DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

# Newsletter

## April 2024

## VISION

To become a world class renowned department where dissemination and application of knowledge in design and analysis of electronic circuits in the field of communication is delivered and to synergistically balance through relentless pursuit of student success towards the economic prosperity of the society and the world at large.

## MISSION

Professionalism: Achieve excellence in teaching, learning, and educational activities which ensure that each student has the opportunity to attain his or her fullest potential

Core Competence: Inculcate innovative skills, research aptitude, team-work, ethical practices in students so as to meet expectations of the industry as well as society.

Research: Provide research and intellectual resources that address problems facing the industry and the world, while advancing the boundaries of disciplinary and multidisciplinary research and its applications.

Industrial Interaction: Provide professional development opportunities for all by creating an open and accessible learning environment and incorporating appropriate technology through collaboration with industry

## PROGRAM OUTCOMES

1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution 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 process 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 proceed 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 EDUCATIONAL OBJECTIVES**

1.To enable graduates to pursue research, or have a successful career in academia or industries associated with Electronics and Communication Engineering, or as entrepreneurs.

2. To provide students with strong foundational concepts and also advanced techniques and tools in order to enable them to build solutions or systems of varying complexity.

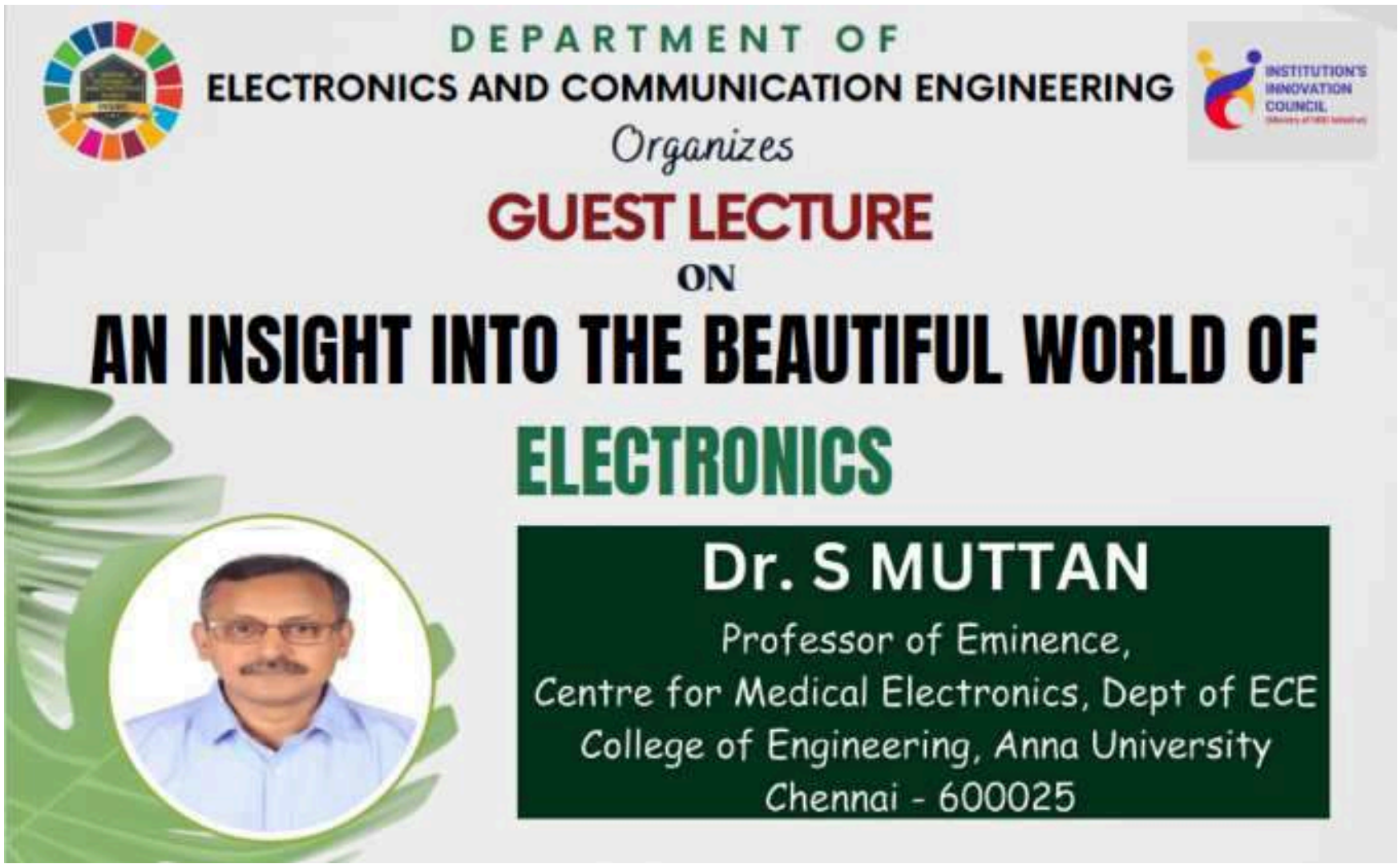
3.To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research oriented methodologies to solve the problems identified.

