Department of Mechanical Engineering
Dayananda Sagar University
School of Engineering
Harohalli, Kanakapura Road, Bengaluru South Dt. – 562 112

SEMINAR REPORT

Topic: Condition Monitoring and Predictive Maintenance of Electric Vehicle Drivetrains

Organising Department	Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University
Date	Saturday, 24 October 2026
Time	11:30 AM – 12:30 PM IST
Mode	Online – Google Meet
Resource Person	Dr. Vinayak Kulkarni
Affiliation	KLS Gogte Institute of Technology, Belagavi, Karnataka
Coordinator	Dr. Ravitej Y. P.
Participants	13

1. Introduction

The Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, organised an online seminar titled "Condition Monitoring and Predictive Maintenance of Electric Vehicle Drivetrains" on 24 October 2026. The session was delivered by Dr. Vinayak Kulkarni of KLS Gogte Institute of Technology, Belagavi, Karnataka. The seminar addressed the importance of monitoring the health of electric vehicle (EV) drivetrain components and using predictive maintenance strategies to support reliability, operational efficiency, and sustainable electric mobility.

2. Objectives of the Seminar

- To introduce the role and importance of drivetrain health monitoring in electric vehicles.
- To discuss common drivetrain problems and the need for early fault identification.
- To explain how monitoring indicators, including electrical signals and temperature, can support assessment of vehicle health.
- To highlight the relevance of predictive maintenance in reducing unexpected failures and improving system availability.

- To connect mechanical and automotive engineering concepts with condition monitoring and reliability engineering.

3. Technical Content and Proceedings

The presentation examined why drivetrain health monitoring matters in electric vehicles and outlined common problems that can affect drivetrain operation. The slides included discussion of vehicle-health sensing and the checking of electrical signals and temperature. These topics illustrated how monitoring information can help identify deviations from expected operating conditions and support maintenance decisions. The seminar connected these concepts with the wider objective of improving drivetrain reliability and the long-term performance of electric mobility systems.

The session was conducted online through Google Meet. Presentation screenshots included in the source document provide visual evidence of the speaker's presentation and the technical topics discussed.

4. Key Learning Outcomes

The seminar was intended to enable participants to:

- Describe the purpose of condition monitoring in EV drivetrains.
- Recognise the importance of identifying early indications of component degradation or abnormal operation.
- Explain, at an introductory level, how electrical-signal and temperature checks can contribute to vehicle-health assessment.
- Differentiate the purpose of condition monitoring from the maintenance actions informed by predictive insights.
- Relate reliability-oriented maintenance practices to system availability and sustainable transportation.

5. Conclusion

The seminar provided a focused technical discussion on condition monitoring and predictive maintenance for electric vehicle drivetrains. The topics presented highlighted the importance of monitoring drivetrain health, identifying possible abnormal operating conditions, and using maintenance strategies to support reliability and system availability. The event is relevant to departmental technical-

enrichment activities and can be included in NBA supporting documentation when accompanied by verified participation records and mapped to the applicable institutional criterion.

6. Event Record

Prepared by	Ravitej Y P
Verified by	Dr.Saravana Bavan D
Date of report	24 October 2026

Annexure I – Photographic / Online Session Evidence

The following images are reproduced from the seminar source document. They show the online session and selected presentation slides. Retain the original file alongside this report for full-resolution evidence.



Figure 1. Online seminar / presentation evidence.

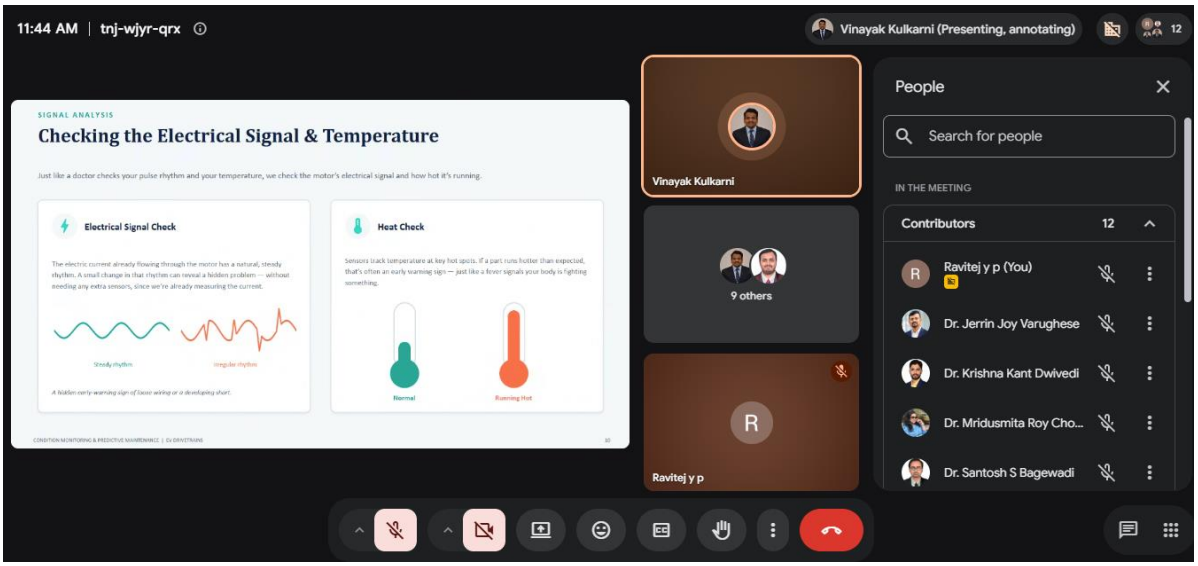


Figure 2. Online seminar / presentation evidence.

