



**MAR BASELIOS CHRISTIAN COLLEGE OF  
ENGINEERING AND TECHNOLOGY,  
PEERMADE**

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING**

**REPORT ON**

**TALK SESSION**

**EV CHARGER: OPPORTUNITIES FOR ELECTRICAL  
ENGINEERS**

## **ABOUT THE SESSION**

Organized By: Electrical and Electronics Department

Date: 09-December-2022

Venue: PTA Seminar Hall, Mar Baselios Christian College of Engineering and  
Technology, Peermade

Attendees: Students of Electrical and Electronics Engineering

# **INTRODUCTION**

As part of our ongoing efforts to expose students to emerging technologies and industry-relevant insights, a talk session on the topic **“EV Charger: Opportunities for Electrical Engineers”** was conducted by **Mr. Mohamed Aslam**, the **Chief Executive Officer of inQbe Innovation Pvt. Ltd.**

The session aimed to highlight the growing relevance of electric vehicle (EV) charging infrastructure in the context of global energy transition and sustainable mobility. With the rise in electric vehicle adoption, the demand for efficient and intelligent charging solutions is rapidly increasing, opening up numerous opportunities for electrical engineers in areas such as power systems, embedded systems, smart grid integration, and renewable energy management.

Mr. Aslam, with his vast experience in innovation-driven entrepreneurship and product development in the EV sector, provided valuable insights into the technological and career prospects in this field. His presentation covered the fundamentals of EV chargers, the challenges in large-scale deployment, and the skillsets required for engineers to contribute effectively to this evolving domain.

The session was highly informative and served as an eye-opener for students, motivating them to explore the potential of the EV industry and its allied sectors as a promising career path.

## **SYNOPSIS OF THE PROGRAM**

The expert talk session titled **“EV Charger: Opportunities for Electrical Engineers”** was organized with the objective of introducing students to the emerging opportunities in the electric vehicle (EV) charging sector and its relevance to the electrical engineering discipline. The session was conducted by **Mr. Mohamed Aslam, CEO of inQbe Innovation Pvt. Ltd.**, a pioneer in innovation-driven solutions for energy and mobility.

With the global shift towards sustainable and clean transportation, the electric vehicle industry has gained significant momentum. Among the critical components

of this ecosystem is the **EV charging infrastructure**, which presents vast scope for innovation and technical contributions from electrical engineers. The program was aimed at creating awareness about this fast-growing sector and the skills required to be part of it.

During the session, Mr. Aslam shared insights on:

- The current landscape and future trends of electric mobility
- The technical architecture and components of EV charging systems
- Opportunities in hardware design, embedded systems, power electronics, and smart grid integration
- Real-world challenges and industry expectations
- Career paths and entrepreneurship in the EV sector

The talk was well-received and provided a valuable platform for students to understand the intersection of traditional electrical engineering and modern sustainable technologies. The session concluded with an interactive Q&A, allowing students to clarify their doubts and seek guidance for further learning.

## **PO JUSTIFICATIONS:**

### **☐ PO1 – Engineering Knowledge**

→ The session enhances the foundational understanding of electrical concepts related to EV chargers, such as power electronics, grid integration, and battery technology.

### **☐ PO2 – Problem Analysis**

→ Discusses real-world challenges and potential solutions in implementing EV infrastructure, enabling students to analyze and approach engineering problems.

### **☐ PO3 – Design/Development of Solutions**

→ Exposes students to design aspects of EV chargers, charger types (Level 1, 2, DC fast charging), and control systems.

### **☐ PO4 – Conduct Investigations**

→ Encourages curiosity and exploration of industry problems, recent innovations, and R&D trends in EV charging technology.

□ **PO5 – Modern Tool Usage**

→ Introduces tools and technologies used in the design, monitoring, and testing of EV charging stations.

□ **PO6 – The Engineer and Society**

→ Highlights the role of electrical engineers in transitioning to e-mobility and contributing to sustainable transport solutions.

□ **PO7 – Environment and Sustainability**

→ Emphasizes the eco-friendly nature of EVs and how charging infrastructure aids in reducing carbon emissions.

□ **PO8 – Ethics**

→ Discusses ethical responsibilities in promoting clean technologies and energy conservation.

• **PO9 – Individual and Team Work**

→ The session encourages collaborative learning and teamwork, especially in multidisciplinary EV projects.