# EVENTS OF APRIL –2024

- Events Organized
- Professional Society Activities
- Incubation Cell
- Alumni Activities
- Placement Activities
- Industrial Interactions
- Students Achievements
- Staff Achievements

# EVENTS ORGANIZED

## Guest Lecture




**Eminent Professor Delivers Captivating Lecture on Electronics Basics**

The Department of Electronics and Communication Engineering recently hosted a distinguished guest speaker, Dr. S. Muttan. Professor of Eminence at the Centre for Medical Electronics and former Head of the department at Anna University Chennai's College of Engineering Guindy, Dr. Muttan boasts an impressive career.

# EVENTS ORGANIZED

## Guest Lecture

**A Wealth of Experience**

Dr. Muttan's experience spans across various leadership positions, including Regional Director, Tiruchirappalli; Director i/c of Indian Institute of Information Technology, Srirangam; Dean of Bharathidasan Institute of Technology, Tiruchirappalli; and several key roles within Anna University itself. Notably, he served as Chairman of the NBA Working Committee, overseeing accreditation processes.

**Engaging and Informative Presentation**

Dr. Muttan's lecture on the fundamentals of electronics captivated the audience of 191 students. His presentation was lauded for its clarity, engaging style, and wealth of information, making it an enriching experience for all attendees.

# EVENTS ORGANIZED

## Vision Quest for School Students


**St. Joseph's College of Engineering ECE Department Hosts Embedded Systems Workshop for High School Students.**

The Department of Electronics and Communication Engineering (ECE) at St. Joseph's College of Engineering conducted a workshop on Embedded Systems for students of grades XI and XII on April 13th, 2024.

**Sharing Knowledge and Inspiring Innovation:**

This event aimed to introduce high school students from Sri Bala Vidyalaya, Perambur, Chennai, and Maharishi International Residential School, S.V. Chatram, Kanchipuram, to the fascinating world of Embedded Systems. Over 120 students participated in the workshop, gaining valuable insights from ECE department's second and third-year students.

# EVENTS ORGANIZED

## Vision Quest for School Students

**Interactive Learning with Project Demonstrations**

The workshop showcased the practical applications of Embedded Systems through engaging project demonstrations. Here's a glimpse into the showcased projects:

- **RADAR Using Arduino Uno:** This project utilized an Arduino board, ultrasonic sensor, and servo motor to create a real-time radar system. The system operates by emitting ultrasonic waves, measuring the time taken for them to bounce back from objects, and calculating the distance based on the speed of sound. The Arduino processes sensor data, controls the servo motors movement, and displays the results on a monitor or laptop.

