



# ERODE SENGUNTHAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi Permanently Affiliated to Anna University - Chennai  
Accredited by NAAC & National Board of Accreditation (NBA), New Delhi.)

PERUNDURAI, ERODE – 638 057



## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### Vision

- ✦ To provide competent and ethical electrical engineers finding solution to problem related to society, environment and industry using innovative technologies.

### Mission

- ✦ To make a positive difference among electrical and electronics engineering students through innovative teaching learning methods
- ✦ To provide electrical and electronics engineering knowledge base at large for the upliftment of different background people
- ✦ To instill research oriented mindset and to develop well-furnished electrical and electronics engineering research labs
- ✦ To inculcate the moral and ethical values among students in order to make them competent and quality electrical and electronics engineers

### Program Educational Objectives (PEOs)

- ✦ **CORE COMPETENCE:** To impart fundamental electrical and electronics engineering knowledge through collaborative and case study methods of teaching learning process
- ✦ **BREADTH:** To produce quality electrical and electronics engineering graduates with in-depth technical knowledge including current issues and challenges in this field
- ✦ **LEARNING ENVIRONMENT:** To develop and enhance research based facilities so as to address the industrial issues and challenges
- ✦ **PROFESSIONALISM:** To imbibe effective communication, interpersonal and other managerial skills for the holistic development of EEE students



### Program Outcomes (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### Program Specific Outcomes (PSOs)

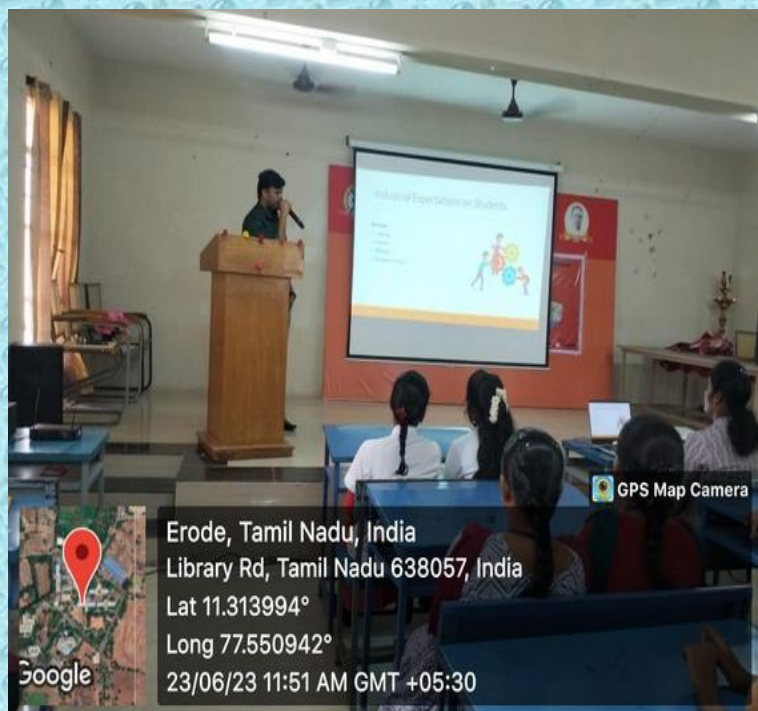
**PSO1: Real World Knowledge-** Apply the knowledge in solving the real time problems and solutions to issues and challenges in Electrical and Electronics Engineering technologies.

**PSO2: Interdisciplinary Skill-** Design and develop interdisciplinary and innovative system.

**PSO3: Personality Development** – Imparting effective communication, team work and leadership skills for a successful career in industry and R&D.



## ASSOCIATION ACTIVITIES



The inauguration of EEE association (DYNAFEST 2023-24), IE(I) Student Chapter and IEEE student branch activities for the academic year 2023-24 was held on 23.06.2023.

Er. P.Thamilarasan, Senior Hardware Engineer, Continental Automotive, Bengaluru inaugurated EEE association, IE (I) Student Chapter and IEEE student branch activities. Also delivered a Guest lecture on the topic "Scope of after GATE Exam in Engineering". More than 150 students were participated in this function.

