

# ENLYTUS

SEPTEMBER '25 EDITION

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- »»» FACULTY ACHIEVEMENTS
- »»» STUDENT ACHIEVEMENTS
- »»» TECH BEATS



## VISION OF DEPARTMENT

To be an exemplary department in Electrical Engineering to facilitate value imbibed quality professionals.

## MISSION OF DEPARTMENT

1. Impart state of the art knowledge in Electrical and Electronics Engineering Field.
2. Inculcate the culture of research and lifelong learning.
3. Facilitate the professionals with commitment towards Social & Ethical Values.

## PROGRAMME EDUCATIONAL OBJECTIVES

1. Graduates will handle the modern tools and take diverse career paths / research / higher education.
2. Graduates will excel with managerial and leadership qualities.
3. Graduates will have skills to work in teams with integrity & ethical values.

## PROGRAMME SPECIFIC OUTCOMES:

1. Graduate will be able to apply fundamental knowledge of Electrical and Electronics Engineering to identify, analyse, and solve complex problems related to Power Systems, Electrical Machines, Control Systems, Power Electronics and Electrical System Design.
2. Graduates will be able to apply core Electrical and Electronics Engineering knowledge with advanced Computational Intelligence skills to develop innovative and sustainable solutions for societal, environmental and industrial needs.

# DEPARTMENT ACTIVITIES

## PTA MEETING



**The Department of EEE conducted PTA meetings to strengthen the communication between faculty and parents. The S7 and S5 EEE PTA meeting was held on 11 September 2025, followed by the S3 EEE PTA meeting on 12 September 2025. These sessions provided a platform to discuss academic progress, student development, and future initiatives.**



# DEPARTMENT ACTIVITIES

## VALUE ADDED COURSE



**The EEE Department successfully organized the value added course on Autodesk Revit and AutoCAD for the 2022–2026 Batch EEE students. Organized in association with CADD Centre, the six-day training concluded on September 9, 2025 at the Programming and Simulation Lab. The program aimed to enhance students' technical expertise in design and drafting, equipping them with practical industry-relevant skills for their professional growth and future opportunities.**

# DEPARTMENT ACTIVITIES

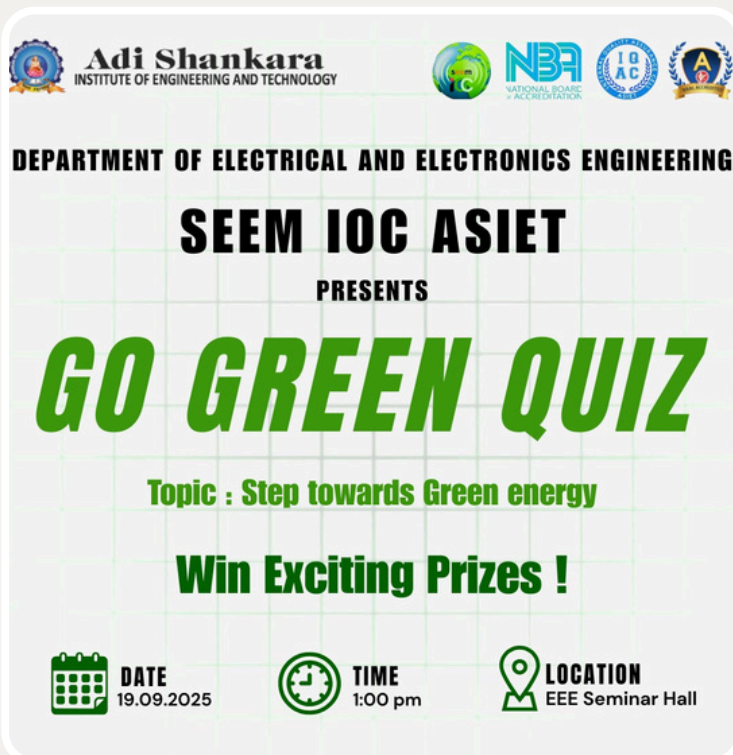
## UX-ELEVATE



The coding club of EEE Department, Algo Clans organized UX ELEVATE – a workshop on the basics of UX Design and Solution Architecture on 17 September 2025 at the EEE Seminar Hall. The interactive session was led by Mr.Jabin J, Entrepreneur and Enterprise Architect Consultant, who introduced students to the fundamentals of UX, real-world applications and practical exercises. The workshop provided participants with valuable insights into creating impactful digital experiences.