- **Home Automation Using Raspberry Pi:** This project demonstrated how to build a home automation system using a Raspberry Pi and relays. The Raspberry Pi, programmed with the Node-RED platform, facilitated communication between electronic devices and the internet. Relays were used to bridge the gap between the Raspberry Pi's 5V output and the 240V appliances, enabling control and automation of various functions in a home or factory, potentially leading to reduced energy consumption.

The workshop provided a valuable platform for high school students to explore the exciting possibilities of Embedded Systems, igniting their passion for science and technology.

# EVENTS ORGANIZED

## Non-Governmental Organization (NGO) Activities

On April 6th, II Year students from the ECE Department embarked on a heartwarming mission to spread joy and brighten the days of those in need. Their journey took them to both a local orphanage and old age homes, where they connected with the residents in meaningful ways. The spirit of giving was evident as the students served delicious meals, ensuring everyone was well-nourished and comfortable. To add a dash of fun and laughter, they also conducted engaging activities. These activities likely brought out smiles and created a sense of community, fostering memories that would last. Their selfless act of giving back to the community not only brought joy to the residents of the orphanage and old age homes but also served as an inspiration to others.

## PROFESSIONAL SOCIETY ACTIVITIES

# IEEE Communication Society


## Electroblits'24: A Multifaceted Exploration of Electronics

**Electroblits'24** wasn't just your average electronics competition. It was designed to be a well-rounded experience that challenged participants, fostered a strong community, and honed essential skills.

## PROFESSIONAL SOCIETY ACTIVITIES

# IEEE Communication Society

### Deepening Knowledge and Building Community

The core objective was to solidify participants understanding of electronic circuits. This included foundational concepts, practical applications, and the principles that tie it all together.

- Through a well-crafted quiz, the event assessed the knowledge and proficiency of registered IEEE members. This not only tested their grasp of the subject but also identified areas for further exploration, both individually and collaboratively.
- The emphasis wasn't just on individual performance; the event aimed to create a spirit of camaraderie and teamwork among participants. Encouraging open discussions and collaboration fostered a sense of community within the IEEE chapter.

# PROFESSIONAL SOCIETY ACTIVITIES

## IEEE Communication Society

### Promoting Continuous Learning and Essential Skills

- Electroblits'24 wasn't just about showcasing existing knowledge; it was about igniting a passion for continuous learning. By actively participating and engaging with the challenges, participants were encouraged to explore the vast and exciting world of electronics.
- The competition wasn't limited to theoretical knowledge. It was designed to develop critical skills like problem-solving, analytical thinking, and critical analysis – all essential for success in the field of electronics.

### A Platform for Networking and Growth

- Electroblits'24 provided a valuable platform for participants to connect and learn from each other's experiences. This exchange of knowledge and insights further strengthened the fabric of the IEEE community.

### A Look at the Event Rounds

The competition itself was a multi-stage journey:

- Electro Quiz: This round tested participants; core knowledge of electronic circuits through a series of challenging questions. It assessed their understanding of fundamental concepts, analysis techniques, and practical applications.
- Filmophile: This unique round added an interesting twist. Participants were presented with...
- Circuits Challenge: The final round put theoretical knowledge to the test. Participants tackled real-world scenarios by solving circuits and identifying characteristics like power, voltage, and current. They were presented with circuits (diagrams or physical) and required to calculate these values at various points.

# INCUBATION CELL

## Startup from Brainchild!

### MLPMS The Game Changer!!!

**MLPMS: Revolutionizing Energy Consumption**

St. Joseph's College of Engineering Alumni Take Charge MLPMS, founded by St. Joseph's College of Engineering Electronics and Communication Engineering department alumni Mr. Jasper and Mr. Akash, is on a mission to revolutionize energy consumption. Their business aims to make energy management accessible and user-friendly for everyone.

**Empowering Individuals and Businesses**

MLPMS envisions a future where individuals and businesses can effortlessly control their energy usage and contribute to a more sustainable world. They believe everyone has the power to reduce their energy consumption and carbon footprint.