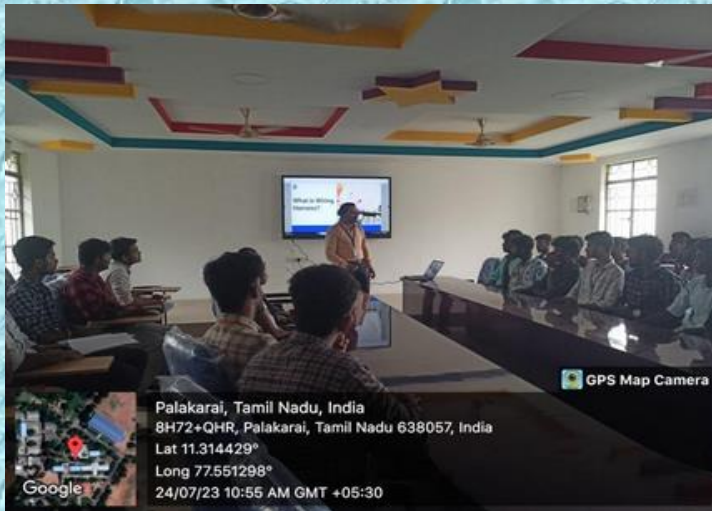


Seminar on the topic "Smart Grid with Integration Source" was conducted on 30.06.2023. Mr. S.Ananthakrishnan, Deputy General Manager, Ashok Leyland, Hosur was the resource person. More than 200 students were participated in this function.



Nikola Tesla Day Celebration was conducted on 10.07.2023. More than 200 students were participated in this function. Students were presented about the Scientist Nikola Tesla inventions.





Awareness Program on the topic “MATLAB programming Applications” was conducted on 24.07.2023. Mr. R.Praveen, Embedded Engineer, Caliber Embedded Technologies India(P ) Ltd, Diagonal CADD, Perundurai was the resource person. More than 200 students were participated in this function.

## CAREER GUIDANCE ACTIVITIES



Awareness Program on “Opportunities for Higher Education in India & abroad” was conducted on 12.07.2023. Mrs.S.Neena Priya, Team Head, Bluestone Overseas Consultants, Erode was the resource person. More than 200 students were participated in this function.



Seminar on “Professional Etiquette & Communication” was conducted on 03.10.2023. Er. S. Velazhagan, Assistant Executive Engineer, TNEB,Thingalur, Erode was the resource person. More than 200 students were participated in this function.





Professional Development Program on “Career Planning and Management” was conducted on 07.11.2023. Er. Rakkappan Ganesan, Managing Director, IBLITZ carving future private limited, Chennai was the resource person. More than 200 students were participated in this function.

### STUDENTS PARTICIPATIONS IN INTER-INSTITUTE EVENTS

S. No.	Name Of The Student / Year / Semester	Name of the Event	Title of the Paper	Name of the Institution organized	National/I nternatio nal	Date
1	Rohith P II / III	Workshop	Workshop – on IoT and its application in manufacturi ng industry	SNS College of Technology, Coimbatore.	National	15.07.2023
2	Rohith P II / III	Workshop	Workshop – on Data Analytics with Python	Karpagam College of Engineering	National	28.07.2023
3	Kavin S II / III	Workshop	Workshop – on Electrical Wiring Harness	Diagonal CADD, Perundurai.	National	01.07.2023
4	Rohith P Sethupathi K K II / III	Workshop	Workshop – on Application Development with Low Code No Code	Karpagam College of Engineering, Coimbatore	National	30.08.2023

5	Deepa V Thomas Raj A Sri Hariharan V II / III	Workshop	Workshop – on Arduino and IoT	SNS College of Technology, Coimbatore.	National	11.09.2023
6	Sethupathi K K II / III	Workshop	Workshop – Embedded System	SNS College of Technology, Coimbatore.	National	11.09.2023
7	Rohit P Dharsan M Nithees Kumar M G Keerthana S Kaviya S II / III	Workshop	Workshop – on Arduino and IoT	SNS College of Technology, Coimbatore.	National	11.09.2023
8	Santhosh M Rohith P Sethupathi K K II / III	Workshop	Workshop – on Application Development for Industrial Embedded system	Sri Eshwar College of Engineering Coimbatore	National	08.09.2023 & 09.09.2023
9	Arinseyan A Dhanush kumar R II / III	Workshop	Workshop – on Implications of Artificial Intelligence for Electrical Vehicle and Charging Technology	Karpagam College of Engineering Coimbatore	National	14.10.2023
10	Puvanesan R M II / III	Workshop	Workshop – on Premiere Pro Mastery	PSG College of Technology, Coimbatore	National	14.10.2023 & 15.10.2023



