



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC-AUTONOMOUS)

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A Report on

“Smart Distribution Systems for Sustainable EV Infrastructure”

Organized by

Department of Electrical & Electronics Engineering (EEE), MITS Madanapalle

27.01.2024

Convener: Dr. AV Pavan Kumar, Professor and Head, Department of EEE, MITS.

Co-ordinator: Mr. 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 "**Smart Distribution Systems for Sustainable EV Infrastructure**" on 27th Jan 2024.

Workshop Schedule

Time	Session	Resource Person
9:30 AM - 10:00 AM	Inauguration & Welcome Address	Host & Coordinator
10:00 AM - 11:30 AM	Fundamentals of Smart Distribution Systems	Dr. A Senthilkumar
11:30 AM - 11:45 AM	Break	-
11:45 AM - 1:15 PM	Integration of EV Infrastructure with Smart Grids	Dr. A Senthilkumar
1:15 PM - 2:00 PM	Lunch Break	-
2:00 PM - 3:30 PM	Case Studies and Real-Time Applications	Dr. A Senthilkumar
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. Dr. GOURAV KUMAR SUMAN
6. Dr. V B THURAI RAAJ
7. Dr. SUMAN YADAV
8. Mr. N SRIDHAR
9. Mr. IBRAHIM ZAFAR
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



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



Online Workshop on
Smart Distribution Systems for Sustainable EV Infrastructure

Dr. A Senthilkumar
Professor Department of Electrical & Electronics Engineering,
MAM school of Engineering

Date: 27th Jan 2024

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



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The online one-day workshop was inaugurated on 27th Jan 2024 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. A Senthilkumar, emphasizing the importance of Smart Distribution Systems for Sustainable EV Infrastructure 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 the architecture and components of modern smart distribution systems. Dr. Senthilkumar elaborated on:

- The evolution of distribution networks from conventional to smart grids
- The role of automation, communication, and control technologies in smart systems
- Benefits of real-time monitoring and distributed generation integration

After break, the session addressed the core topic of the workshop—EV integration. Key points included:

- Load impacts of EV charging stations on distribution networks
- Optimal location and sizing of EV chargers using smart grid data
- Demand-side management and vehicle-to-grid (V2G) technologies
- Standards and protocols for EV grid integration

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide from Madanapalle Institute of Technology & Science (UGC-AUTONOMOUS INSTITUTION). The slide title is "Online Workshop on Smart Distribution Systems for Sustainable EV Infrastructure" by Dr. A Senthilkumar, Professor Department of Electrical & Electronics Engineering, MAM school of Engineering. The date is 27th Jan 2024. The slide lists the following roles and names:

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

The right side of the interface shows a gallery of participants, including revathy gopinath, IBRAHIM ZAFAR, MALLIKARJUNA GURRAMK..., Sridhar Natarajan, Pavan Kumar, Dr. A Senthilkumar, rajesh K S, and chodagam srinivas.

After lunch break, Dr. Senthilkumar presented practical insights through case studies on:

- Pilot projects involving smart EV charging systems
- Use of AI/ML in predicting EV charging demand
- Distribution automation in urban EV corridors



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The presentation slide titled 'Smart Grids' is divided into three main sections: Generation, Transmission & Distribution, and Residential. Generation includes Nuclear Power Import, Cross-Border Interconnection, Local Generation, and Renewable Generation. Transmission & Distribution includes Remote Control / Condition Monitoring / Wide-Area Monitoring, Grid Automation, Intelligent Substations, Smart Switch & Distribution Automation, and Energy Storage. Residential includes Smart Control / Smart Appliances, Home Display Unit, Energy Storage, and Smart Meter / Advanced Metering Infrastructure. Commercial & Industrial includes Distributed Generation, Energy Storage, Smart Charging, Distributed Energy Management Systems, and Smart Building. A notification at the bottom left states 'saravanakumar R has left the meeting'.

Participants listed on the right:

- ramesh kumar
- ramanjaneyulu ya...
- Dr Balaji Damodha...
- VENKATESH M
- rajesh K S
- b karthick
- Dr. Lakshmi Khand...
- 2 others
- chodagam srinivas

The presentation slide titled 'Energy Systems' compares 'yesterday' and 'tomorrow'. Yesterday's system is characterized by few large power plants, centralized and messy national markets, based on large power lines and pipelines, top to bottom distribution, and passive consumers who only pay. Tomorrow's system features many small power producers, decentralized markets ignoring boundaries, including small scale transmission and regional supply compensation, both directions distribution, and active consumers participating in the system.

Participants listed on the right:

- revathy gopinath
- IBRAHIM ZAFAR
- MALLIKARJUNA GURRAMK...
- Sridhar Natarajan
- Pavan Kumar
- Dr. A Senthilkumar
- rajesh K S
- chodagam srinivas

The workshop concluded with a Q&A and discussion session, where participants actively engaged with the resource person.

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. Pavan 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