OBJECTIVES

In this FDP, participants will explore the transformative fields of AI and Electric Vehicles (EVs). They will learn how AI plays a critical role in enhancing EV efficiency, performance, and user experience through practical applications. Participants will examine real-world scenarios, including autonomous EV control systems and intelligent charging infrastructure. Under the guidance of experts, they will gain hands-on knowledge in applying AI technology to EV development and operations, broadening their understanding of sustainable transportation solutions for a greener future. By integrating academic knowledge with real-world applications, this FDP equips participants to drive innovation at the intersection of AI and EVs.

SCOPE OF FDP

Participating in the FDP on "AI-Driven Solutions for Enhancing Electric Vehicle Performance and Sustainability" offers numerous benefits. Participants will be at the forefront of knowledge, learning about the latest advancements in EV and AI technology. The sessions enhance research and development by teaching participants, including PG students, how to apply AI-driven solutions in electric vehicle systems. With their newly acquired knowledge, participants can lead innovative projects and expand their professional networks. This program provides participants with the tools to make a meaningful impact on the advancement of AI and EV technology, promoting a more efficient and environmentally friendly future. The FDP is highly relevant to the industry as it addresses two critical themes shaping the future of transportation: Artificial Intelligence (AI) and Electric Vehicles (EVs). The integration of AI technology into EVs is transforming the industry by enhancing user experience, safety, and optimization, directly supporting efforts to reduce carbon emissions and achieve a greener future as societies shift toward sustainable energy solutions.

ABOUT JKKMCT

J.K.K. Munirajah College of Technology (Autonomous) was established in 2008 and is governed by the Annai J.K.K. Sampoorani Ammal Charitable Trust. Founded by J.K.K. Munirajah, a prominent industrialist, technocrat, distinguished educationalist, dedicated social worker, and philanthropist with deep spiritual values, the institution aims to deliver world-class education and training in a structured and systematic manner. The management has proudly completed 25 years of dedicated service to the people of India and abroad in the field of education. Spanning 250 acres of lush green land, the college offers state-of-the-art infrastructure and has earned recognition as one of the esteemed educational institutions for men and women in India. Our institute is accredited with an "A" grade by NAAC and is an ISO-certified institution.

ABOUT THE DEPARTMENT

J.K.K. Munirajah College of Technology introduced the 4-years **B.E. program in Electrical and Electronics Engineering** in 2008 and the PG program in **ME Power Electronics & Drives** in 2012. These programs are approved by AICTE, New Delhi, and affiliated with Anna University, Chennai. The Department of Electrical and Electronics Engineering continuously updates its curriculum, and its faculty members bring extensive industrial and academic experience, ensuring that students are well-equipped with advanced technologies. The department is committed to addressing local and regional needs related to electrical engineering and encourages students and faculty to engage in multidisciplinary research programs and projects.

CONTACT DETAILS

Dr. C. Saravanan, 9994050050, hodeee@jkkmct.edu.in

Ms. N. Mekala, 7010068191, mekalan@jkkmct.edu.in

AICTE Training and Learning (ATAL) Academy FDP on "AI-Driven Solutions for Enhancing Electric Vehicle Performance and Sustainability"

16th – 21st December 2024

REGISTRATION DETAILS

Link: https://atalacademy.aicte-india.org/login

Last date of Application: 9th Dec. 2024

Acceptance Notification: 12th Dec. 2024

Organized by

Department of Electrical and Electronics Engineering

J.K.K. MUNIRAJAH COLLEGE OF TECHNOLOGY (Autonomous)

Approved by AICTE & Anna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution

T.N. Palayam, Gobi, Erode Dt.TN.

COURSE CONTENTS

Session 1	:	Role of Power Converter Interfaces for Electric Vehicle
Session 2	:	Solar Powered Electric Vehicle Charging Systems with AI
Session 3	:	Smart Charging Station Infrastructure
Session 4	:	Electric Vehicle Wireless Charging Technologies Practices and Research Opportunities
Session 5	:	Predictive Maintenance and Diagnostics
Session 6	:	Advancements in Electric Vehicle Performance and Sustainability
Session 7	:	Role of Climate Action in Environmental Impact for EV
Session 8	:	BMS and their Impact on Electric Vehicle Energy
Session 9	:	AI-Enhanced Intelligent Solutions for Electric Vehicle
Session 10	:	Optimized Battery Management Systems (BMS)
Session 11	:	Sustainable Solutions for a Greener Future
Session 12	:	Enhanced Vehicle-to-Grid (V2G) & Grid- to-Vehicle (G2V) Integration
Session 13	:	Impact of Electric Vehicle ON Grid and Solutions.

