



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE  
(Deemed to be University)

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NAAC Accredited with A+ Grade, NIRF India Rankings 2024 - Band: 201-300 (Engg.)  
NBA Accredited - B.Tech. (CIVIL, CSE, ECE, EEE, MECH, CST), MBA & MCA



A Report on **International Online Faculty Development Programme on**  
**“Research Trends in AI for Sustainable Development”**  
Organized by **Department of Computer Science & Engineering**  
**in Association with Computer Society of India (CSI)**  
**from 23.02.2026 to 28.02.2026.**

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**MITS**  
MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE  
(Deemed to be University under section 3 of UGC Act, 1956)  
Madanapalle-517325, Andhra Pradesh, India.

Department of  
**Computer Science & Engineering**  
Organizes  
**A One Week Online International Faculty  
Development Programme**  
on  
**Research Trends in AI for Sustainable Development**  
in association with  
**Computer Society of India (CSI)**

**Dr. Sivaraman Eswaran**  
Associate Professor,  
Dept. of Electrical & Computer Engineering,  
Curtin University Malaysia  
23-02-2025

**Dr. A. Prasanth**  
Assistant Dean Research,  
Vel Tech Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
24-02-2025

**Dr. Arun Kumar R**  
Digital Forensics & Cyber Security,  
University of South Wales,  
Treforest, United Kingdom  
25-02-2025

**Dr. B. Santhosh Kumar**  
Dean R & D and HoD/CSE  
Guru Nanak Institute of Technology  
26-02-2025

**Dr. Pethuru Raj, PhD, SMIEEE**  
Principal AI Architect,  
Infacion Inc., Bangalore  
27-02-2025

**Mr. T. Rajan, M.E., (Ph.D.)**  
Dept. of Computer Science & Engineering,  
University of West London, UAE.  
28-02-2025

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**Report Submitted by: Dr. R. Nidhya, Professor, Department of Computer Science and Engineering**  
**Co- Coordinators : Dr K Senthil Kumar, Assistant Professor/CSE; Mrs R Kavi Priya, Assistant Professor/CSE;**  
**Mrs. Thripathi P Balakrishnan, Assistant Professor/CSE**  
**Total no. of Participants : 78**  
**Mode of Delivery: Online Mode through Microsoft Teams**  
**Report Received on 18.03.2026**

The Department of Computer Science & Engineering, MITS organized a **One Week International Faculty Development Programme (FDP)** on **“Research Trends in AI for Sustainable Development”** from **23rd February 2026 to 28th February 2026** in association with the **Computer Society of India (CSI)**. The Programme started at 10 AM with a welcome address by Dr R Nidhya, Professor, Department of Computer Science & Engineering. The presidential address was delivered

by Dr M Sridevi, Professor & HoD, Department of Computer Science & Engineering. Then Chief Guest of the day Dr E Sivaraman, Associate Professor, Curtin University, Malaysia was introduced by Dr R Nidhya. In presidential address, HoD mam highlighted FDP participants from various states of nation as well from foreign countries also. Then the session took over by the chief guest for the session.

**Day 1: 23.02.26 (Monday)**

**Resource Person: Dr. E. Sivaraman, Associate Professor, Curtin University, Malaysia**

**Topic: A Deep Dive into Privacy-Preserving Artificial Intelligence Techniques**

The resource person started the session by extended his thanks to Management, Principal, HoD, Organizers. He explained concepts such as Federated Learning, Differential Privacy, Secure Multi-Party Computation, Data anonymization techniques. The session highlighted the importance of ethical AI and data privacy in modern AI systems, particularly in domains like healthcare, finance, and social networks. The session ended with Q&A session with participants.