**State-of-the-Art Technology**

The MLPMS device leverages cutting-edge technology to deliver precise, real-time data on your energy consumption. By harnessing the power of IoT (Internet of Things), MLPMS helps you optimize energy use, saving you both power and money.

# INCUBATION CELL

**Commercial website : https://www.mlpms.com/**


**MLPMS:** Revolutionizing Energy Consumption St. Joseph's College of Engineering Alumni Take Charge MLPMS, founded by St. Joseph's College of Engineering Electronics and Communication Engineering department alumni Mr. Jasper and Mr. Akash, is on a mission to revolutionize energy consumption. Their business aims to make energy management accessible and user- friendly for everyone. Empowering Individuals and Businesses MLPMS envisions a future where individuals and businesses can effortlessly control their energy usage and contribute to a more sustainable world. They believe everyone has the power to reduce their energy consumption and carbon footprint. State-of-the-Art Technology The MLPMS device leverages cutting-edge technology to deliver precise, real-time data on your energy consumption. By harnessing the power of IoT (Internet of Things), MLPMS helps you optimize energy use, saving you both power and money.

# INCUBATION CELL

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/01/2024
(21) Application No 202441003739 A
(43) Publication Date : 09/02/2024

(54) Title of the invention : MICRO LEVEL POWER MANAGEMENT SYSTEM

(51) International classification: G06Q30/0601000; G06Q30/0641000; G01R0022060000; G01R0022100000; G01D0004000000
(86) International Application No: NA
Filing Date: NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number: NA
Filing Date: NA
(62) Divisional to Application Number: NA
Filing Date: NA

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(57) Abstract :
MICRO LEVEL POWER MANAGEMENT SYSTEM Excess usage of the electricity is increasing everyday due to unmonitored power consumption, thus resulting in high amounts in electricity bills. Irrigation cycle is also affected due to the irregularity of the power supply causing great loss in farmer's income. The Smart Power Management System is a module that can be attached to the existing energy meter or as a standalone module to measure certain parameters of electric current. The module measures the instantaneous voltage, current, power being consumed and energy consumed, the above details can be viewed from a smartphone, laptop or desktop. The module also alerts the user about low voltage and high voltages by sending popups to the user's mobile phone. In case of non response from the user, the module automatically disconnects electric appliances from the grid as a safety measure, however the appliances could be turned back on with the consent of the user (user override), not all appliances are disconnected from the grid at such situations, the concept of dedicated line steps in at such scenarios. Dedicated Line Concept: The User may want some appliances to keep running even in low or high voltages provided the user has provisioned them with stabilizers etc. in such situations, the appliances are connected to a dedicated line, the appliances connected to this dedicated line does not get disconnected at Low/High voltage circumstances and power is continuously supplied and monitored for those appliances. The Three-Phase Model: The device is capable to operate in 3-phase, the load connected to each phase is constantly monitored and thus help the user with efficiently distributing the load among the 3-phases, the device also switches between the 3 phases when one or two phase out is available (after a time delay of 5-sec) to ensure continues supply of power without human intervention. In case of power cut the smart meter does not turn off immediately, it waits for a period of 5 - 7 seconds for the power to resume, thus avoiding on and off due to fluctuations, but if the power does not resume within 5 - 7 seconds the module stores the last known value of energy consumed in a flash memory and powers off. Switch Off Mains from anywhere: In unforeseen circumstances where there is a necessity for the mains to be turned off, it could be done via mobile either through text message or online command, however this does not affect the appliances connected to the dedicated line, the appliances connected in the dedicated line will continue to receive power as usual. Estimated Bill Generator: We can fix a monthly target (units to be conserved) and work towards achieving it, the module shows warning before reaching the threshold mark, thus keeping a track of our progress towards conserving electricity. The module takes into account the TNEB Slab rate and the energy consumed during the billing period and produces an estimated bill amount that can be viewed from smartphone. Automatic Readings update to TNEB: The Readings could be updated directly to TNEB thus making it easy for them to produce an online bill, thus providing an opportunity to completely automize bill generation. (Currently over 10,000 staffs are working in TNEB just to take readings from energy meters and upload it in their portal), this saves our government an approximated value of 1.2 Crore per bill cycle. The Micro Level Power Management System (MLPMS) is implemented using IOT, Machine Learning and Neural Network to manage and monitor Electricity. This allows the users to predict and plan their monthly energy usage. The appliance management system allows users to manage the appliances connected to it through IOT, it uses ML & RNN to predict maintenance requirement of the connected devices thus allowing the user to take precautions before any mishaps. The MLPMS also does the work of an energy meter allowing integration with TNEB as an energy meter providing benefits to both Government as well as the users. Currently our government is planning to replace the conventional energy meter with smart meter technology, this product will achieve both the requirement of government while providing various functionalities to the End User at the same cost of a smart meter. The Estimated Bill Generation with respect to the local tariff will notify the user about the amount spent in a weekly basis thus allowing the user to be in track of their usage. This helps in automating the bill generation and payment process without human involvement.