ELIGIBILITY

Mode: Through Online

- **There is no registration fee from any participants.**
- All the faculties, research scholars and PG Students from AICTE approved institutions are eligible for the FDP.
- **Number of participants is limited to 100.**
- Participants will be selected on first-come first-served basis.
- Selected candidates will be intimated by E-mail confirmation of participation is to be made by email only.
- Faculty members selected for the programme should get the authorization certificates signed from the Head of the institution.

ADVISORY COMMITTEE

Mrs. Vasantha Kumari Munirajah, Chairman, JKKM Institutions.

Mrs. M. Kasthuripriya, Secretary, JKKM Institutions.

Dr. Kirubakarmurali, R & D, Director, JKKM Institutions.

CONVENER

Dr. K. Sridharan, M.E, MBA, MISTE, Ph.D., Principal, JKKMCT.

COORDINATOR

Dr. C. Saravanan., M.E, Ph.D., Prof. & Head/EEE

CO-COORDINATOR

Ms. N. Mekala, M.E., Asst. Prof./EEE

ORGANIZING TEAM MEMBERS

Mr. S.M. Pranesh, AP/EEE
Mr. T.S. Thambiran, AP/EEE
Mr. A.Vigneshkumar, AP/EEE
Mr. G. Palanisamy, AP/EEE
Ms. M. Mohanambika, AP/EEE
Mr. N. Dhanasekar, AP/EEE
Mr. S. Srinivasan, AP/EEE

An initiative for Green Energy Transition

RESOURCE PERSONS

- **Dr. S. Thangavel**, Associate Professor/EEE, **National Institute of Technology**, Puducherry.
- **Dr. M. Prabhakar**, Professor/EEE, **Vellore Institute of Technology**, Chennai Campus.
- **Dr. K. Udhayakumar**, Professor/EEE, **Anna University**, Guindy, Chennai.
- **Dr. C. Bharatiraja**, Professor/EEE, SRM Institute of Science and Technology, Chennai.
- **Dr. P. Maruthupandi**, Associate Professor/EEE, **Government College of Technology**, Coimbatore.
- **Dr. K. Ilango**, Associate Professor/EEE, **Amrita Vishwa Vidyapeetham**, Coimbatore.

OVERSEAS EXPERTS

- **Mr. S. Umasankar**, Associate Professor/EEE, Prince Sultan University, Saudi Arabia.
- **Mr. S. Anandhan**, Senior Sub-Station Automation System & Agile Electro Mechanical Contracting LLC, UAE.

INDUSTRY PERSONS

- **Mr. K. S. Kavin**, Managing Director, AB Technologies, Nagercoil.
- **Mr.M.Ranjithkumar**, Managing Director, Crystal Clear Technology & Innovations, Coimbatore.
- **Mr. V. Angappa**, Managing Director, Spark Technology, Coimbatore.
- **Mrs. M. Vimaladevi**, HR Manager, Caliber Embedded Systems, Coimbatore.
- **Mr. M. Parthiban**, Managing Director, Caliber Embedded Systems, Salem.

PARTICIPATION CERTIFICATE

- Minimum 80 % attendance and scoring 70 marks in test is mandatory to get the participation certificate.
- The participation certificate will be issued online through ATAL portal to be eligible participants only.