# DEPARTMENT ACTIVITIES

## GO GREEN QUIZ



**Adi Shankara**  
INSTITUTE OF ENGINEERING AND TECHNOLOGY

**SEEM IOC ASIET**  
PRESENTS

**GO GREEN QUIZ**

Topic : Step towards Green energy

Win Exciting Prizes !

**DATE** 19.09.2025

**TIME** 1:00 pm

**LOCATION** EEE Seminar Hall



SEEM IOC ASIET, in association with the Department of EEE, organized the GO GREEN QUIZ on 19 September 2025 at the EEE Seminar Hall. The event aimed to promote awareness of green energy and sustainability through an engaging and competitive quiz. Participants enthusiastically showcased their knowledge, making the event both informative and inspiring.



# DEPARTMENT ACTIVITIES

## CAREER OPPORTUNITIES SEMINAR

The poster features the Adi Shankara Institute of Engineering and Technology logo at the top left and a circular logo with a gear and text at the top right. The background is light blue with faint illustrations of light bulbs, a trophy, and a graduation cap. The main title 'CAREER OPPORTUNITIES SEMINAR' is in large, bold, black letters. Below it, the date '19TH AUGUST 2025' and time '2:30 PM' are listed, along with the location 'ASIET, KALADY'. A blue box contains the text: 'Flowers TV and 24 News Channel are organizing a FREE Seminar on "Career Opportunities in India and Abroad"'. A circular photo of the speaker, Mr. Ibrahim Babu, is shown next to his name and title 'Seminar Speaker IBRAHIM BABU Career Guidance Counselor'. A yellow arrow points to the text 'OPEN TO ALL FINAL YEAR STUDENTS!'. At the bottom, a quote reads: '"Don't miss this opportunity to explore your career options and boost your English skills. See you there!"'.

Adi Shankara  
INSTITUTE OF ENGINEERING AND TECHNOLOGY

**CAREER OPPORTUNITIES SEMINAR**

19TH AUGUST 2025 2:30 PM  
ASIET, KALADY

Flowers TV and 24 News Channel are organizing a FREE Seminar on "Career Opportunities in India and Abroad"

Seminar Speaker  
**IBRAHIM BABU**  
Career Guidance Counselor

**OPEN TO ALL FINAL YEAR STUDENTS!**

"Don't miss this opportunity to explore your career options and boost your English skills. See you there!"

A Career Opportunities Seminar was organized on 19 August 2025 at the college, in association with Flowers TV and 24 News Channel. The session was handled by Mr. Ibrahim Babu, Career Guidance Counselor, who shared valuable insights on exploring career opportunities in India and abroad. The seminar proved highly beneficial for final-year students in guiding them towards their future career paths.

# FACULTY ACHIEVEMENTS



**Dr.Sreena Sreekumar** actively participated in the five-day Online Faculty Development Program on, “Artificial Intelligence (AI) and Machine Learning (ML) in Engineering” organized by the EEE Association – ELEGENDS, Department of EEE, SNIT Adoor, held from 16 to 20 September 2025. The FDP provided advanced insights into AI and ML concepts, applications, and teaching methodologies.



**Prof.Anna Baby** actively participated in the five-day Online Faculty Development Program on, “Artificial Intelligence (AI) and Machine Learning (ML) in Engineering” organized by the EEE Association – ELEGENDS, Department of EEE, SNIT Adoor, held from 16 to 20 September 2025. The FDP provided advanced insights into AI and ML concepts, applications, and teaching methodologies.

# STUDENT ACHIEVEMENTS



**SEEM IOC ASIET, in collaboration with the Department of EEE, organized the Go Green Quiz on 19 September 2025 at the EEE Seminar Hall. The event aimed to spread awareness on sustainable practices and green energy, Navin Vinod of S3 EEE secured the first place.**



# STUDENTS ACHIEVEMENTS

GTech  $\mu$ Learn Exclusive Weekly Twitch

## Listen up, it's Discord stages

Tune into Inspiration Station  
Radio



**Brian Roy Mathew**  
UX Designer at Datamate InfoSolutions |  
Founder- Techiepedia |  
Research Activities Coordinator- IEEE EdSoc KC

Organised by  
 **$\mu$ Learn**  
ASI

**16th September 2025, 8 PM**  
#Google Meet

The G Tech Mulearn ASIET hosted an inspiring session with Brian Roy Mathew of S5 EEE, UX Designer at Datamate InfoSolutions, Founder of Techiepedia, and Research Activities Coordinator at IEEE EdSoc KC. Held on 16 September 2025 via Google Meet, the session highlighted Brian's journey in technology, design and community leadership. With his insights on creativity, problem-solving and innovation, the event motivated students to explore opportunities in UX design and contribute meaningfully to digital transformation.