**Committed to Innovation and Growth**

MLPMS's dedication to innovation is further solidified by their registration as a startup through the following esteemed programs:

**Institution's Innovation Council (IIC):** This program fosters a vibrant startup ecosystem within educational institutions, providing crucial support to budding entrepreneurs like MLPMS.

**MOE's Innovation Cell (MIC):** Established by the Ministry of Education (MOE), the MIC champions technological advancements and promotes student-led ventures, aligning perfectly with MLPMS's vision.

# INCUBATION CELL

भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises

**UDYAM REGISTRATION CERTIFICATE**

| | |
|---|---|
| UDYAM REGISTRATION NUMBER | UDYAM-TN-08-0082875 |
| NAME OF ENTERPRISE | M/S MLPMS |

TYPE OF ENTERPRISE *

| S.No. | Classification Year | Enterprise Type | Classification Date |
|---|---|---|---|
| 1 | 2024-25 | Micro | 13/04/2024 |

MAJOR ACTIVITY: **MANUFACTURING**

SOCIAL CATEGORY OF ENTREPRENEUR: OBC

NAME OF UNIT(S)

| S.No. | Udyog Aadhaar Memorandum | Unit(s) Name |
|---|---|---|
| 1 | TN02D0127340 | Believe Motivations |
| 2 | | MLPMS |

OFFICAL ADDRESS OF ENTERPRISE

| | | | |
|---|---|---|---|
| Flat/Door/Block No. | NA | Name of Premises/ Building | St. Joseph's College of Engineering |
| Village/Town | Jeppiaar Nagar | Block | Rajiv Gandhi Salai |
| Road/Street/Lane | Old Mahabalipuram Road | City | Chennai |
| State | TAMIL NADU | District | KANCHIPURAM , Pin 600119 |
| Mobile | 9944688100 | Email: | mlpmspartners@gmail.com |

DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE: 01/02/2024

DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS: 01/02/2024

NATIONAL INDUSTRY CLASSIFICATION CODE(S)

| SNo. | NIC 2 Digit | NIC 4 Digit | NIC 5 Digit | Activity |
|---|---|---|---|---|
| 1 | 27 - Manufacture of electrical equipment | 2732 - Manufacture of other electronic and electric wires and cables | 27320 - Manufacture of other electronic and electric wires and cables (insulated wire and cable made of steel, copper, aluminium) | Manufacturing |
| 2 | 27 - Manufacture of | 2790 - Manufacture of | 27900 - Manufacture of | Manufacturing |

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**MSME (Ministry of Micro, Small and Medium Enterprises):** Recognizing MLPMS's potential, the MSME program extends valuable resources and guidance to propel promising small businesses like theirs.

**Udayam Registration:** This program by the Government of India further empowers MLPMS by simplifying regulatory processes and offering additional support mechanisms for startups.

With this impressive backing and their commitment to sustainable energy solutions, MLPMS is poised to make a significant impact.

