



You Choose, We Do It

# St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

St. Joseph's Group of Institutions

OMR, Chennai - 119



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

# Newsletter

August 2024



**St. JOSEPH'S**  
GROUP OF INSTITUTIONS  
OMR, CHENNAI - 119



*The Choice of*  
**Disciplined Toppers**



## 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

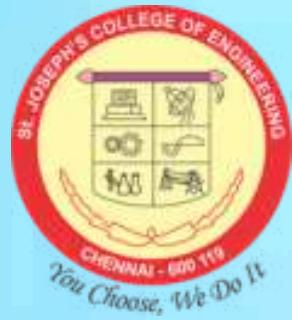
Core Competence: Inculcate innovative skills, research aptitude, team-work, ethical practices in students so as to meet expectations of the industry as well as society.

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.

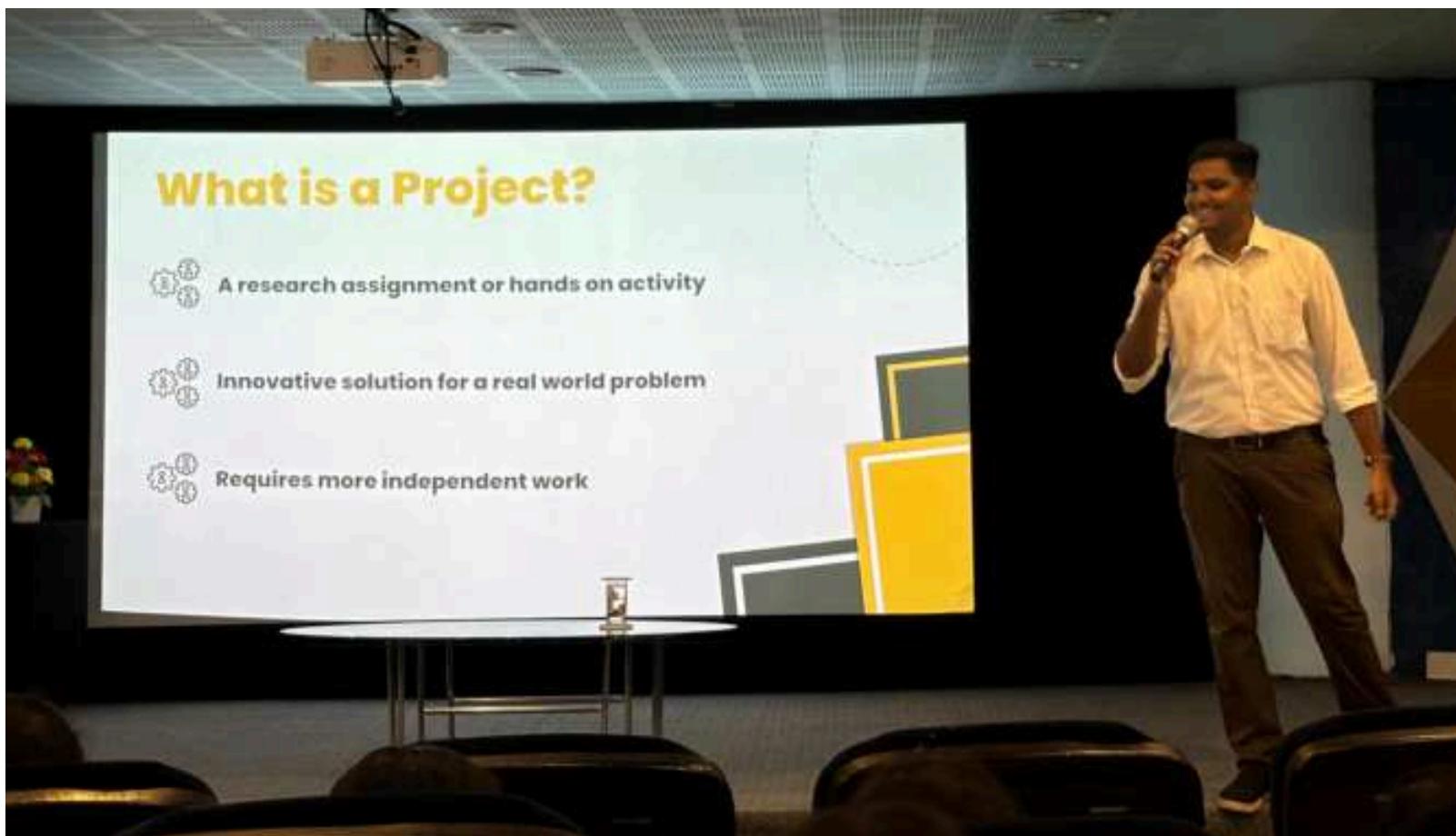
## **PROGRAM EDUCATIONAL OBJECTIVES**

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 AUGUST-2024**

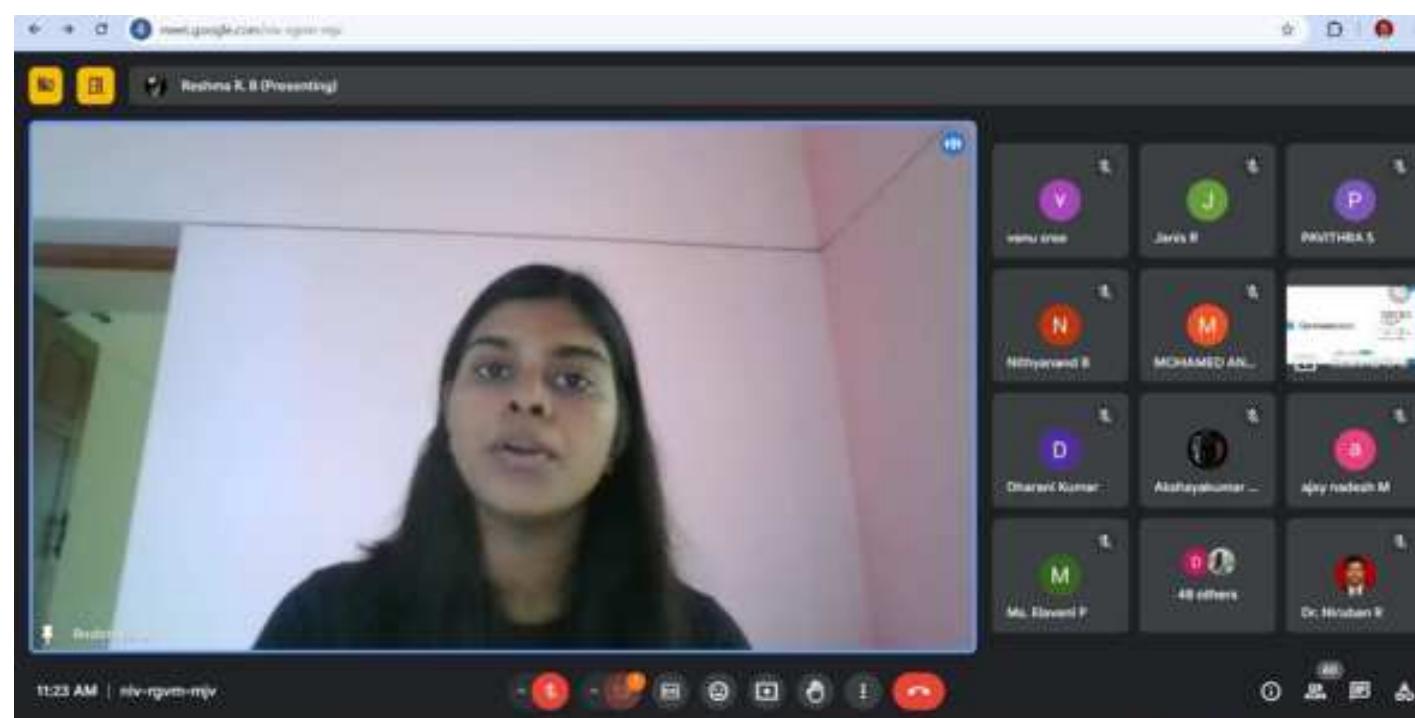
- **Alumni Activities**
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- **Industrial Interactions**
- **Professional Society Activities**
- **School Event**
- **NGO Activities**
- **Industrial Visit**
- **Student Achievements**
- **JETSIGNUM' 24 A National Level Technical Symposium**
- **Staff Achievements**

## ALUMNI ACTIVITIES



On 2nd August 2024, our esteemed alumnus Mr. Tharun Prasath J who was the recipient of our department Best Outgoing student Award for the batch 2019 – 2023. He had attended the GATE 2023 exam and had obtained a score of 728 out of 1000. He got admission for doing his M. Tech Programme specialization in Digital Signal Processing in Indian Institute of Space Science and Technology, Trivandrum, a prestigious organization under Ministry of Space, Government of India. Tharun provided an insightful talk for our III-year students regarding project competitions and encouraged them to start building projects on their own for participating in various national and international level competitions.

