



ELECTRICAL AND ELECTRONICS ENGINEERING

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

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ABOUT US

The Department of Electrical and Electronics Engineering at M.I.E.T. Engineering College was established in 1998 and offers two undergraduate programs: Under-Graduate Programme (B.E) in Electrical and Electronics Engineering and Post-Graduate Programme (M.E) in Power Electronics and Drives. The department has been accredited by the National Board of Accreditation (NBA) and recognized as a Research Department by Anna University. The programs cover subjects such as Electrical Machines, Transmission and Distribution, Electronic Devices and Circuits, Control Systems, Micro Processor and Micro Controllers, and Power System Operation and Control.

The department has well-equipped laboratories, including Electrical Machines Lab, Measurement and Instrumentation Lab, Control Systems Lab, Power Electronics Lab, Power System Simulation Lab, and Renewable Energy Systems Lab. The department also encourages students to organize seminars, workshops, and conferences on advanced areas of Electrical and Electronics Engineering, and invites eminent professors, scientists, technocrats, and industrialists to deliver guest lectures and interact with students.

VISION

- ❖ To be recognized as centre of excellence in Electrical and Electronic Engineering, contribution to the needs of stakeholders.

MISSION

- ❖ To impart quality education through comprehensive exposure, value additions and effective teaching learning process.
- ❖ To facilitate learning environment in view of challenges in the field of Electrical and Electronics Engineering.
- ❖ To provide Platform for students to update the contemporary knowledge with professional quality and commitment to lifelong learning.

STUDENT PARTICIPATION IN PROFESSIONAL EVENTS

- **M. Vasith Rahuman** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **M. Mohamed Jameel** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **M. Jagadeeswaran** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **S. Nishvanth** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **R. Mohamed Aqil** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **S. Karthikeyan** participated in the **AR/VR Workshop** organized by **SSN College of Engineering, Chennai**, at the **State level** on **06.10.2023 and 07.10.2023**.
- **F. Mohamed Zaidh** participated in the **Extempore Speech** event organized by **Sathish Dhawan Space Centre, SHAR, ISRO, Sriharikota**, at the **State level** from **04.10.2023 to 10.10.2023**.
- **S. Sathik Manzoor** participated in the **Project Demo** event organized by **Sathish Dhawan Space Centre, SHAR, ISRO, Sriharikota**, at the **State level** from **04.10.2023 to 10.10.2023**.

LIST OF STUDENTS PARTICIPATED IN PROFESSIONAL EVENTS

- **M. Vasith Rahuman** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **M. Mohamed Jameel** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **M. Jagadeeswaran** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **S. Nishvanth** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **R. Mohamed Aqil** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **S. Karthikeyan** participated in the **State Level AR/VR Workshop** at **SSN College of Engineering, Chennai**, on **06.10.2023 and 07.10.2023**.
- **F. Mohamed Zaidh** participated in the **State Level Extempore Speech** event at **Sathish Dhawan Space Centre, SHAR, ISRO, Sriharikota**, from **04.10.2023 to 10.10.2023**.

- **S. Sathik Manzoor** participated in the **State Level Project Demo** at Sathish Dhawan Space Centre, SHAR, ISRO, Sriharikota, from **04.10.2023 to 10.10.2023**.

LIST OF FACULTY MEMBERS AS RESOURCE PERSON IN STTP/FDP EVENTS

- Dr. V. Sivakami served as a resource person for “**Agriculture Robotics – The Future of Farming**” at M.I.E.T. Engineering College on 23.11.2023.
- Mr. D. Tamilselvan served as a resource person for “**Recent Trends in Hybrid Renewable Energy Sources**” at C.K. Engineering College on 27.12.2023.

GUEST LECTURE

- ❖ A Guest Lecture on “**Electrical AutoCAD**” was organized on **29.08.2023** at the ‘**B**’ Block Seminar Hall for the **III Year students of the Department of Electrical and Electronics Engineering (EEE)**. The session was delivered by **Mr. K. VasuDevan, Technical Head, Live Wire, Tiruchirappalli**. The lecture provided students with valuable knowledge about Electrical AutoCAD, its applications in electrical engineering, and the importance of computer-aided design tools in preparing and developing electrical drawings and layouts. The session also helped students gain practical exposure to industry-relevant design practices and enhance their technical skills.



Mr. K. Vasu Devan, Technical Head, LiveWire, Trichy as the resource person.