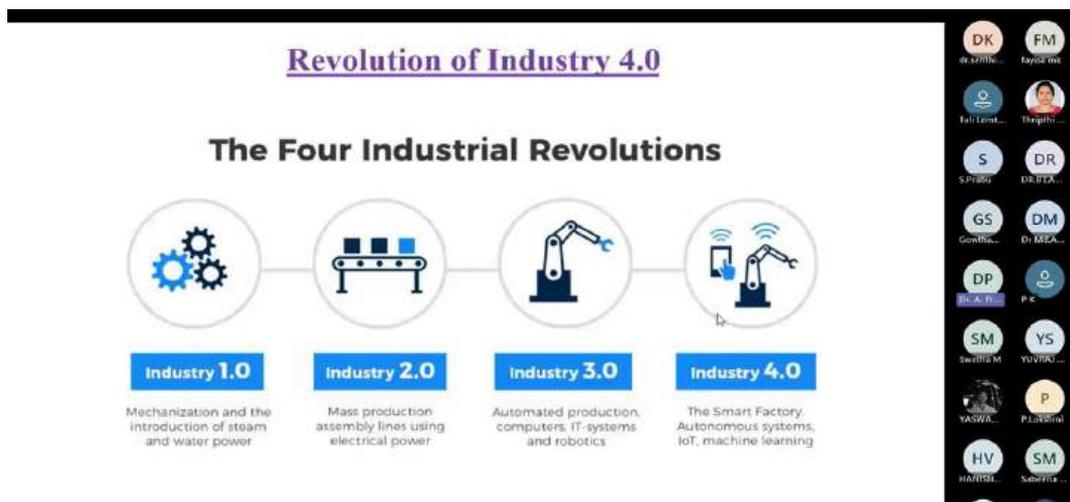


**Day 2: 24.02.26 (Tuesday)**

**Resource Person: Dr. A. Prasanth, Assistant Dean Research & Associate Professor/CSE, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai**

**Topic: Advanced Machine Learning for Sustainable Development: Innovations Driving SDG Solutions**

Sir, discussed how advanced machine learning techniques are being used to support United Nations Sustainable Development Goals (SDGs). He explained applications of machine learning in, Climate change prediction, Smart agriculture, Resource optimization, Environmental monitoring, Sustainable urban development. The session emphasized the importance of data-driven decision-making for global sustainability challenges. Finally, the session was concluded with effective Q&A session with the participants.



**Day 3: 25.02.2026 (Wednesday)**

**Resource Person: Dr. Arun Kumar R, Senior Lecturer in Digital Forensics & Cyber Security, University of South Wales, United Kingdom**

**Topic: Smart Defense for a Sustainable World: AI Trends in Cybersecurity**

Day3 session was handled by Dr Arun Kumar R. Mrs R Kavipriya introduced him to the participants and session was continued by the Resource Person. The session focused on the role of Artificial Intelligence in strengthening cybersecurity systems. He explained about AI-driven intrusion detection systems, Malware detection using machine learning, Behavioral analysis for cyber threat identification, Predictive cybersecurity frameworks. The session also addressed emerging cyber

threats and the need for intelligent security systems to protect digital infrastructures. Finally, the session concluded with effective Q&A session with the participants.

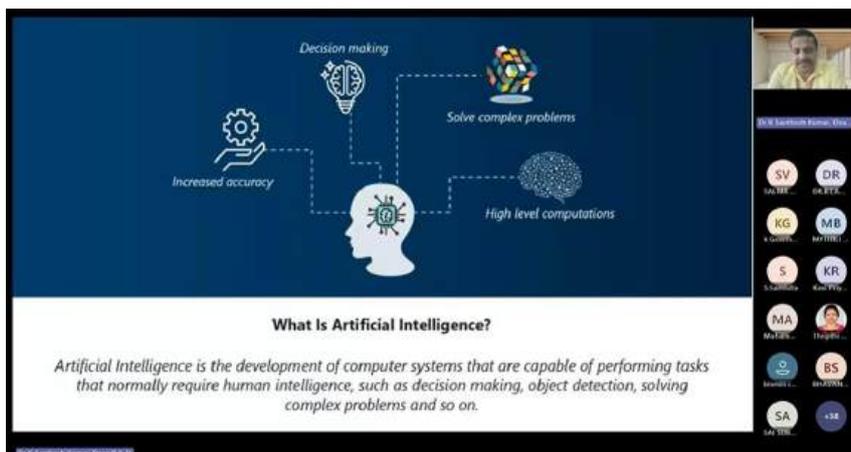


**Day 4: 26.02.2026 (Thursday)**

**Resource Person: Dr. B. Santhosh Kumar, Dean R&D and Head of Department/CSE, Guru Nanak Institute of Technology, Hyderabad.**

**Topic: "AI in Sustainable Healthcare and Social Well-being"**

Dr. Santhosh Kumar discussed the role of Artificial Intelligence in transforming healthcare systems. His key highlights included, AI-based disease prediction models, Intelligent medical imaging analysis, Personalized healthcare systems, AI applications in mental health monitoring. The session emphasized how AI technologies can improve healthcare accessibility, diagnosis accuracy, and patient care outcomes. Finally, the session concluded with effective Q&A session with the participants.