## ALUMNI ACTIVITIES



A valuable placement guidance session was conducted on August 18, 2024, by the Department of ECE to equip students with essential strategies for securing roles at Accenture. Reshma R B, a successful alumna of the 2018-2022 batch currently excelling as a Packaged App Development Analyst at Accenture, imparted her invaluable insights during the event.

## **PLACEMENT ACTIVITIES**



A placement talk on the topic "From Campus to Corporate" was conducted by Department of ECE for the third and final year ECE students by Ms. Evangeline Priyadharsini, Senior Project Coordinator at 360 Degree Cloud Technologies, Noida. The event saw active participation from around 80 students, who were keen to learn about the transition from academic life to the corporate world.

## **PLACEMENT ACTIVITIES**

### **Student Employability Enhancement Research Activities**



**The ECE department held a comprehensive SEERA program on August 22, 2024 to second year students. The program focused on improving students' English language skills, awareness of VLSI design and 5G technology, and career opportunities in these fields. Students were also introduced to coding modules in C, Java, and Python. The overall goal of the workshop was to motivate students and equip them with the necessary skills for success in the field of electronics and communication engineering.**

## **PLACEMENT ACTIVITIES**

### **Student Employability Enhancement Research Activities**



The ECE department conducted the SEERA program on August 16, 2024. The program focused on providing students with essential guidance for competitive exams, career preparation, and academic development. Key outcomes included: Guidance on IELTS/GRE ,Motivation for GATE preparation, Awareness about other core-related examinations ,Awareness regarding Smart India Hackathon and other national level student competitions, Strategies and skills to help students perform better in interviews, Motivating students to get better insight into the subject. These initiatives aim to equip students with the necessary skills and knowledge to excel in their academic pursuits and future careers.

## **PLACEMENT ACTIVITIES**

### **Student Employability Enhancement Research Activities**



**The ECE department conducted a SEERA program on August 7, 2024, for third-year students. The program focused on enhancing students' academic skills, technical proficiency, and career readiness. Key areas covered included general aptitude for GATE 2025, web development using CSS and HTML, time response analysis, and coding challenges through SkillRack. Students engaged in hands-on practice and learned from expert faculty to improve their understanding of these critical topics, preparing them for future academic pursuits and professional opportunities.**

## **INDUSTRY INTERACTION**



**On August 29, 2024, the ECE Department faculties have visited Renault Nissan Automotive India Private Limited, Oragadam, to discuss potential collaborations. The visit included a company overview, a tour of their facilities, and productive discussions with Renault Nissan's talent management and learning and development heads. The key areas of collaboration explored were student placements, internships, and joint research projects. Renault Nissan expressed enthusiasm for these initiatives, and the department will follow up to ensure their successful implementation.**

## **INDUSTRY INTERACTION**



**ECE Department faculties visited Data Patterns(India) Ltd., Chennai, to discuss establishing a Center of Excellence (CoE) on our campus.** During the meeting with Mr. Soundarapandian and Mr. Karthick, they have explored the potential objectives, structure, and implementation strategies for the CoE. The primary goals include fostering knowledge sharing and developing talent to enhance core placements. To achieve these objectives, we discussed allocating resources, providing lab facilities, and equipping the CoE with component-level evaluation boards to facilitate students in meeting industry requirements for design and product development.

## **INDUSTRY INTERACTION**



**Electronics and Communication Engineering** faculties recently visited Vaan Megam Networks and Vaayusastra, two prominent companies in the IITM Research Park, Chennai. Vaan Megam Networks, a leader in 5G services, offers test-as-a-service solutions for enterprises, telecom, and system integrators. Vaayusastra specializes in drone engineering and manufacturing. During their visit, our faculty had in-depth discussions with Mr. S.H. Muthukumar, the CEO, about potential collaborations, including the possibility of signing a Memorandum of Understanding (MoU), providing guidance to startups, and offering internship and industry-academia partnership opportunities.