# ALUMNI ACTIVITIES

## Mock Interview


The Department of ECE organized a mock interview event titled "Pathfinder Panel: Navigating Futures Mock Interview Exchange with Alumni" on April 6, 2024. Students gained valuable interview experience and insights from industry professionals. The mock interviews helped students identify areas for improvement in their interview skills. The feedback provided by the alumni panelists will be instrumental in helping students prepare for future job interviews. The event fostered a connection between current students and ECE alumni.

# PLACEMENT ACTIVITIES

## PLACEMENT TRAINING PROGRAM

From March 25th to April 2nd, III Year Electronics and Communication Engineering students participated in an intensive week-long training program on Data Structures. Led by Mr. Govind Chandak, a dedicated M.Tech student at IIIT Allahabad, the training provided valuable skills specifically on Data Structures that will benefit students during their job placements, particularly in the software industry.

# PLACEMENT ACTIVITIES

## Student Employability Enhancement Research Activities


Ms. S. Vidyalakshmi, a final-year Electronics and Communication Engineering student recently placed at Vodafone Idea, shared her insights on the Vodafone interview process. She also offered advice on the technical areas students should focus on to improve their chances of landing a job in a core engineering company.

# PLACEMENT ACTIVITIES

## Student Employability Enhancement Research Activities




The Department of ECE conducted SEERA activities for 2nd year students on April 12th, 2024. Activities included group discussions where students debated various topics, a **MATLAB session** covering data analysis and applications, and mock interviews to prepare students for future interviews. The activities were well-received by students and provided valuable learning experiences

# PLACEMENT ACTIVITIES

## Student Employability Enhancement Research Activities

On April 5, 2024, three third-year ECE students, Benedict John Alston, Motheeswaran B, and Nikhisha B, presented an informational session to second-year ECE students about their internship experiences in **Germany focused on 5G and Industrial Internet of Things (IIoT)**. Second-year ECE students gained firsthand knowledge about internship opportunities in Germany related to 5G and IIoT. The session likely motivated and inspired students to consider pursuing international internships as part of their academic journey. The informative presentation by their peers may have sparked an interest in 5G and IIoT technologies among second-year students.

# INDUSTRIAL INTERACTION

## INTERNSHIP (Hands-On Training)

**Rural Electronics Education Gets a Boost!!**

A group of students from second year Electronics and Communication Engineering department participated in a 15-day internship program at **Qmax** Test Equipments Pvt Ltd. The internship focused on a collaborative project with **IIT Madras** to develop a comprehensive learning kit for electronics education in rural schools. This kit, designed for a hands-on learning experience, included:

- Digital Electronics Modules
- Analog Electronics Components
- Linear Integrated Circuits Modules
- Arduino-Based Experiments

# INDUSTRIAL INTERACTION

## INTERNSHIP (Hands-On Training)

The project partnered with rural schools to deliver the kits alongside training sessions and workshops for both teachers and students. This holistic approach fostered:

- **Practical Skills:** Students gained hands-on experience in various electronics domains.
- **Critical Thinking:** The program encouraged problem-solving through experimentation.
- **Passion for STEM:** The interactive learning environment ignited a passion for science, technology, engineering, and mathematics (STEM) subjects.

By bridging the digital divide, the project ensured equitable access to quality electronics education. This empowers rural students to:

- **Pursue Opportunities:** Develop skills and knowledge for future careers in technology.
- **Drive Innovation:** Foster a culture of innovation within rural communities.

# STUDENTS ACHIEVEMENTS

Indran B. and Kaviarasu S., second year students, from the Electronics and Communication Engineering impressed judges at the national level INSPIRUS 2024 multidisciplinary symposium held at **SIMATS School of Engineering**. Their insightful paper titled "EFFECTIVE TRAFFIC MANAGEMENT" secured them the coveted **first place** along with a **cash prize of Rs. 1000.**

This achievement exemplifies the exceptional caliber of and their dedication to tackling real-world challenges. The win underscores the importance of innovative solutions in traffic management, a topic of growing concern in today's world.