Paper Presentation Details						
S. No.	Name Of The Student	Year / Semester	Name of the Event	Name of the Institution organized	National / International Level	Date
1.	Sethupathi K K	II/III	TEKOZ URA 2K23	Dr.NGP Institute of Technology Coimbatore	International	26.08.2023
2.	Raghul kumar	II/III	TECHFII NIX 23 Paper presentation	Paavai Engineering College Namakkal	National	19.10.2023 & 20.10.2023
3.	Kaviya K					
4.	Sethupathi K K					
5.	Gowri A A					
6.	Kaviya K					
7.	Rohith P	II/III	IGNITE 2k23 Paper Presentation	Sri Ramakrishna Institute of Technology Coimbatore	National	07.11.2023
8.	Puvanesan R M					
9.	Keerthana S					
10.	Sanjai K					
11.	Nithees Kumar M G					
12.	Deepa V					
13.	Dharsan M	II/IV	Project Presentation	Vidyal Welfare Movement, Chennimala i	-	04.02.2024
14.	ArinSeyan A					
15.	Lohit G T					
16.	Dharsan M					
17.	Rohith P					
18.	Puvanesan R M					

19.	Peararsan V					
20.	Tamilvanan M					
21.	ArinSeyan A					
22.	Santhosh M	II/IV	SCIENS EA- 2K24  Project Present ation	Kongu Engineering College, Perundurai	National	04.02.2024
23.	Sri Hariharan V					
24.	Saravanakumar C					
25.	Thomas Raj A					
26.	Arinseyan A					
27.	Keerthana S					
28.	Deepa V					
29.	Nithees kumar M G					
30.	Puvanesan R M					
31.	Dharsan M					
32.	Rohith P					
33.	Sethupathi K K	II/IV	CEREB RIA 24  Paper Empori um	Bannari Amman Institute of Technology, Sathyamang alam		07.03.2024 & 08.03.2024
34.	Sanjai K					
35.	Jamuna Rani M	III/VI	AVENT URO- 2K24  Paper Presentat ion	Kongu Engineering College, Perundurai	National	08.03.2024



## FACULTY PUBLICATIONS

S.No.	Name of the Faculty	Title of the Paper	Journal Name	Publication Details
<b>Academic Year 2023-24</b>				
1	Dr.P.Selvan	Cloud Computing Encrypted Image Retrieval Strategy in Cloud Computing Using a Hybrid Optimization Algorithm	Journal of Intelligent & Fuzzy Systems	Vol. 46, Issue no. 3, pp. 5911-5925, 2024 DOI: 10.3233/JIFS-237948.
2	Dr. R. Muthukumar	Internet of Things-Based Induction Motor Diagnosis Using Convolutional Neural Network	Electric Power Components and Systems	Volume 52, 2024 - Issue 2 PP.265-276. <a href="https://doi.org/10.1080/15325008.2023.2217434">https://doi.org/10.1080/15325008.2023.2217434</a>
3		Using Machine Learning for Real-Time Temperature Prediction in Electronic Systems	Ninth International Conference on Science Technology Engineering and Mathematics (ICONSTEM)	pp. 1-6, Doi: 10.1109/ICONSTEM60960.2024.10568779.
4	Dr. A. Johny Renoald	Improving Data Processing Speed on Large Datasets in a Hadoop Multi-	<u>Journal of Intelligent &amp; Fuzzy Systems</u>	Vol. 45, Issue No. 4, pp. 6161-6177, 2023 DOI:



		node Cluster Using Enhanced Apriori Algorithm		10.3233/JIFS- 232048
5	Dr. A. Johnny Renoald	A Heuristic Approach to Improve the Data Processing in Big Data using Enhanced Salp Swarm Algorithm (ESSA) and MK- means Algorithm	Journal of Intelligent & Fuzzy Systems	Vol. 45, Issue No. 2, pp. 2625-2640, 2023 DOI: 10.3233/JIFS- 231389
6	Dr. A. Johnny Renoald	Design and investigation of PV string/central architecture for bayesian fusion technique using grey wolf optimization and flower pollination optimized algorithm	Energy Conversion and Management	Volume 286, 15 June 2023, 117078 <a href="https://doi.org/10.1016/j.ensonman.2023.117078">https://doi.org/10.1016/j.ensonman.2023.117078</a>
7	Dr. A. Johnny Renoald	A Novel Hyper Parameter Tuned Deep Learning Model for Power Quality Disturbance Prediction in Micro-grids with Attention based Feature Learning Mechanism	Journal of intelligent and fuzzy systems	DOI: 10.3233/JIFS- 233263 (vol. 46, no. 1, pp. 2911-2927, 2024)

