address by: <b>Dr. Gujjala Venkatasubbaiah</b> Vice President-ISTE, Prof., Dept. of Mech. Engg., MVSR Engg. College, Hyderabad

## **CHIEF PATRON**

**Shri. K. Hari Thiagarajan**

Secretary & Correspondent

## **PATRON**

**Dr. L. Ashok Kumar**

Principal, TCE

## **ORGANIZING SECRETARY**

**Dr. S. Parthasarathy**

Dean (CoE & CCE) & Head, Dept. of AMCS

## **COORDINATORS**

**Dr. T. Chandrakumar**

Professor, Dept. of AMCS (Data Science)

**Dr. S. T. Padmapriya**

Assistant Professor, Dept. of AMCS

**For further details, Contact**

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# Guidelines

**FREE REGISTRATION for all participants**

The entire programme will be conducted in online mode via Google Meet. Session joining links will be communicated to selected candidates through their registered email on a daily basis. All sessions will be recorded. Assessment on the topics covered will also be conducted online. Minimum 80% attendance and 60% marks are required to earn the ISTE–BNY Certificate of Participation.

## Registration Details

Register via the Google Form link below. A signed Bonafide Certificate from the participant's institution is mandatory and must be submitted on or before 9<sup>th</sup> May 2026.



**FREE REGISTRATION**

for all participants

[forms.gle/5Sndd1A9eCyYdAdM8](https://forms.gle/5Sndd1A9eCyYdAdM8)

*Scan QR to register*

## Eligibility

Faculty members from AICTE–approved engineering and technology institutions across India. Priority will be given to ISTE Life Members. Since this is an online programme, Pan–India participation is strongly encouraged. Seats are limited. Not more than 10% of participants shall be from the host institution. Selection is at the sole discretion of the Programme Coordinator and ISTE guidelines