ATAL Online Faculty Development Programme 2024-25 Schedule

FDP Application Number: 1730874112

FDP Thrust Area: Energy Sustainability and Climate Change

FDP Title: AI-Driven Solutions for Enhancing Electric Vehicle Performance and Sustainability

Start Date: 16.12.2024 ***End Date: 21.12.2024***

Day 1 (16.12.2024)	Day 2 (17.12.2024)	Day 3 (18.12.2024)	Day 4 (19.12.2024)	Day 5 (20.12.2024)	Day 6 (21.12.2024)
6:00 PM to 6:30 PM **Inaugural Session** **Dr. C. Saravanan** Professor & HoD/EEE J.K.K. Munirajah College of Technology	**6:00 PM to 7:30 PM** **Session 3** **Topic:** Smart Charging Station Infrastructure Name of the Expert: **Mr. M. Ranjithkumar** Designation & Organization: MD & Crystal Clear Technology & Innovations, Coimbatore Years of Exp: 08 years	**6:00 PM to 7:30 PM** **Session 5** **Topic:** Predictive Maintenance and Diagnostics Name of the Expert: **Mr. V. Angappa** Designation & Organization: MD & Spark Technologies, Coimbatore. Years of Exp: 34 years	**6:00 PM to 7:30 PM** **Session 7** **Topic:** Role of Climate Action in Environmental Impact for E V Name of the Expert: **Mrs. M. Vimaladevi** Designation & Organization: HR Manager & Caliber Embedded Systems, Coimbatore. Years of Exp: 10 years	**6:00 PM to 7:30 PM** **Session 9** **Topic:** AI-Enhanced Intelligent Solutions for Electric Vehicle Name of the Expert: **Mr. S. Umashankar** Designation & Organization: ASP/EEE, Prince Sultan University, Saudi Arabia. Years of Exp: 20 years	**2:00 PM to 3:30 PM** **Session 11** **Topic**: Sustainable Solutions for a Greener Future Name of the Expert: **Mr. S. Anandhan** Designation & Organization: Sr. Substation Automation System & Agile Electromechanical Contracting LLC, UAE. Years of Exp: 10 years
6:30 PM to 8:00 PM **Session 1** **Topic:** Role of Power Converter Interfaces for Electric Vehicle Name of the Expert: **Dr. M. Prabhakar** Designation & Organization: Prof./EEE, VIT, Chennai. Years of Exp: 24 years	**7:30 PM to 9:00 PM** **Session 4** **Topic:** Electric Vehicle Wireless Charging Technologies Practices and Research Opportunities Name of the Expert: **Dr. C. Bharatiraja** Designation & Organization: Prof./ EEE & SRM Institute of Science and Technology, Chennai Years of Exp: 22 years	**7:30 PM to 9:00 PM** **Session 6** **Topic:** Advancements in Electric Vehicle Performance and Sustainability Name of the Expert: **Mr. M. Parthiban** Designation & Organization: MD & Caliber Embedded Systems, Salem. Years of Exp: 12 years	**7:30PM to 9:00 PM** **Session 8** **Topic:** BMS and their Impact on Electric Vehicle Energy Name of the Expert: **Dr. K. Ilango** Designation & Organization: ASP/EEE & Amrita Vishwa Vidyapeetham, Coimbatore. Years of Exp: 20 years	**7:30 PM to 9:00 PM** **Session 10** **Topic:** Optimized Battery Management Systems (BMS) Name of the Expert: **Dr. K. Udhayakumar** Designation & Organization: Prof/EEE & Anna University, Chennai. Years of Exp: 23 years	**3:30 PM to 5:00 PM** **Session 12** **Topic**: Enhanced Vehicle-to-Grid (V2G) & Grid-to-Vehicle (G2V) Integration Name of the Expert: **Dr. S. Thangavel** Designation & Organization: ASP/EEE NIT, Puducherry Years of Exp: 26 years
8:00 PM to 9:30 PM **Session 2** **Topic:** Solar Powered Electric Vehicle Charging Systems with AI Name of the Expert: **Mr. K. S. Kavin** Designation & Organization: MD & AB Technologies, Nagercoil. Years of Exp: 15 years					**5:00 PM to 7:30 PM** **Session 13** **Topic:** Impact of Electric Vehicle ON Grid and Solutions Name of the Expert: **Dr. P. Maruthupandi** Designation & Organization: ASP/EEE & GCT, Coimbatore. Years of Exp: 27 years
					6:30 PM to 7:30 PM **Online Test & Feedback**
					7:30 PM to 8:00 PM **Valedictory Session**