



Report on Expert Lecture: Recent Trends in Electric Vehicles

Date: Saturday, 11th January 2025

Organized by: Electrical Engineering Department (Degree Wing)

Introduction

On 11th January 2025, the Electrical Engineering Department of Yashwantrao Bhonsale Institute of Technology hosted an expert lecture on the topic Recent Trends in Electric Vehicles (EVs). The lecture was delivered by Dr. Mithun Aush, a well-known expert in the field of EV technology.

This session was organized to provide second-year electrical engineering students with insights into the latest advancements, challenges, and opportunities in the EV sector. Dr. Aush's presentation was aimed at building a deeper understanding of the critical role electric vehicles play in creating sustainable transportation systems and reducing environmental impacts.

Key Topics Covered

1. Introduction to Electric Vehicles: The Future of Transportation

The session began with an overview of EV technology, comparing EVs with Internal Combustion Engine (ICE) vehicles. Dr. Aush elaborated on the economic and environmental benefits of EVs, emphasizing their role in reducing greenhouse gas emissions and enhancing energy efficiency.

2. Design and Working Principles of Electric Vehicle Powertrains

Dr. Aush explained the design aspects of EV power trains, including motor selection, control systems, and power train architecture. He highlighted the efficiency of regenerative braking systems, which help in energy recovery during braking.

3. Battery Technology in Electric Vehicles

The lecture covered the different types of batteries used in EV, including lithium-ion and solid-state batteries. Dr. Aush discussed the importance of Battery Management Systems (BMS) for ensuring optimal performance and safety. Charging challenges and advancements in fast-charging technologies were also addressed.

4. Charging Infrastructure and Renewable Integration

The session explored the various types of EV chargers, such as slow chargers, fast chargers, and DC fast chargers. Dr. Aush discussed the importance of integrating EV charging infrastructure with renewable energy sources like solar and wind, as well as smart charging and vehicle-to-grid (V2G) technologies to enhance grid stability.



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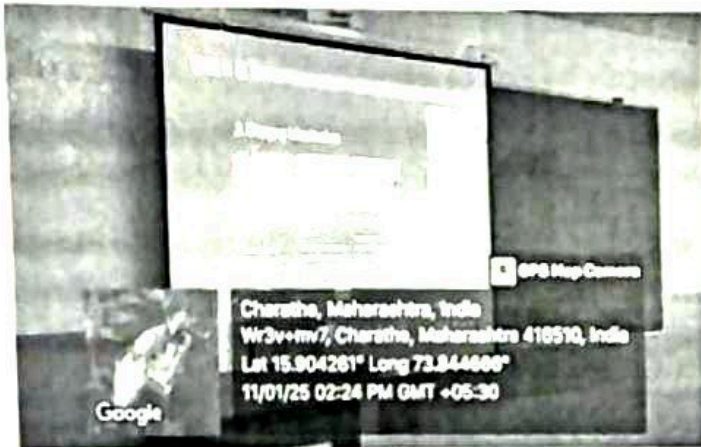
Conclusion

The expert lecture provided valuable insights into the technological advancements and emerging trends in the electric vehicle industry. Students gained a thorough understanding of the challenges and opportunities in EV adoption, such as battery technology, charging infrastructure, and renewable energy integration.

Dr. Aush's expertise and ability to relate theoretical concepts with practical applications made the session highly engaging and informative. The lecture concluded with an interactive Q&A session, where students actively participated, seeking clarifications and discussing future possibilities in the EV sector.

The department extends its gratitude to Dr. Mithun Aush for his invaluable time and effort in enlightening the students. Such sessions play a crucial role in equipping students with knowledge about current innovations in the field of electrical engineering.

Glimpse Of the Event:




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Dr. Raman Bane
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