



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 09th 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 Power System Monitoring and Control	Dr. G PANDU RANGA REDDY
11:30 AM - 11:45 AM	Break	-
11:45 AM - 1:15 PM	AI for Electric Vehicles and Battery Management Systems	Dr. G PANDU RANGA REDDY
1:15 PM - 2:00 PM	Lunch Break	-
2:00 PM - 3:30 PM	Case Studies and Simulation Tools for AI in Power Systems	Dr. G PANDU RANGA REDDY
3:30 PM - 4:30 PM	Q&A and Discussion	Open Session



**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



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 09th 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 real-time 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.



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



Dr. G PANDU RANGA REDDY (Presenting)

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC-AUTONOMOUS INSTITUTION)
Madanapalle-517325, Annamayya Dist., Andhra Pradesh

Online Workshop on Artificial Intelligence for Power Systems and E-Mobility

Dr. G PANDU RANGA REDDY
Professor & Head, Department of Electrical & Electronics Engineering,
G Pullaiah College of Engineering and Technology

Date: 09th Dec 2023

Chief Patron Dr. N Vijaya Bhaskar Chowdary Secretary & Correspondent	Patron Mrs. N Keerthi Executive Director	Program Chair Dr. C Yuvraj Principal
Convener Dr. A V Pavan Kumar Professor & HOD-EEE	Coordinator Mr. Rajesh K S Assistant Professor, EEE	

IBRAHIM ZAFAR, rajesh K S, chodagam srinivas, Dr. G PANDU RANGA REDDY

Dr. G PANDU RANGA REDDY (Presenting)

eMOBILITY
E-Mobility Programme Eco-system

eMOBILITY
What are the Main Drivers for e-Mobility?

Environmental Friendliness and Targets Environmental targets set by the Climate can be met in part through e-mobility	Legislative Compliance E-mobility has become more urgent through legislative action by govts. Government has made it a priority initiative
Reduced Costs The benefits of e-mobility can reduce costs for the overall lifetime cost of the vehicle with servicing costs	Regulatory and Standard Compliance In addition to governments, regulatory bodies will also introduce e-mobility standards
Switch from Fossil Fuels A major part of the environmental targets achievement is the switch from fossil fuels	

rajesh K S, Dr. G PANDU RANGA REDDY, IBRAHIM ZAFAR, Pavan Kumar, chodagam srinivas

Dr. G PANDU RANGA REDDY (Presenting)

eMOBILITY
Electric Mobility Ecosystem

ECO HOME TECHNOLOGY
Enter your sub headline here

EXAMPLE TEXT

ramesh kumar, ramanjaneyulu y..., Pavan Kumar, Dr Balaji Damod..., VENKATESH M, 6 others, chodagam sriniv...

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-



**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



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