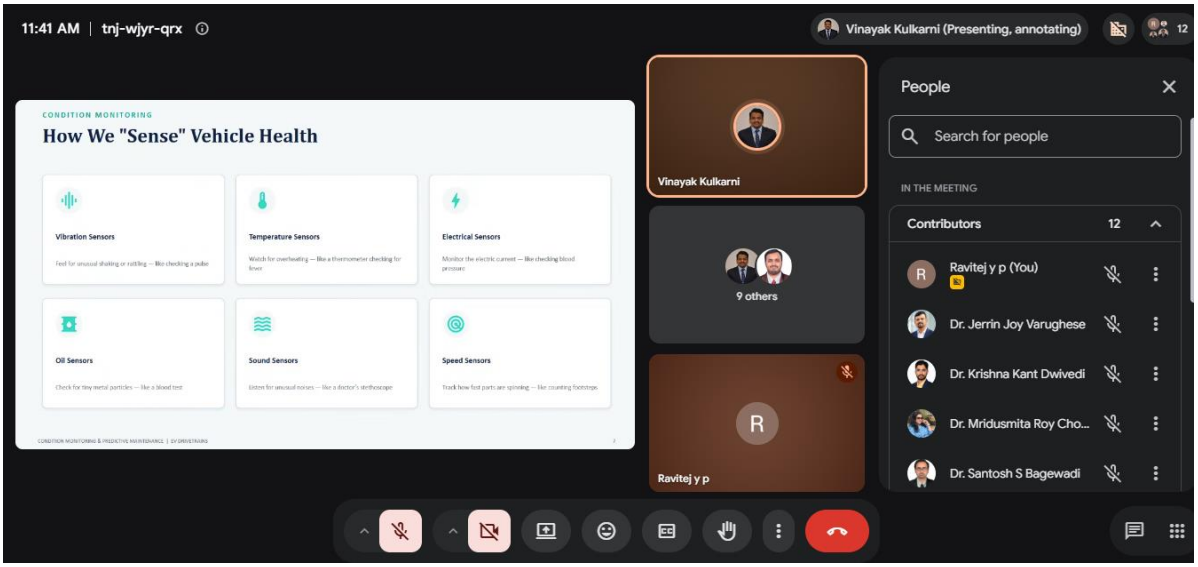


Figure 3. Online seminar / presentation evidence.



Figure 4. Online seminar / presentation evidence.

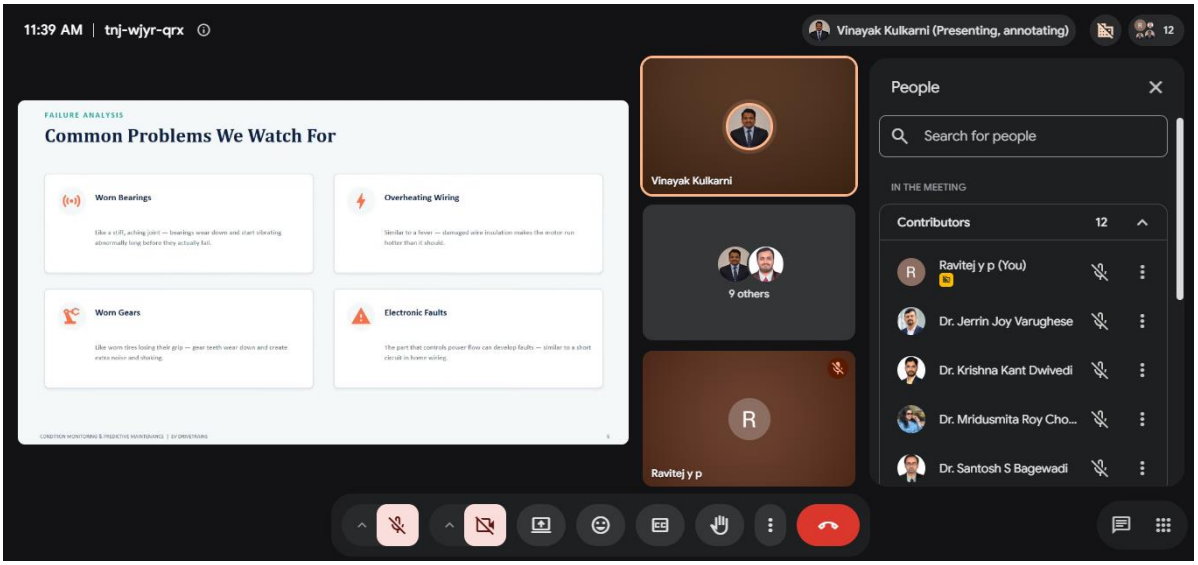


Figure 5. Online seminar / presentation evidence.