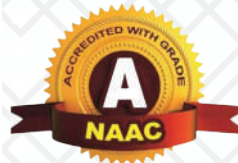




S.A. ENGINEERING COLLEGE

(An Autonomous Institution Affiliated to Anna University Chennai)

Accredited by NAAC 'A' Grade & ISO 9001:2015 Certified Institution



IEEE Madras Section

In association with

**S.A. Engineering College IEEE Student Branch (STB05661),
Department of EEE & CSE (AI and ML)**

Organize

IEEE Sponsored

**One week Faculty Development Programme
on**

**“Recent Trends and Developments in AI for
Autonomous EV”**

18th - 22nd December 2023



S.A. ENGINEERING COLLEGE

(An Autonomous Institution Affiliated to Anna University)

Accredited by NAAC 'A' Grade & ISO 9001 2015 Certified Institution

Poonamalle-Avadi Main Road, Veeraraghavapuram, Thiruverkadu, Chennai-600077

About the Institution

S. A. Engineering College was established by the Dharma Naidu Educational and Charitable Trust in the year 1998-99. The college is approved by AICTE and affiliated to Anna University, Chennai, Tamil Nadu. The college also acquired the Autonomous status in the year 2019-20. The college is well planned with 5 lakhs sq. ft of constructed area. The college maintains a high standard of Education by providing a world class academic facilities, employing highly qualified and experienced faculty members and creating an ambience conducive for quality education. In recognition of quality policy being implemented by the institution, M/s TUV NORD has accorded ISO 9001:2015 certification. The college is accredited by NAAC with 'A' Grade and NBA, The college offers 11 UG Programmes and 6 PG Programmes. S.A. Engineering College is also conferred Autonomous status for over 10 years from 2019. For more details, visit <https://www.saec.ac.in/>

About the Department of EEE

The Department of EEE was established in the year 2001 and got permanent affiliation with Anna University in 2013. The Post Graduate Programme M.E. Embedded System Technologies (EST) was established in the year 2006. The department has dedicated and well expertise Faculty members publish papers periodically in reputed indexed journals. The department has well equipped laboratories and are upgraded from time to time to provide adequate opportunities for students to learn and innovate. Our department promotes the professional skills of students through societies like Indian Society for Technical Education (ISTE) and Institute of Electrical and Electronics Engineers (IEEE). Career guidance Programme and entrepreneurship awareness Programme are also carried out through the association of EEE.

About the Department of CSE (AI and ML)

The Department of CSE (Artificial Intelligence and Machine Learning) was started in the year 2022. The department has grown to its current strength of 116 students from a humble beginning with 56 students. Our department is equipped with the latest state of the art laboratories and is equipped with an excellent Internet facility. We have a dedicated team of faculty members who will always counsel and motivate the students to bring out their best performance. We encourage the students to join in various professional societies like IEEE and CSI to develop their technical expertise and also to organize several student conferences / symposia / seminars / workshops in various trending topics. To make students well prepared to face the industry, they were imparted the requisite training by utilizing the services of external academia and professional practitioners for contesting in competitions like TCS Code Vita, Smart India Hackathon etc

About the IEEE Madras Section

The IEEE Madras Section was established in 1973 and is in its golden jubilee year. It has an active membership over 7000. It organizes conferences, seminars, workshops, symposia, faculty development programmes and other technical programmes. The section is concerned about the welfare of the students to enrich their skills and knowledge in this part of the country and strives to improve the teaching learning process in the engineering colleges and universities. For more details, visit <http://sites.ieee.org/madras>

About the FDP

The FDP is to provide educators with updated knowledge, skills, and insights in recent trends and developments in rapidly evolving field of AI in Autonomous Vehicles. The concepts of power train and its topology, AI and Computer Vision for Self-driving Cars, Object Detection for Autonomous Vehicles, Materials for eMobility etc will be covered.

Objectives

- Understanding Autonomous Vehicle Technology with a focus on AI-based solutions.
- Exploring Electric Vehicle Architecture emphasizing the integration of AI
- AI Algorithms for Autonomous Driving
- Explore different sensor technologies and their role in AI-driven decision-making.
- Best practices related to deploying AI-driven autonomous electric vehicles.

Outcome

By the end of this FDP, faculty will be enriched with:

- Enhanced understanding of AI-driven Autonomous Vehicle systems.
- Updated knowledge of AI Algorithms
- Insights into Electric Vehicle Architecture
- Ability to evaluate Sensor Technologies
- Awareness of Safety and Ethical Considerations
- Proficiency in Data Management for Autonomous Vehicles

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Ms. R. Madhana, Assistant Professor, EEE

Ms. J. S. Theptha, Assistant Professor, EEE

Ms. S. Lakshmi Priya, Assistant Professor, CSE (AI and ML)

Ms. S. Derisha Mahil, Assistant Professor, CSE (AI and ML)

Ms. V. Praveena, Assistant Professor, CSE (AI and ML)



Who Can Attend ?

- Faculty Members of Engineering Colleges / Universities
- R&D and Industry Personnel
- Research Scholars & PG Students

Registration Fee

IEEE Members / Host Institution : **Rs. 250/-**

Non – IEEE Members / Others : **Rs. 500/-**

For registration please refer the following link:

 <https://forms.gle/YcJ8SjWCfAhXgpAH9>

(Or)

Scan Here



Seats are limited and the registration will be on first come first served basis

Important Dates:

Last Date for Registration : **15.12.2023**

Date of Intimation of Acceptance : **16.12.2023**

Account Details

Account No.: **50106245804**

Bank Name: **Indian Bank**

Branch: **S. A. Engineering College Branch**

IFSC Code: **IDIB000C571**

On first come and first serve basis first 50 participants will be selected and intimated through email.