# STUDENTS ACHIEVEMENTS


Second-year Electronics and Communication Engineering students, Roshini Kaviarasu, Swasthika M, and Thomas Epsiba N J, made a splash at the recent **Make-a-thon 5.0!** Their innovative project, HAPTO ASSIST, impressed the judges, earning them **third place** and a well-deserved cash prize of **Rs.2000** at Sri Venkateswara College of Engineering in Chennai.

# STUDENTS ACHIEVEMENTS


St. Joseph's College of Engineering ECE department is thrilled to announce the success of Muhammad Yahyaa, a second-year Electronics and Communication Engineering student. Yahyaa secured **first place** at the prestigious **Silicon 2K24** symposium's **Technoshow** event held at Sathyabama Institute of Science and Technology, Chennai.

This remarkable achievement underscores the exceptional talent and technical expertise nurtured within the institute's ECE department. This win serves as a motivation for all ECE students, inspiring them to strive for excellence in their chosen field.

# STUDENTS ACHIEVEMENTS

On 4th April 2024 ,Thomas Epsiba NJ, Swasthika M, Roshni kaviarasu and Stephi Priscilla Second-year Electronics and Communication Engineering students are setting imaginations on fire at the **Intra-College Project Expo** with their innovative project, HAPTO ASSIST. Witnessing this project, younger students from both the college and local schools will be inspired to develop their own creative ideas and pursue their own path of invention.

# STUDENTS ACHIEVEMENTS

The following students have won prizes in competitions conducted by various Engineering colleges.

| S. NO | NAME | YEAR | NAME OF THE EVENT | ORGANIZED BY | POSITION | CASH PRIZE |
|---|---|---|---|---|---|---|
| 1. | Ajitha J<br>Deepika M<br>Dorima Roshni R<br>Sivashree R | III | War of Words | SIMATS School of Engineering | I | - |
| 2. | Akash R S<br>Harish M | II | Innovate Expo | St. Joseph's Institute of Technology | Special Mention for best UI/UX | Rs.2000 |

# STAFF ACHIEVEMENTS


Mr. M. Lingeshwaran, Assistant Professor/ECE, served as a 5G consultant to DADB - German Academy of Digital Education for the **Andhra Pradesh State Skill Development Corporation (APSSDC) sponsored** "5G Communication Technology" course, and delivered invited talks on "Foundations on 5G" at the following venues:

- Andhra Loyola Institute of Engineering and Technology, Vijayawada
- Sri Venkateswara College of Engineering & Technology, Tirupati Road
- Mother Theresa Institute of Engineering and Technology, Chittoor
- Gayatri Vidya Parishad College for Degree & P.G. Courses, Visakhapatnam

# STAFF ACHIEVEMENTS





Mr. M. Lingeshwaran, Assistant Professor/ECE, served as a 5G Consultant DADB-German Academy of Digital Education for **Andhra Pradesh State Skill Development Corporation (APSSDC) Sponsored** "5G Communication Technology" Course and delivered incited talks on "Foundations of 5G "at the following venues:

- VEMU Institute of Technology, P. Kotha Kota
- Andhra Engineering College, Atmakur

# STAFF ACHIEVEMENTS

## Faculty Development Programme

The following faculty members have attended faculty development programme in various institutions.

| S. No | Name of the Faculty | Title | Conducted by |
|---|---|---|---|
| 1. | Dr. S. Rajesh Kannan | Technology Based Entrepreneurship Development Programme | Maritime Education and Training, Chennai |
| 2. | Dr. R. Avudaiammal | Revolutionizing Industries: AI's Impact in Today's World | KPR Institute of Engineering and Technology, Coimbatore |
| 3. | Mrs. R. Madhumitha | Antenna Concepts and Applications | SSN College Of Engineering, Chennai |

