

About the Institute

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. The institution has 5 research centres and Idea lab for the research exposure to students as well as faculty members.

About the Department

The Department of EEE was established in the year 2001 and acquired permanent affiliation with Anna University in 2013. The Post Graduate Programme M.E. Embedded System and Technologies (EST) was established in the year 2006. The department has dedicated and well experienced Faculty members publishing papers periodically in reputed indexed journals.

The department has well equipped laboratories, centre of excellence in Industrial Automation and are upgraded from time to time to provide adequate opportunities for students to learn and innovate.

The department offers Value added Courses, workshops such as Battery Management Systems, Industrial IoT, ETAP, PSCAD for students based on industrial needs. In addition to that guest lectures are conducted regularly by eminent personalities from Industries.

To upgrade the students technical skill campus wide Matlab license is provided. Our department promotes the professional skills of students through societies like Institute of Electrical and Electronics Engineers (IEEE) and Indian Society for Technical Education (ISTE). Career guidance Programme and entrepreneurship awareness Programme are also carried out through the association of EEE.

Advisory Committee

Chief Patron

Shri. D. Duraisamy, Chairman
Shri. D. Paranthaman, Vice-Chairman
Shri. D. Dasarathan, Secretary
Shri. S. Amarnaath, Correspondent
Shri. S. Gopinath, Joint Secretary
Tmt. D. Saraswathi, Director of Sudharsanam Vidyaashram
Dr. S. Aravind, Director of S. A. College of Arts & Science
Shri. D. Sabarinath, Director of S. A. Engineering College
Shri. P. Venkatesh Raja, Correspondent of S. A. College of Arts & Science, Sudharsanam Vidyaashram

Patron

Dr. S. Ramachandran, M. E., Ph. D

Principal

Chairman

Dr. S. Sendil Kumar
Professor & Head of the Department, EEE

Coordinators

Dr. L. Umasankar, Associate Professor, EEE
Dr. S. Bhuvanewari, Associate Professor, EEE

Organizing Committee

Dr. S. Kamalakkannan, Professor, EEE
Dr. N. Magadevi, Associate Professor, EEE
Dr. P. Bhanu, Associate Professor, EEE
Dr. G. Muralikrishnan, Associate Professor, EEE
Ms. S. Bharathi, Associate Professor, EEE
Ms. A. Prabha, Associate Professor, EEE
Ms. J. Megala, Associate Professor, EEE
Ms. K. S. Margaret, Assistant Professor, EEE
Ms. S. Sathya, Assistant Professor, EEE
Ms. N. Rajavinu, Assistant Professor, EEE
Mr. T. Sathish Kumar, Assistant Professor, EEE
Mr. S. P. Alexprabu, Assistant Professor, EEE
Mr. N. Sakthisaravanan, Assistant Professor, EEE
Mr. R. Kamalakkannan, Assistant Professor, EEE
Ms. R. Priyanka, Assistant Professor, EEE
Dr. R. Mageswaran, Assistant Professor, EEE
Ms. G. Srimathy, Assistant Professor, EEE
Ms. S. Vismaya, Assistant Professor, EEE
Ms. R. Madhana, Assistant Professor, EEE
Mr. K. Vijayakumar, Assistant Professor, EEE
Ms. E. Lavanya, Assistant Professor, EEE

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ATAL Faculty Development Programme on Synergizing Advanced Battery Management with AI-Driven Cell Balancing for Optimal Electric Vehicle Performance *Sponsored by AICTE Training and Learning Academy*



December 9 - 14, 2024

Organized by
**Department of Electrical and
Electronics Engineering**



S.A.ENGINEERING COLLEGE
**(An Autonomous Institution,
Affiliated to Anna University)**
**Accredited by NBA, NAAC 'A' Grade &
ISO 9001:2015 Certified Institution**
**Poonamallee-Avadi Main Road,
Veeraraghavapuram,
Thiruverkadu, Chennai-600077**

Expert Team

1. Dr. R. Jayaganthan, Professor, IIT Madras
2. Dr. S. Moorthi, Professor, NIT, Trichy
3. Dr. A. S. Prakash, Senior Principal Scientist, CSIR Madras Complex, CSIR
4. Dr. Kuldeep Singh, Principal Scientist, CSIR Madras Complex, CSIR
5. Dr. Somasundaram Periasamy, Professor, CEG, Anna University
6. Mr. Meenakshi Sundaram, Chief Technology Officer, India Pistons Pvt. Ltd.
7. Dr. M. K. Nallakaruppan, Associate Professor, VIT Vellore
8. Dr. Dhanamjayalu.C, Associate Professor, EEE Department, VIT, Vellore
9. Dr. T. S. Kishore, Professor GMR Institute of Technology, Visakapattinam
10. Dr. K. Pushpanathan, Director, TIAS Energy Pvt Ltd, Chennai

About the FDP

The objectives of this Faculty Development Program is to explore and synergize advanced battery management with AI-driven cell balancing to optimize electric vehicle performance, maximizing efficiency, range, and longevity while minimizing operational costs and environmental impact.