Contact Details

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Resource Persons

Dr. R. Sarathi, Professor, IIT Madras

Dr. Mahesh Kumar, Professor, IIT Madras

Dr. R. Jayaganthan, Professor, IIT Madras

Dr. S. Radha, Vice Principal, SSNCE, Chennai

Dr. N. Kumarappan, Professor (Rtd.),
Annamalai University, Chidambaram

Dr. V. Masilamani, HoD, CSE, IIITDM
Kancheepuram

Mr. L Sivaraman, Vice President, Advanced
Sustainable Products, Chennai

Mr. Roy Antony G, Consultant, Infosys,
Mahindra World City, Chengalpattu

Dr. Jagadeesh Kakarla, Assistant Professor,
IIITDM, Kancheepuram

Dr. Ram Prasad Padhy, Assistant Professor,
IIITDM, Kancheepuram

Dr. S. Aasha Nandhini, Assistant Professor,
SSNCE, Chennai

Ms. Keerthi Reddy. P, Associate - Learning at
Infosys ETA (Education Training & Assessment),
Mahindra World City, Chengalpattu

Mr. Dinesh Kumar. V, Manager – Software
Division, Advanced Sustainable Products,
Chennai

FDP Schedule

Date	Description	Timing	Topic	Resource Person
Day 1 18.12.2023	Registration (8.30 am – 9.00 am)			
	Inaugural Function (9.00 am – 09.30 am) Chief Guests Dr. R. Sarathi, Professor, IIT Madras Dr. Mahesh Kumar, Professor, IIT Madras Dr. R. Jayaganthan, Professor, IIT Madras			
	Tea Break (9.30 am – 9.45 am)			
	Session 1	09.45 am to 10.45 am	Recent Trends in Condition Monitoring	Dr. R. Sarathi, Professor, IIT Madras
	Session 2	10.45 am to 11.45 am	Hybrid Energy Storage Management for Micro Grid Systems Correlating EV	Dr. Mahesh Kumar, Professor, IIT Madras
	Session 3	11.45 am to 12.45 pm	Estimation of SOC of a Battery Pack	Dr. R. Jayaganthan, Professor, IIT Madras
	Networking & Lunch (12.45 pm – 2.00 pm)			
	Session 4	2.00 pm to 4.00 pm	The Role of Artificial Intelligence in Autonomons Vehicles	Dr. Jagadeesh Kakarla, IIITDM, Kancheepuram
Day 2 19.12.2023	Session 5	9.00 am to 11.00 am	Electric Vehicle – Drive Train Concepts	Mr. L. Sivaraman, Vice President, Advanced Sustainable Products, Chennai
	Tea Break (11.00 am – 11.15 am)			
	Session 6	11.15 am to 1.15 pm	Autonomy – Computer Vision Systems	Mr. Dinesh Kumar. V, Manager – Software Division, Advanced Sustainable Products, Chennai
	Lunch (1.15 pm – 2.00 pm)			
	Session 7	2.00 pm to 4.00 pm	AI and Computer Vision for Self-driving Cars	Dr. Ram Prasad Padhy, Assistant Professor, IIITDM, Kancheepuram

FDP Schedule

Day 3 20.12.2023	Session 8	9.00 am to 11.00 am	AI, ML Algorithms & Overview of GenAI	Ms. Keerthi Reddy P, Associate - Learning at Infosys ETA (Education Training & Assessment), Mahindra World City, Chengalpattu
	Tea Break (11.00 am – 11.15 am)			
	Session 9	11.15 am to 1.15 pm	AI, ML Algorithms & Overview of GenAI	Ms. Keerthi Reddy P, Associate - Learning at Infosys ETA (Education Training & Assessment), Mahindra World City, Chengalpattu
	Lunch (1.15 pm – 2.00 pm)			
	Session 10	2.00 pm to 4.00 pm	Case Studies and Industrial Application using AI & ML	Mr. Roy Antony G, Consultant, Infosys, Mahindra World City, Chengalpattu
Day 4 21.12.2023	Industrial Visit (Session 11, 12 & 13)			
	L&T Technology Services Limited, Manapakkam, Chennai		Advanced Sustainable Products Limited , Porur, Chennai	
Day 5 22.12.2023	Session 14	9.00 am to 11.00 am	Intelligence Unit Commitment With Electric Vehicle to Grid Using Hybrid Optimization Technique	Dr. N. Kumarappan, Professor (Rtd.), Annamalai University, Chidambaram
	Tea Break (11.00 am – 11.15 am)			
	Session 15	11.15 am to 1.15 pm	Object Detection for Autonomous Vehicles	Dr. V. Masilamani, HoD, CSE, IIITDM Kancheepuram
	Lunch (1.15 pm – 2.00 pm)			
	Session 16	2.00 pm to 4.00 pm	The Role of Embedded Artificial Intelligence in Smart Electric Vehicles	Dr. S. Radha, Vice Principal, SSNCE, Chennai & Dr. S. Aasha Nandhini, Assistant Professor, SSNCE, Chennai
	Valedictory Function (4.00 pm – 4.30 pm) Chief Guest Dr. S. Radha, Vice Principal, SSNCE, Chennai			