# STUDENT ACHIEVEMENTS



**The Kerala State Energy Conservation Award Scheme 2025, organized by the Energy Management Centre (EMC), was held on 20 September 2025 at the Lulu IT Twin Towers, Kochi. Featuring sensitisation programmes, best practices sharing and workshops, the event highlighted sustainability efforts by leading organizations. SEEM IOC ASIET, S3 EEE students volunteered in the programme.**

# STUDENT ACHIEVEMENTS



**The S3 EEE students secured first prize in the Onappattu competition conducted as part of Thakrithi '25, the Onam celebrations of the college. It was a department-wise competition, and the team comprising of Aakhila Mujeeb, Neha Antony, Krishnendhu P S, Abhirami V R and Rinu Reji brought laurels to the department with their remarkable performance.**



# STUDENT ACHIEVEMENTS



**Aravind N (S5 EEE) and Ashwin Sivan (S7 EEE) secured the first prize in the Eighth District Level Energy Quiz Competition 2025 organized by the KSEB Engineers' Association in association with the Department of Electrical and Electronics Engineering, Ilahia College of Engineering and Technology, Muvattupuzha. The event, held on 25 September 2025, featured distinguished experts including Er.K.R. Jayasankar, Er.Haridas, Smt.Najeena Salim and Er.Sreeju as quiz leaders. ASIET emerged champions, followed by VISAT in second place and ICET in third.**