Inaugural Address by Dr.E. Muthukumaran, HoD/EEE



Interaction with students in Guest lecture



Chief Guest delivered the drawing of electrical components in ELECTRICAL AUTOCAD

- ❖ A Guest Lecture on “**Prospects of Shape Memory Alloys in Assistive/Rehabilitation Technology**” was organized on **25.09.2023** for the **II, III and IV Year students of the Department of Electrical and Electronics Engineering (EEE)**. The lecture was delivered by **Dr. K. Dhanalakshmi, Professor and Head, Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli**. The session provided students with valuable insights into the applications and future prospects of Shape Memory Alloys (SMAs) in assistive and rehabilitation technologies, highlighting their role in developing innovative devices for healthcare and human assistance.



HoD delivering



Dr. K. Dhanalakshmi, NIT Trichyas the resource person.

INDUSTRIAL VISITS

- **IV Year – 04.10.2023:** The IV Year students visited **United Electrical Industries Limited, Kollam, Kerala**, to gain practical exposure to electrical equipment manufacturing, industrial operations, testing procedures, and maintenance practices. The industrial visit helped students understand the practical application of electrical engineering concepts in a real-time manufacturing environment.
- **IV Year – 05.10.2023:** The IV Year students visited the **Power Plant at Wonderla, Kochi, Kerala**, to understand the generation and utilization of electrical power in an industrial and commercial environment. The visit provided practical knowledge of power generation, electrical distribution, safety measures, and maintenance practices.
- **IV Year – 06.10.2023:** The IV Year students visited **Kerala Electrical & Allied Engineering, Mamala, Kerala**, to gain industrial exposure to electrical engineering equipment and manufacturing processes. The students observed various production, testing, quality control, and maintenance activities carried out in the industry.



- **III Year – 26.10.2023:** The III Year students visited the **Radio Astronomy Centre, Ooty**, to understand the applications of electrical, electronic, communication, and instrumentation technologies in radio astronomy. The visit provided students with valuable exposure to advanced scientific equipment and real-time technical applications.

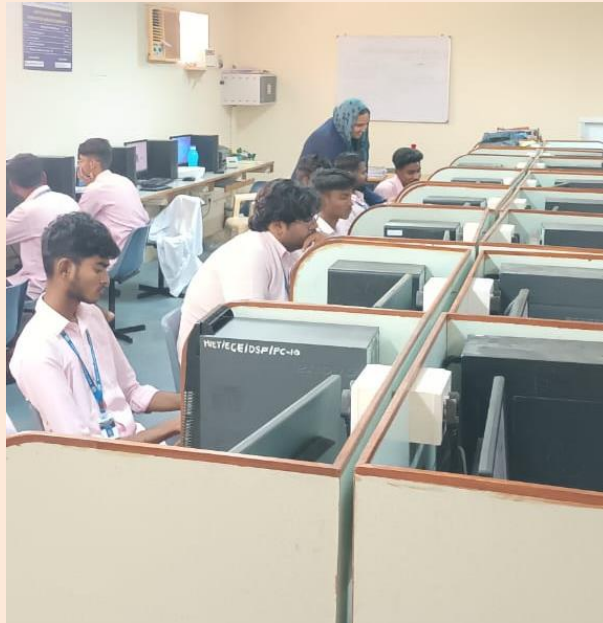


- **II Year – 08.12.2023:** The II Year students visited the **Kodaikanal Solar Observatory, Indian Institute of Astrophysics, Kodaikanal**, to gain knowledge about solar observations, scientific instrumentation, and solar research activities. The visit helped students relate their academic concepts with practical applications in astronomy, solar studies, and instrumentation technology.



VALUE ADDED COURSE

- Value Added Course on “Innovative Projects using Arduino and Raspberry Pi” **was conducted from 06.09.2023 to 27.10.2023, handled by Mrs. J. Sherrin Banu**, Assistant Professor, Department of Electrical and Electronics Engineering, M.I.E.T. Engineering College.



Students Performing Software-Based Project Development and Programming Using Arduino and Raspberry Pi

MOOC/NPTEL/NAAN MUDHALVAN COURSES

- **Allwin Albert J**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Anbuselvan S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Hanas Sheik Abdullah Q**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Jagadeeswaran M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Karthikayan S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.

- **Mohamed Aqil R**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Hasan J**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Jameel M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Nowsath Ali A**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Rizvan M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Nelson E**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Nishvanth S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Ponvasanthu S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **RamyaDharshini N**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Ranjani R**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Revathi S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Senthamilselvan S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Sevakraj P**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.

