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Guest Lecture Report

The department of Electrical and Electronics organised a **Guest Lecture** titled **AC/DC Variable Speed Drives-Use Cases** on **13-09-2025** at **10:15am**, in **Seminar Hall 2**.

The lecture was delivered by **Mr. Rajesh R**, a Global Freelance Consultant (Alumni-1991 Batch). His area of expertise includes design, retrofitting, commissioning, health-checks, and troubleshooting of advanced electrical systems involving Siemens PLCs and power management systems.

Objectives of the Event

The primary objectives of the event were:

- Energy Efficiency: Optimise energy consumption by adjusting motor speed to match load requirements, reducing waste and lowering operational costs.
- Process Control: Improve process control and precision by adjusting motor speed to match specific application needs.
- Increased Productivity: Enhance productivity by allowing for flexible and precise control of motor-driven systems.

Event Overview

The session began at 10:15 AM with a welcome address by Mrs Renjini E Nambiar, followed by an engaging session by **Mr Rajesh R, a Global Freelance Consultant (Alumni-1991 Batch)**. The presentation covered key areas such as Introduction of Drives, Industrial Applications: Conveyor belt control, Pump and fan control, Compressor control, Material handling, thereby providing deep insights into the subject matter. Participants (students) showed keen interest, with active participation during interactive segments and Q&A rounds.

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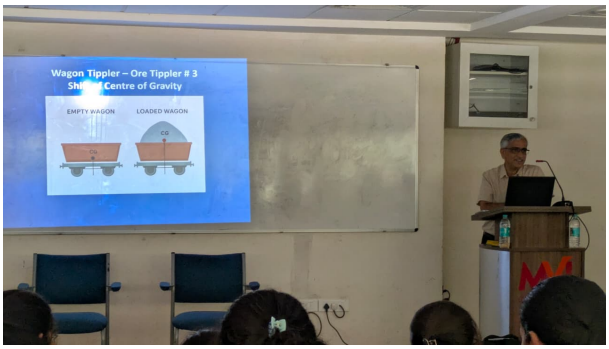
Figure 1: Mr Rajesh R,a Global Freelance Consultant (Alumni-1991 Batch)

(a) Mr Rajesh R , addressing the session



(b) Mr Rajesh R , addressing the session

Figure 2: Figure a and b - Session address by Mr Rajesh R

Day	Time	Session Details
Saturday, September 13 2025	10:15 - 10:25 am	Welcome Address
	10:25 - 12:15 am	Commencement of Session

Table 1: Schedule of the Event

Outcomes and Impact

- Students are able to learn the fundamentals of VFD and machines.
- Students are able to learn about the real-time applications of slip ring induction motor and DC motors in New Pamban Bridge, Wagon Tippler.

Conclusions

The session was useful for students as they gained knowledge of VFD and DC motors with real-time applications.

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