# STUDENT ACHIEVEMENTS



**Adi Shankara**  
INSTITUTE OF ENGINEERING AND TECHNOLOGY

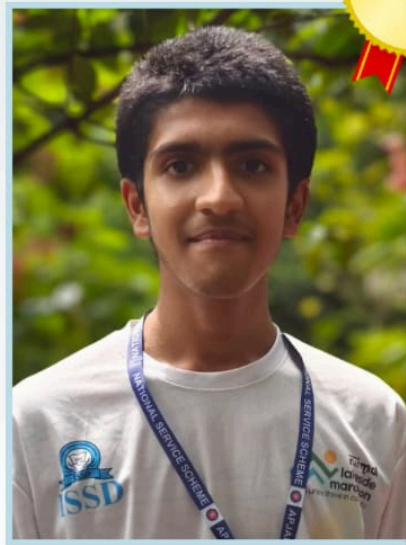


Department of Electrical and Electronics Engineering

*Congratulations*



ASHWIN SIVAN - S7 EEE



ARAVIND N - S5 EEE

**First prize in KSEB ENERGY QUIZ competition**  
**District level**

8th Edition In memory of **Dr. A.P.J. Abdul Kalam**





# STUDENT ACHIEVEMENTS



**Adi Shankara**  
INSTITUTE OF ENGINEERING AND TECHNOLOGY



## *Congratulations*



**Brian Roy Mathew (S5 EEE)**

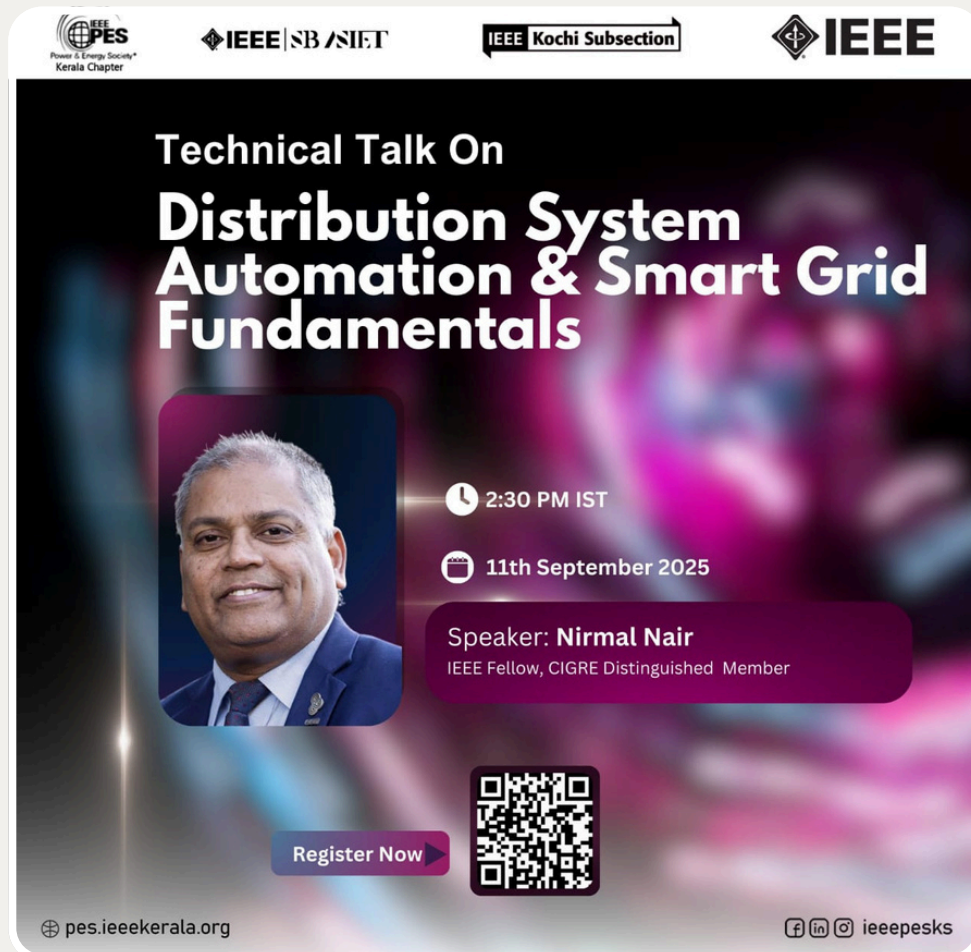
**Sreeramachandran S Menon (S3 CSE)**

**R B Ravish (S3 CSE)**

for winning first position in 'Hack M BITS' Hackathon  
held at Mar Baselios Institute of Technology and  
Science, Kothamangalam



# IEEE PES SBC ASIET



The poster features a dark background with a blurred image of a person. At the top, logos for IEEE PES Kerala Chapter, IEEE SB ASIET, IEEE Kochi Subsection, and IEEE are displayed. The main title is 'Technical Talk On Distribution System Automation & Smart Grid Fundamentals'. Below the title is a portrait of the speaker, Nirmal Nair. To the right of the portrait, the time '2:30 PM IST' and the date '11th September 2025' are listed. Below the date, the speaker's name 'Nirmal Nair' and his credentials 'IEEE Fellow, CIGRE Distinguished Member' are provided. A 'Register Now' button and a QR code are located at the bottom center. The website 'pes.ieeeekerala.org' is at the bottom left, and social media icons for Facebook, LinkedIn, and Instagram are at the bottom right.


IEEE PES  
Power & Energy Society  
Kerala Chapter

IEEE SB ASIET

IEEE Kochi Subsection

IEEE

Technical Talk On  
**Distribution System  
Automation & Smart Grid  
Fundamentals**




2:30 PM IST

11th September 2025

Speaker: **Nirmal Nair**  
IEEE Fellow, CIGRE Distinguished Member

[Register Now](#)



[pes.ieeeekerala.org](http://pes.ieeeekerala.org)

[f](#) [in](#) [@](#) [ieeepesks](#)

IEEE PES Kerala Chapter, in association with IEEE SB ASIET and IEEE Kochi Subsection, organized a technical talk on “Distribution System Automation & Smart Grid Fundamentals” on 11 September 2025 at ASIET. The session was delivered by Dr. Nirmal Nair, IEEE Fellow and CIGRE Distinguished Member, and was attended by S7 and S5 EEE students. The lecture provided valuable insights into modern power systems, distribution automation, and the fundamentals of smart grids shaping the energy sector’s future. The session was coordinated by Ms.Gomathy S.

## The Silent Revolution: Wireless Power Transfer and the Future of EV Charging



Ms.Ashna Mohan  
Ass.t Prof.