# STAFF ACHIEVEMENTS

## SCI Publications (Calendar Year – 2024)

| S. No | Author(s) | Title | Journal name | Impact Factor |
|---|---|---|---|---|
| 1. | Dr. R. Avudaiammal<br>Dr. J. Martin Leo Manickam | Semantic Segmentation-Based Building Extraction in Urban Area Using Memory-Efficient Residual Dilated Convolutional Network | Arabian Journal for Science and Engineering | 2.9 |
| 2. | Dr. R. Avudaiammal<br>Dr. J. Martin Leo Manickam | Building rooftop extraction from aerial imagery using low complexity UNet variant models | Journal of Spatial Science | 1.9 |
| 3. | Dr. D. Lakshmi | A customized Conv NeXt-XL network with fusion of deep and handcrafted features for colposcopy image classification | International Journal of Imaging Systems and Technology | 3.3 |
| 4. | Dr. P. Ezhilarasi | Homomorphic encryption algorithm providing security and privacy for IoT with optical fibre communication | Optical and Quantum Electronics | 2.084 |
| 5. | Dr. G. Sivagurunathan | Implementation of unidirectional control mechanism for DC-DC converters | Journal of Information & Optimization Sciences | ESCI |

# STAFF ACHIEVEMENTS

## Scopus and Conference Publications

| S. No | Author(s) | Title | Journal/ Conference Name |
|---|---|---|---|
| 1. | G. Sivagurunathan | Modified Evolutionary Programming Method for Solving Unit Commitment Problem with Import and Export Constraints | European Chemical Bulletin |
| 2. | Dr. P. Ezhilarasi, Dr. S. Rajeshkannan | Unveiling the Secrets of Brain Tumors: A Fuzzy C-Means and U-Net Convolution Approach for Enhanced Segmentation | International Journal of Computers, Communications and Control |
| 3. | Dr. Shirley Selvan | Automated Classification of MR Brain Images based on Transfer learning Approach | ICCEBS 2024 |
| 4. | Dr. Shirley Selvan<br>Mrs. R. Madhumitha<br>Mrs. P. Elaveni | Smart Shoes for Fitness and Performance Analysis of Sportsmen | 5th IEEE International Conference on Computing, Power & Communication Technologies (IC2PCT) |
| 5. | Dr. P. Ezhilarasi,<br>Dr. S. Rajeshkannan | Cipher Care: Multi-Authentication Video Steganography Powered by CNNs | IEEE International Students Conference on Electrical, Electronics and Computer Science, SCEECS 2024. |
| 6. | Mrs. M. Angelin Ponrani<br>Dr. P. Ezhilarasi,<br>Dr. S. Rajeshkannan | Modelling of Intelligence Stereoscopic vision system using Adaptive Super pixel Based Disparity Estimation Algorithm | 3rd International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication and Computational Intelligence (RAEEUCCI- 2024) |

# STAFF ACHIEVEMENTS

## Patent (Intellectual Property Rights)

The following faculty members have **published Patent** in the month of April 2024

| S. No | Name of the Faculty | Title |
|---|---|---|
| 1. | Dr. S. Rajeshkannan | VEHICURE |
| 2. | Dr. K. Ramachandra Reddy | Identifying the language present in text or image using visual features training model |
| 3. | Dr. J. Sivakumar | Enhancing Misinformation Detection with Ensemble Learning |
| 4. | Dr. A. M. Balamurugan | Soil Stabilization using Sawdust and Stone dust |

## *TO KNOW MORE ABOUT DEPARTMENT ACTIVITIES*

**Visit out Department Website:**

**Click Here**
**ECE Department St. Joseph's College of Engineering**

**Scan Here**

**Follow our Social Media Pages:**

**Linkedin:**
**ECE St. Joseph's Linkedin**

**Instagram:**
**ECE St. Joseph's Instagram**

**Editorial:** *Mrs. M. Angelin Ponrani(AP/ECE)*
**Student Editorial:** *N.Shriramkrishna, S.Thavaprakash*
**Reviewed by:** *Dr. S. Rajeshkannan (HOD/ECE)*

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