**FACULTY PRESENTATION IN NATIONAL / INTERNATIONAL  
CONFERENCE**



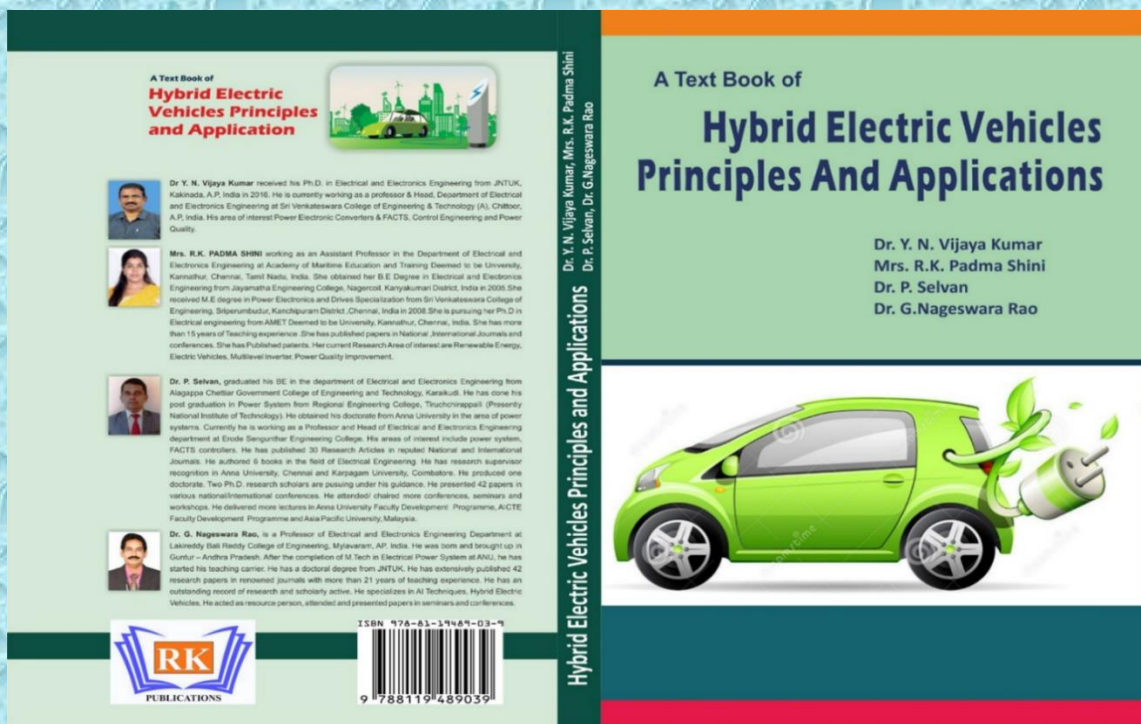
S. No.	Name of the faculty	Name of the Conference	Paper presented on (Topic)	Venue	Date
Academic Year 2023-24					
1	Dr L Anbarasu	International Conference on Engineering and Technology (ICET-2023)	Design and Implementation of Real Time MMC based PMSM with Bess	SembodaiRukmaniVaratharajan Engineering College	27.10.2023
2	Dr. A. Johny Renoald	International conference on Currents trends in modernized computing and communication technology	An intelligent power management control scheme for 9-bus grid tied power system with PV system	SIMATS Engineering, Chennai	11.10.2023

### FACULTY PUBLICATIONS IN BOOK / BOOK CHAPTER

S.No.	Name of the faculty	Name of the Book / Book Chapter	Publication Details
Academic Year 2023-24			
1	Dr.L.Anbarasu	PV based Bi-directional novel isolated converter for EV system	Futuristic Trends in Renewable & Sustainable Energy e-ISBN: 978-93-6252-460-7 IIP Series, Volume 3, Book 5, Part 1, Chapter 7 978-93-6252-460-7
2	E.Immanuvel Bright	Design of PMBLDC motor for high speed electrical application	Futuristic Trends in Electrical Engineering e- ISBN: 978-93-6252-001-2 IIP Series, Volume 3, Book 1, Part2, Chapter 2



3	Dr.P.Selvan	Hybrid Electric Vehicles Principles And Applications	RK Publications, 978-81-19489-03-9
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**Dr P Selvan and Dr L Anbarasu**

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**Erode Sengunthar Engineering College(Autonomous)**

**Perundurai, Erode - 638 057**

**Phone: 04294-232701, 702**