

# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC-AUTONOMOUS)

Affiliated to JNTUA, Anantapuramu& Approved by AICTE, New Delhi Recognised Research Center, Accredited by NBA for CE, CSE, ECE, EEE, ME, MBA & MCA, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956



#### A Report on

## "Artificial Intelligence for Power Systems and E-Mobility"

Organized by
Department of Electrical & Electronics Engineering (EEE), MITS Madanapalle
09.12,2023

Convener (s): Dr. A V PAVAN KUMAR, Professor & Head, EEE Department

Co-ordinator: Mr. RAJESH K S

**Attendees: 19 members** 

Venue: WB120

Platform: Google Meet

The Department of Electrical & Electronics Engineering (EEE), MITS Madanapalle, successfully organized workshop titled "Artificial Intelligence for Power Systems and E-Mobility" on 09<sup>th</sup> Dec 2023.

# **Workshop Schedule**

Time	Session	Resource Person
9:30 AM - 10:00 AM	Inauguration & Welcome Address	Host & Coordinator
10:00 AM - 11:30 AM	Machine Learning Applications in	Dr. G PANDU RANGA
	Power System Monitoring and Control	REDDY
11:30 AM - 11:45 AM	Break	-
11:45 AM - 1:15 PM	AI for Electric Vehicles and Battery	Dr. G PANDU RANGA
	Management Systems	REDDY
1:15 PM - 2:00 PM	Lunch Break	-
2:00 PM - 3:30 PM	Case Studies and Simulation Tools for	Dr. G PANDU RANGA
	AI in Power Systems	REDDY
3:30 PM - 4:30 PM	Q&A and Discussion	Open Session

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### Faculty attended:

- 1. Dr. A V PAVAN KUMAR
- 2. Dr. K. ARUL KUMAR
- 3. Dr. LAKSHMIKHANDAN K
- 4. Dr. BALAJI DAMODHAR T S
- 5. Mr. IBRAHIM ZAFAR
- 6. Dr. V B THURAI RAAJ
- 7. Dr. SUMAN YADAV
- 8. Dr. GOURAV KUMAR SUMAN
- 9. Mr. N SRIDHAR
- 10. Mr. RAJESH K S
- 11. Mr. CHODAGAM SRINIVAS
- 12. Mr. SARAVANAN D
- 13. Mr. G MALLIKARJUNA
- 14. Mr. BONDU VIJAYAKUMAR
- 15. Mr. EJJIROTU RAGHU BABU
- 16. Mr. VENKATESH M
- 17. Mr. RAMESH KUMAR R
- 18. Ms. KODURI REVATHI
- 19. Ms. REVATHY GOPINATH

The online one-day workshop was inaugurated on 09<sup>th</sup> Dec 2023 at 9:30 AM with a welcome address to all attendees by, Dr. A V Pavan Kumar Head of the Department, EEE. This was followed by an inaugural address delivered by Dr. G Pandu Ranga Reddy, emphasizing the importance of **Artificial Intelligence for Power Systems and E-Mobility** in modern power grids. The workshop agenda and the introduction of the resource person were presented by Mr. RAMESH KUMAR R.

This session focused on supervised and unsupervised machine learning techniques for realtime monitoring and decision-making in power systems. Use cases like voltage stability prediction, renewable energy forecasting, and intelligent SCADA systems were presented

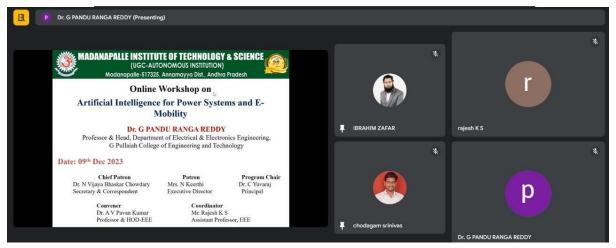
Dr. Reddy emphasized the importance of AI in E-Mobility, especially in optimizing EV charging infrastructure and battery health monitoring. He presented current challenges in EV integration into grids and how AI-based techniques like Neural Networks and Genetic Algorithms provide optimal control and scheduling solutions.



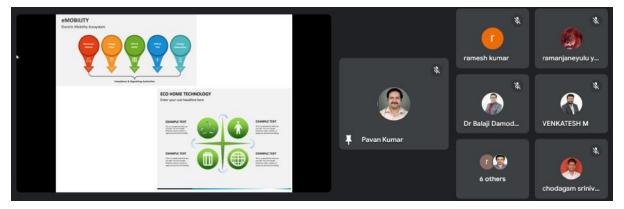
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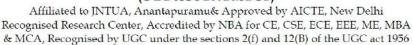






After a lunch break, the final session included practical demonstrations and case studies where AI was implemented in MATLAB, Python, and Power System simulation environments. Participants explored hands-on examples using Simulink, ANN Toolboxes, and Python libraries like scikit-learn and Tensor Flow The workshop concluded with a Q&A and discussion session, where participants actively engaged with the resource person on real-

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world implementations, policy frameworks, and advancements in AI-driven power system control.

A vote of thanks was delivered by Mr. G Mallikarjuna, expressing gratitude to the Principal of MITS for fostering a culture that encourages such events, the Head of the EEE Department, Dr. A.V. Pawan Kumar, for his unwavering support and guidance in organizing the event, as well as to the faculty members, guest speakers, and student volunteers for their valuable contributions in making the event a grand success.

Mr. Rajesh K S Assistant Professor, Department of EEE

MITS, Madanapalle.

Signature of HOD-EEE