- **Sridhar M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **VasithRahuman M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Vigneshwaran T**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Abdul Jabbar A**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Abdulsiddiq S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Abusheik K**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Asifmohamed R**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Gowtham M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Janarthanan G**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Kalingeswari P**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Karthikeyan Ms**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Lawrence G**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Faiyaz J**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.

- **Mohamed Rasath S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Sameer S**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Mohamed Yousuf M**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Muthamilan T**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.
- **Praveen T**, a Fifth Semester student of the Department of Electrical and Electronics Engineering (EEE), successfully completed the “**Employability Skills**” course.

SPONSORED RESEARCH

- **J. Sherrin Banu**: Published a research paper titled “**Smart Real-Time Vehicle Tracking System with Safe Travel**” in the **International Conference on Advanced Trends in Renewable Energy (ICATRE 2023)** during **September 2023**. The paper focused on the development of a smart vehicle tracking system aimed at improving travel safety through real-time monitoring and tracking technologies. The work highlights the application of modern communication and intelligent technologies for safer and more reliable transportation. **ISBN: 978-81-959943-4-2**.
- **Dr. E. Muthukumaran**: Published a research paper titled “**Design of a Smart Energy Meter and Monitoring System for Industrial and Residential**” in **IEEE ICSCAN 2023** during **August 2023**. The research focused on the design and development of a smart energy metering system for monitoring electrical energy consumption in industrial and residential applications. The work provides an effective approach for energy monitoring, efficient utilization, and improved energy management. **DOI/ISBN: 9798-3503-1512-7/23**.

FACULTY PUBLICATION IN INTERNATIONAL/NATIONAL JOURNAL

- **J. Sherrin Banu** published a research paper titled “**Smart Real-Time Vehicle Tracking System with Safe Travel**.” The paper was presented at the **International Conference on**

Advanced Trends in Renewable Energy (ICATRE 2023) in October 2023. The research focuses on the development of a smart real-time vehicle tracking system aimed at improving **vehicle monitoring, passenger safety, real-time location tracking, and secure travel.** The work demonstrates the application of modern technology for enhancing transportation safety and monitoring. The publication is available through the DOI **10.5281/zenodo.10048071.**

- **D. Tamilselvan** contributed a research work titled **“Optimizing Renewable Energy Utilization with High Gain Converters.”** The research was published in **Renewable and Sustainable Energy Reviews** in **December 2024.** The study focuses on the effective utilization of renewable energy sources through the application of **high-gain converter technologies.** The work highlights the importance of efficient power conversion, improved energy utilization, and enhanced performance of renewable energy systems. The research contributes to the development of efficient power electronic solutions for renewable energy applications. The publication is associated with DOI **10.1016/j.rser.2023.114105.**
- **Dr. E. Muthukumaran** published a research paper titled **“Design of a Smart Energy Meter and Monitoring System for Industrial and Residential Applications.”** The research was published through **IEEE Xplore in 2023.** The study focuses on the design and development of a smart energy metering and monitoring system for **industrial as well as residential applications.** The proposed system supports effective monitoring of electrical energy consumption and can help users understand and manage energy usage more efficiently. The research demonstrates the application of smart monitoring technologies for **energy management, consumption analysis, and improved electrical energy utilization.** The publication is identified by DOI **10.1109/CSCAN8655.2023.10395669.**

CONSULTANCY WORK

- **Dr. E. Muthukumaran**, Principal Investigator (PI), with **D. Tamilselvan** as Co-PI, from the **Department of Electrical and Electronics Engineering (EEE)**, undertook a consultancy project titled **“Electrification Work & Design of Circuit Systems in Super Market”** for **Kannan Super Market, Kallakurichi.** The project had a duration of **one year** with a consultancy value of **₹4,00,000.** The project involved electrical electrification works and the design of suitable electrical circuit systems for the supermarket, with emphasis on safe, reliable, and efficient electrical installation and distribution.



- **Dr. E. Muthukumaran**, PI, with **B. Muthuselvi** as Co-PI, from the **Department of Electrical and Electronics Engineering (EEE)**, undertook a consultancy project titled **“Solar Power Irrigation System for Sustainable Agriculture”** for **Mr. Sivalingam, Agriculturalist**. The project was carried out for a duration of **six months** with a consultancy value of **₹1,00,000**. The project focused on the application of solar energy for agricultural irrigation, aiming to reduce dependence on conventional electrical power sources and support energy-efficient and sustainable agricultural practices.