• **PO10 – Communication**

→ Students enhance communication through Q&A, discussions, and possibly by presenting reflections on the session.

• **PO11 – Project Management and Finance**

→ Explores the entrepreneurial and managerial aspects of setting up EV infrastructure, financial incentives, and startup opportunities.

• **PO12 – Life-Long Learning**

→ Inspires students to pursue careers or further studies in evolving fields like EV technology and smart energy systems.

## **PSO JUSTIFICATIONS:**

• **PSO1 – Design, Analyze, and Test Components and Systems**

→ The session relates to the design and operation of EV charger hardware systems, enabling students to align theoretical knowledge with real-world applications.

• **PSO2 – Specify and Develop Electronic Systems for Control and Signal Processing**

→ Many EV chargers involve embedded systems, control strategies, and digital communication protocols, directly connecting with PSO2.

**OUTCOME:**

After attending the session by **Mr. Mohamed Aslam**, students will be able to:

1. **Understand the Fundamentals** of EV charging technologies, types of chargers, and the basic electrical engineering principles behind them.
2. **Identify Career and Industry Opportunities** in the growing EV sector, especially in roles related to power systems, control, embedded systems, and renewable energy integration.
3. **Analyze Real-World Problems** associated with EV charger design, grid connectivity, and deployment in urban and rural areas.
4. **Gain Awareness of Modern Tools and Technologies** used in developing and testing EV charging systems.
5. **Recognize the Importance of Sustainability**, green energy adoption, and the role of electrical engineers in achieving clean mobility goals.
6. **Improve Technical Communication Skills** through interactions, discussions, and exposure to industry perspectives.
7. **Develop Entrepreneurial Thinking** by learning from the experience of an industry expert and understanding the business aspects of EV infrastructure.
8. **Foster Lifelong Learning Attitude** to stay updated in the evolving domain of electric mobility and smart energy systems.

## PHOTOS:





# POSTER:

The poster features a dark blue background with a network of white lines and dots. At the top left is the college's crest, and at the top right is the RGNATA logo. The text is centered and reads: 'MAR BASELIOS CHRISTIAN COLLEGE OF ENGINEERING & TECHNOLOGY KUTTIKKANAM, PEERMADE', 'DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING', 'PRESENTS TALK SESSION'. A vertical 'SPEAKER' label is to the left of a photo of Mohamed Aslam. Below the photo, his name and title 'CEO of inQbe Innovations Pvt Ltd.' are listed. Two callout boxes provide the date '09.12.2022 (FRIDAY) 1.30 PM (IST)' and the location 'PTA SEMINAR HALL'. The topic 'EV charger: Opportunities for Electrical Engineers' is at the bottom. Logos for NBA and NAAC are at the bottom corners.

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COLLEGE OF ENGINEERING & TECHNOLOGY  
KUTTIKKANAM, PEERMADE

**DEPARTMENT OF  
ELECTRICAL AND ELECTRONICS ENGINEERING**

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**TALK SESSION**

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**Mohamed Aslam**  
CEO of inQbe Innovations Pvt Ltd.

**09.12.2022 (FRIDAY)  
1.30 PM (IST)**

**PTA SEMINAR HALL**

**Topic:**  
**EV charger: Opportunities for Electrical Engineers**

**NBA**  
NATIONAL BOARD  
OF ACCREDITATION

**ACCREDITED WITH HIGHEST  
B++  
NAAC**

## **CONCLUSION:**

The talk session delivered by **Mr. Mohamed Aslam**, CEO of inQbe Innovation Pvt Ltd, was highly informative and thought-provoking for aspiring electrical engineers. It shed light on the technological advancements, design considerations, and career prospects in the field of electric vehicle (EV) charging infrastructure. The session successfully bridged the gap between academic knowledge and industry expectations, providing students with a clear vision of their potential role in the sustainable energy transition.

Through this session, students gained valuable insights into the importance of adopting clean and green technologies, the application of engineering skills in real-world EV projects, and the significance of staying updated with modern tools and innovations. It inspired the participants to explore opportunities in the EV domain, encouraged entrepreneurial thinking, and reinforced the relevance of lifelong learning in their engineering journey.

Overall, the session served as a meaningful step toward preparing future-ready electrical engineers equipped to contribute to the evolving electric mobility ecosystem.