

KPR Institute of Engineering and Technology

(Autonomous, NAAC "A")

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NBA Accredited (CSE, ECE, EEE, MECH, CIVIL)

EV LECTURE Event No EE077 **Organizing Department** Electrical and Electronics Engineering Associate Dept. | NSC Society for Smart E-Mobility Date 28/04/2023 Time 02:30 PM to 04:00 PM **Event Type** Expert Talk **Event Level** Dept. Level thanam hall Venue **Total Participants** 132 2 **Industry Personnel Faculty - Internal** 5 125 **Students - Internal**

Related SDG



Involved Staffs

SI	Name	Role
1	Karthick A	Convenor
2	Rakesh Kumar	Co-convenor

Outcome

hri Dhanasekar Venkatesan Senior Manager – System Dynamics, D & E Indo-Pacific, Manufacturing Intelligence Division, Hexagon delivered the talk on "Vehicle Dynamics in EV" to the students. The students learned about the simulation tool in the vehicle dynamics.

Event Summary

The event started with Dr. A Karthick, Asso. Prof. of EEE Dept, welcoming the guests in the Thanam Hall. Shri Dhanasekar Venkatesan Senior Manager – System Dynamics, D & E Indo-Pacific, Manufacturing Intelligence Division, Hexagon, followed up with a brief about the SSEM. Shri S M Manoharan, Executive Director of SSEM. The guests were then felicitated by Dr. K Mohana Sundaram, Head of EEE. Further, "Vehicle Dynamics in EV" expert talk by Shri Er Dhanasekar Venkatesan Senior Manager . Electric vehicles (EVs) have unique vehicle dynamics compared to traditional internal combustion engine (ICE) vehicles due to their distinct powertrain systems. The key difference is that EVs use electric motors to generate torque, whereas ICE vehicles use combustion engine. Overall, EVs have unique vehicle dynamics that offer advantages over ICE vehicles in terms of acceleration, energy efficiency, and handling. However, manufacturers must also consider the weight and placement of the battery pack and the behavior of regenerative braking to optimize the vehicle's performance. Instant Torque: Electric motors can generate maximum torque at zero RPM, providing instantaneous acceleration. This means that EVs can accelerate faster than ICE vehicle's weight, which affects the vehicle's handling and braking. Car manufacturers must find a balance between battery capacity and weight to optimize the vehicle's performance. He also provided significant insights into the EV industry and interacted with faculty and students. At the end, the Vote of Thanks was offered by Dr A Rakesh Kumar, Asst. Prof, EEE Dept.





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