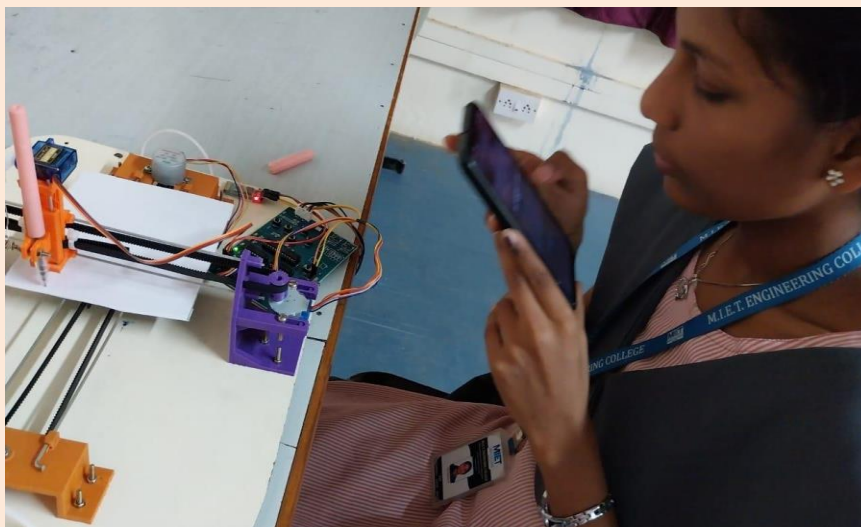
SPONSORED RESEARCH PROJECTS

- The Department of Electrical and Electronics Engineering received **₹3,00,000 as sponsored research funding** for two innovative research projects. **Dr. V. Sivakami, EEE**, served as the faculty member associated with the projects. The first project, titled **“Design of Solar Car with Battery and Real-Time Access,”** was sponsored by **Sri Chellam Industries** for a duration of **4 months**, with a sanctioned amount of **₹1,75,000**. The second project, titled **“Design of Railway Platform for Accident Prevention,”** was sponsored by **AVM Engineering Industry, Coimbatore** for a duration of **6 months**, with a sanctioned amount of **₹1,25,000**. Thus, the department received a total sponsored research amount of **₹3,00,000**, supporting the development of innovative solutions in renewable energy, electric mobility, and railway safety.
- **Dr. V. Sivakami, Department of Electrical and Electronics Engineering**, was associated with the sponsored research project titled **“Design of Railway Platform for Accident Prevention.”** The project was sponsored by **AVM Engineering Industry, Coimbatore** for a duration of **6 months**, with a total sponsored research amount of **₹1,25,000**. The project focused on the design and development of an innovative railway platform system aimed at improving passenger safety and preventing accidents. The project contributed towards the development of practical safety-oriented engineering solutions for railway applications.



SEED MONEY FUNDED PROJECTS

- **Ms. B. Muthuslevi, Department of Electrical and Electronics Engineering,** received **Seed Money funding** for the project titled **“Design and Development of Writing Robot Using Speech Process.”** The project was carried out for a duration of **6 months** with a sanctioned seed money amount of **₹50,000**, out of which **₹46,540** was utilized. The project resulted in the development of a **working model** and the filing of a **patent**, demonstrating the successful translation of an innovative idea into a functional engineering prototype.



- **Dr. E. Muthukumaran, Department of Electrical and Electronics Engineering,** received **Seed Money funding** for the project titled **“Hand Gesture Control Wheelchair with Obstacle and Fall Detection.”** The project was carried out for a duration of 6 months with a sanctioned

seed money amount of ₹50,000, out of which ₹49,841 was utilized. The project focused on developing an assistive wheelchair controlled through hand gestures with additional obstacle detection and fall detection features to improve user safety and mobility. The project resulted in the development of a working model and the filing of a patent.



Mr. D. Tamilselvan, Department of Electrical and Electronics Engineering, received **Seed Money funding** for the project titled “**Detachable Conversion Kit for Manual Wheel Chair to Electrical Trike.**” The project was carried out for a duration of **6 months** with a sanctioned seed money amount of ₹50,000, out of which ₹49,610 was utilized. The project focused on developing a detachable conversion kit to transform a conventional manual wheelchair into an electrically powered trike, providing enhanced mobility and ease of use. The project resulted in the development of a **working model** and the filing of a **patent**.



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