



**KINGS**  
COLLEGE OF ENGINEERING  
AUTONOMOUS

Approved by AICTE, New Delhi  
Affiliated to Anna University, Chennai  
Recognized under 2(f) & 12B, UGC  
NAAC Accredited Institution

## **ISTE STAFF CHAPTER (TN 205)**

### **ACADEMIC YEAR 2024-25(EVEN SEMESTER)**

#### **Staff Seminar Report**

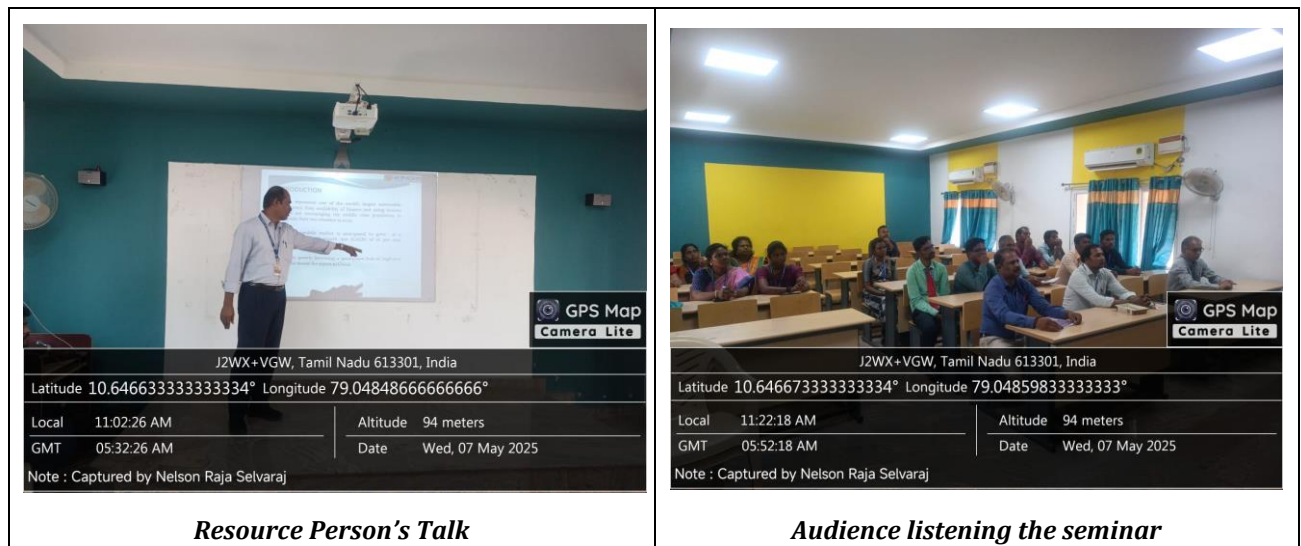
A one day seminar titled “**Recent Advancements in Automobiles**” was organized by **ISTE Staff Chapter [TN 205]** on **07.05.2025** from 11.00a.m. to 12.00noon to the faculty members of Kings College of Engineering (Autonomous) with an objective to offer a better understanding of Recent Advancements in Automobiles. The session was handled by the resource person, **Dr.T. Pushapraj** Professor & Head / Department of Mechanical Engineering.

The automobile industry has evolved significantly over the past century, with various types of vehicles emerging to meet changing consumer needs, environmental concerns, and technological advancements. Traditionally, vehicles were powered by internal combustion engines (ICE), running on gasoline or diesel. These remain common due to established infrastructure and reliability. However, increasing awareness of environmental issues has led to the rise of alternative vehicle types. Electric vehicles (EVs), which run solely on electricity stored in batteries, have gained popularity for their zero emissions and lower running costs.

Hybrid electric vehicles (HEVs) combine an internal combustion engine with an electric motor, improving fuel efficiency and reducing emissions. Plug-in hybrid electric vehicles (PHEVs) extend this concept by allowing external charging and offering a longer electric-only driving range. Additionally, hydrogen fuel cell vehicles are emerging, using hydrogen to generate electricity and emitting only water vapor, offering quick refueling and long ranges. Advances in automobile technology have been equally transformative. One major development is autonomous driving, with companies like Tesla, Waymo, and others investing heavily in self-driving systems that use artificial intelligence, sensors, and cameras to enhance road safety and convenience. Connectivity is another area of rapid growth, as vehicles now come equipped with internet access, real-time navigation, and systems that communicate with other vehicles and infrastructure (V2V and V2X). Safety has also improved with the integration of advanced driver-assistance systems (ADAS) such as adaptive cruise control, lane departure warnings, and automatic emergency braking. Furthermore, the use of lightweight and durable materials like carbon fiber and aluminum helps reduce vehicle weight, improving performance and fuel economy. Automakers are also adopting more

sustainable manufacturing practices, including the use of recycled materials and energy-efficient processes. Overall, the automotive sector is moving towards smarter, greener, and more efficient vehicles, shaping the future of transportation.

Totally 22 faculty members actively participated in this session and gained knowledge about the Recent Advancements in Automobiles. The seminar was arranged by **Mrs.T. Gnanajeya**, Coordinator / ISTE Chapter.



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Coordinator / ISTE Chapter 12/5/25

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12/5/2025  
PRINCIPAL