Key Objectives:

- Gain a comprehensive understanding of the components and functions of Battery Management Systems in electric vehicles.
- Explore machine learning algorithms and techniques for predictive battery analytics and optimization.
- Address safety concerns associated with advanced battery technologies and AI-driven systems.
- Foster collaboration between academia and industry by bringing in experts from the electric vehicle and AI industries to share real-world insights and experiences.
- Future Trends and Research Opportunities.

Vision of the Department

To contemplate brilliance in Technical Education and Research by promoting the extend of practice to provide viable solutions to industry upholding congenial moral code.

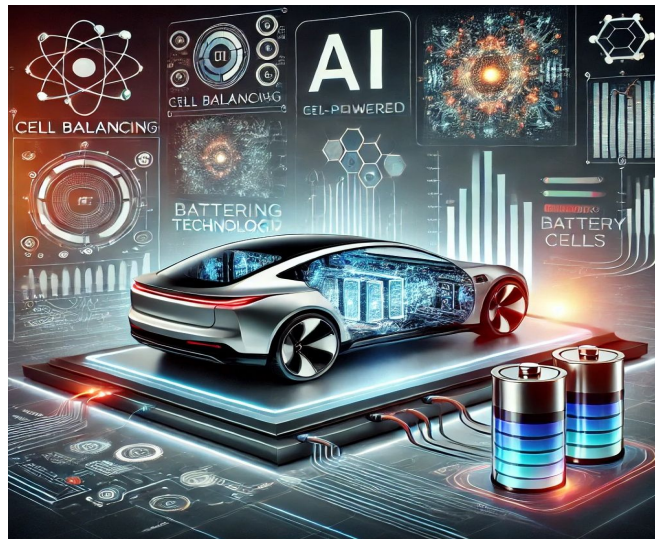
Mission of the Department

M1: To impart quality education by providing innovative methodologies and State - of - Art learning environment.

M2: To promote renewable solutions to the industry and collaborative Research by employing emerging technologies with intellectual skills.

M3: To apply moral commitment for accomplishing solutions for multidisciplinary convivial ordeals.

M4: To enhance core knowledge for promoting Institute-Industry interaction in favour of academic community.



REGISTRATION PROCESS

1. Registration is free for all the participants
2. Registration must be made through online mode only
3. Use the following link for online registration:

<https://atalacademy.aicte-india.org/signup>

ELIGIBILITY

- The targeted Participants are Faculty, R&D Persons, Research Scholars, PG Students from AICTE approved institutions
- A maximum of 50 participants will be selected on first come first served basis
- TA for external participants only.

PARTICIPATION CERTIFICATE

- Minimum 80% attendance and scoring 60% marks in test is mandatory to get the participation certificate.
- The participation certificate will be issued online through ATAL Academy portal to the eligible participants only.

KEY TAKEAWAYS

Insights on

- The latest advancements in battery management systems.
- AI algorithms and their application in enhancing battery performance.
- Optimization of electric vehicle performance through effective cell balancing.

“Join us in this transformative journey to empower with the knowledge and expertise required to optimize electric vehicle performance and its challenges in advanced battery management with AI-driven techniques and contribute to the advancement of the field through research and practical applications”

Department of Electrical and Electronics Engineering
ATAL Faculty Development Programme on
Synergizing Advanced Battery Management with AI-Driven Cell Balancing for Optimal Electric Vehicle Performance
9 - 14 December, 2024

Dec 9, 2024 Monday	Dec 10, 2024 Tuesday	Dec 11, 2024 Wednesday	Dec 12, 2024 Thursday	Dec 13, 2024 Friday	Dec 14, 2024 Saturday
9.00 - 9.30 am Inauguration					
9.30 - 12.00 Session 1 : Introduction to Artificial Intelligence in Battery Management	9.30 - 12.00 Session 3 AI-Based Approaches for Lithium-Ion Battery Modeling	9.30 - 12.00 Session 5: Sustainability in Battery Production and Recycling	9.30 - 12.00 Session 7: Optimization Algorithms for Battery Systems	9.30 - 12.00 Industrial visit	9.30 - 12.00 Session 10: Advanced BMS for Electric Vehicles
12.00 - 1.00 Article Discussion	12.00 - 1.00 Article Discussion	12.00 - 1.00 Article Discussion	12.00 - 1.00 Article Discussion		12.00 - 1.00 Article Summary
1.00 - 02.00 Lunch	1.00 - 02.00 Lunch	1.00 - 02.00 Lunch	1.00 - 02.00 Lunch	1.00 - 02.00 Lunch	1.00 - 02.00 Lunch
2.00 - 4.30 Session 2: Fundamental Concepts in Lithium-Ion Batteries	2.00 - 4.30 Session 4: Integration of AI in Battery Management Systems	2.00 - 4.30 Session 6: Advanced AI Techniques for Cell Balancing	2.00 - 4.30 Session 8: Regulatory and Ethical Considerations	2.00 - 4.30 Session 9: Future Trends and Research Directions on BMS	2.00 - 3.00 MCQ Test & Reflection Journal
4.30 - 5.30 Hands on session	4.30 - 5.30 Hands on session	4.30 - 5.30 Hands on session	4.30 - 5.30 Hands-on session		3.00 – 4.30 pm Valedictory Session

*Subjected to change