**Day 5: 27.02.2026 (Friday)**

**Resource Person: Dr. Pethuru Raj, PhD, SMIEEE, Principal AI Architect, Infocion Inc., Bengaluru**

**Topic: "Agentic and Physical AI and Sustainability"**

Dr. Pethuru Raj presented advanced AI approaches used in smart city infrastructure and energy optimization. He discussed AI-based energy forecasting models, Smart grid management systems, IoT-enabled intelligent energy monitoring, Sustainable urban infrastructure solutions. The session highlighted how AI can significantly reduce energy consumption and improve efficiency in smart city environments. Finally, the session was concluded with effective Q&A session with the participants.

The slide, titled "Agentic and Physical AI and Sustainability", provides contact information for the resource person:

Pethuru Raj PhD, SMIEEE  
Principal AI Architect  
Infocion Inc.  
Bangalore  
peterindia@ieeee.org

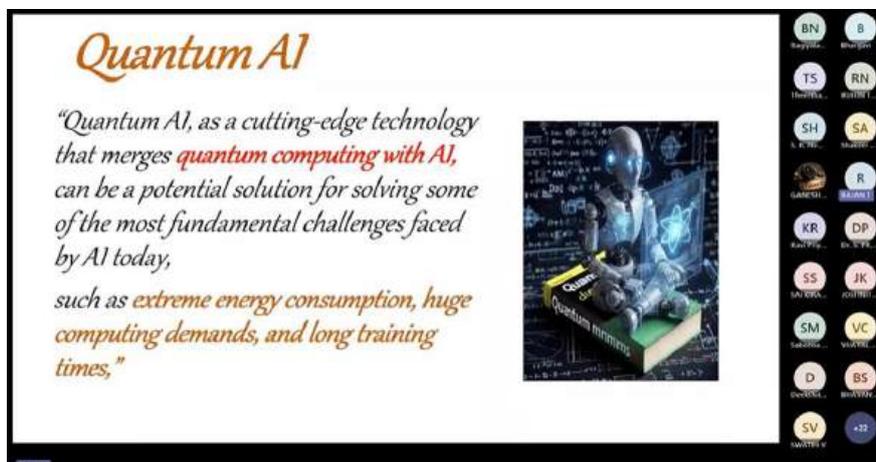
At the bottom right, it says "Confidential | 24-02-2026 | version 1".

Day 6: 28.02.2026 (Saturday)

Resource Person: Mr. T. Rajan M.E. (Ph.D), Department of Computing Engineering, University of West London, UAE.

Topic: Quantum AI for Sustainability: Solving Tomorrow's Challenges Today

The final technical session introduced participants to Quantum Artificial Intelligence, an emerging interdisciplinary field combining quantum computing and AI algorithms. The speaker explained, Fundamentals of quantum computing, Quantum machine learning models, Applications in optimization and complex simulations, Potential future impacts of quantum AI in sustainability research. The session provided participants with insights into next-generation computational technologies. Finally, the session concluded with effective Q&A session with the participants.



### Valedictory Session

The FDP concluded with a Valedictory Session on 28th February 2026 from 3:00 PM to 3:15 PM.

The organizers expressed their gratitude to all the resource persons, faculty participants, and organizing committee members for their active participation and support. Participants shared their feedback and appreciated the FDP for providing valuable knowledge on advanced AI research and sustainable development applications. Certificates were distributed to all participants.

### Summary of FDP:

**Total number of Participants : 78**

**Foreign participants : 02**

- Nigeria : 01
- UAE : 01

**Indian Participants : 76**

- Andhra Pradesh : 22
- Karnataka : 05
- Kerala : 12
- Tamilnadu : 36
- Maharashtra : 01

### Outcome of the FDP:

The Faculty Development Programme achieved several academic and professional outcomes:

- 1. Knowledge Enhancement:** Participants gained in-depth knowledge about emerging research trends in Artificial Intelligence and its role in sustainable development.
- 2. Research Skill Development:** The sessions helped faculty members understand advanced research methodologies, AI frameworks, and practical applications.
- 3. International Academic Exposure:** The FDP featured international experts, providing global perspectives on AI innovations and sustainable technology solutions.
- 4. Interdisciplinary Collaboration:** The programme encouraged collaboration among faculty members from different institutions and research domains.
- 5. Industry and Research Insights:** Participants learned about real-world applications of AI in healthcare, cybersecurity, energy systems, and smart cities.