### Introduction

The electric vehicle (EV) revolution offers a cleaner and quieter transport future. However, one problem remains: charging. Finding plugs, managing bulky cables, and dealing with the weather stand in stark contrast to the smooth digital experience inside modern EVs. Wireless Power Transfer (WPT) fills this gap by allowing a seamless and automatic charging process. WPT arises from principles of electromagnetism and power electronics. It is moving from academic research to commercial use. Static charging at parking spots is already in pilot phases, and dynamic charging for smart roads is on the horizon. WPT could change how we view energy and mobility.

This article examines the electrical engineering principles behind WPT, the key industry players, the power electronics that support this change, and the innovations pointing toward a truly contactless energy future.

**Core Technology:** Inductive Power Transfer

Modern EV WPT systems use resonant inductive coupling based on Faraday's Law of Induction. The setup includes:

**Ground Assembly (GA):** A transmitter coil in or on the ground, powered by the grid.

**Vehicle Assembly (VA):** A receiver coil installed beneath the EV.

**Process flow:**

1. Grid AC (50/60 Hz) is transformed into high-frequency AC (20–100 kHz) using a power inverter in the GA.
2. The transmitter coil creates a magnetic field. The receiver coil induces a matching AC voltage when properly aligned.
3. The VA converts this induced AC into DC to charge the battery.
4. Capacitors on both sides create a resonant LC network, increasing efficiency and reducing issues with misalignment.
5. A control and communication system verifies the vehicle, manages power flow, and ensures safety.

Static WPT systems currently achieve around 90–93% efficiency from the grid to the battery, with operation gaps of 100–250 mm. This makes them practical for both personal and fleet EVs.

**Industry Leaders and Approaches:**

The move toward wireless EV charging has attracted startups, technology licensors, and car manufacturers:

**WiTricity:** A spinout from the Massachusetts Institute of Technology (MIT), WiTricity licenses its magnetic resonance-based design to Original Equipment Manufacturers (OEMs) and Tier 1 suppliers. Their systems provide up to 11 kW of static charging with over 90% efficiency. Partnerships with BMW, Nissan, and Toyota showcase their role in consumer adoption.

**Momentum Dynamics:** Focused on high-power fleet charging, their systems deliver 200–300 kW, making them ideal for buses, taxis, and delivery fleets.



Their “opportunity charging” concept allows EVs to recharge during brief scheduled stops, increasing operational uptime.

**Electreon:** A leader in Dynamic Wireless Charging (DWC), Electreon embeds coils into roadways. Their segmented road design activates only under moving vehicles, enhancing efficiency and safety. Pilot projects are taking place in Israel, Sweden, Germany, Italy, and the U.S.

**Automakers** (BMW, Hyundai, VW, Stellantis): BMW tested a wireless charging pad for the 530e plug-in hybrid. Hyundai and Kia have invested in road-charging trials, while Volkswagen has explored working with WiTricity.

## **Towards Dynamic Charging: Power Electronics as Backbone**

While static WPT makes charging easier, dynamic charging could eliminate range anxiety by providing power to EVs while they are moving. A proposed DWC setup includes:

- 1.Grid Interface:** Medium-voltage AC supply is adjusted for high-power transfer.
- 2.Central Inverter Station:** It turns medium-voltage into high-frequency AC, shared among several road segments.
- 3.Roadway Coil Network:** Underground lines provide power to coil panels embedded in the road.
- 4.Smart Switching:** Each coil segment activates only when a vehicle is above it, managed by Silicon Carbide (SiC) or Gallium Nitride (GaN) semiconductor switches for high efficiency.

## Emerging Innovations

- Depot “slot charging” for autonomous fleets, where precise alignment enables top-tier efficiency.
- Bidirectional Vehicle-to-Grid (V2G) wireless systems, allowing EVs to return power to the grid without cables.
- Standardization efforts like Society of Automotive Engineers (SAE) J2954, which define interoperability guidelines for static WPT systems, paving the way for broader consumer use.

## Conclusion

Wireless Power Transfer goes beyond convenience—it represents the next step in EV charging, built on essential electrical engineering and power electronics advancements. Companies like WiTricity, Momentum Dynamics, and Electreon are turning laboratory research into scalable commercial applications. Challenges with costs, infrastructure deployment, efficiency in real-world conditions, and global standardization remain, but the path ahead is clear: charging will gradually become less noticeable in everyday life. Soon, EVs may recharge silently while parked or continuously while traveling on electrified roads, reducing range anxiety and rethinking the relationship between vehicles and the grid.

WPT is not just an upgrade; it is a silent revolution in how mobility and energy will coexist.

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