## **INDUSTRY INTERACTION**



### **ECE Faculty Visit to Healthcare Technology Innovation Centre (HTIC)**

Our ECE faculty members recently visited the Healthcare Technology Innovation Centre (HTIC) at IITM Research Park, Chennai. HTIC, a collaborative venture between IIT Madras and the Government of India, is dedicated to developing cutting-edge healthcare technologies. During the visit, we engaged in fruitful discussions with Dr. Nabeel P M, Lead Research Scientist, to explore potential collaborations.

## INDUSTRY INTERACTION



**On 6th August 2024, Sathish Gurumoorthy, Enterprise Architect at HCLTech specializing in Aerospace, Rail, and Automotive had a discussion with principal for industry- institution collaboration with Electronics and communication engineering department.**

## Professional Society Activities



Our ECE department hosted a captivating guest lecture on August 5th, featuring Youghessh S, the visionary founder of Syasan's Career Analytics. Students gained invaluable insights into the future of coding, exploring the transformative power of AI, machine learning, cloud computing, and other cutting-edge technologies. The session delved into the ethical dimensions of AI and the exciting realms of AR/VR, blockchain, and quantum computing, equipping our students with the knowledge to shape tomorrow's digital landscape.

## Professional Society Activities



St. Joseph's College of Engineering's ECE department successfully conducted an IEEE Communications Society registration drive on August 6th for 2nd-year students. The event aimed to introduce students to the world of IEEE and the opportunities it offers. With the goal of empowering young minds and building future leaders, the drive encouraged students to explore the benefits of IEEE membership and participate in its various initiatives.

## Professional Society Activities



On August 6th, our ECE department successfully conducted an IEEE Communications Society and Antennas and Propagation Society event, "Electrogyre." The day-long competition, held from 9 AM to 4 PM, challenged students with a series of exciting rounds designed to test their knowledge and problem-solving abilities. This event provided a dynamic platform for students to showcase their skills and foster a spirit of collaboration and innovation within the ECE community.

## Professional Society Activities



On August 2, 2024, an insightful online seminar was conducted on Google Meet, focusing on the theme "Future-Proofing Industry 4.0: The Role of Machine Learning and SDN in Enhancing Network Security." The session was led by Dr. Neena Susan Shaji, a distinguished professor at BITS Pilani if Dubai campus, who shared valuable insights into the integration of machine learning and Software-Defined Networking (SDN) to fortify network security in the context of Industry 4.0.

## **Professional Society Activities**

### **IETE- Students Forum**



#### **The ECE Department's IETE Chapter Hosted a Freshers' Event**

The IETE chapter of the ECE department organized a successful event for second-year students to introduce them to the activities of IETE and encourage their participation. Twenty teams competed in a three-round quiz, with nine teams advancing to the final round. The final round focused on public speaking skills, and the judging panel evaluated presentations and content delivery.

## Professional Society Activities

### Optica Student Chapter



The OPTICA Student Chapter of Electronics and Communication Engineering Department organized an engaging outreach event at Tiaano Vidyashram CBSE School, Tambaram, Mudichur. This initiative aimed to introduce students of classes 9, 10, 11, and 12 to advanced engineering concepts through practical demonstrations and interactive projects. The event, held on 9th August 2024(Friday), was part of a broader effort to inspire students and provide hands-on learning experiences.

## **Professional Society Activities**

### **Optica Student Chapter**



**A placement talk on the topic "From Campus to Corporate" was conducted by Department of ECE for the third and final year ECE students by Ms. Evangeline Priyadharsini, Senior Project Coordinator at 360 Degree Cloud Technologies, Noida. The event saw active participation from around 80 students, who were keen to learn about the transition from academic life to the corporate world.**

## School Event



### **SJCE Shares Robotics Expertise with High School Students**

The Department of Electronics and Communication Engineering at St. Joseph's College of Engineering (SJCE) recently conducted a school event program for Class 11 and 12 students from All Angels Matriculation Higher Secondary School in Chennai. The event provided students with a comprehensive introduction to the field of Robotics, featuring interactive quizzes, hands-on project demonstrations, and expert guidance. The workshop was a resounding success, inspiring students to explore Robotics further and nurturing their interest in technology.

## **NGO Activities**



### **SJCE Students Make a Difference at Little Flocks Children Home**

**On August 29, 2024, the II ECE-A students from St. Joseph's College of Engineering embarked on a heartwarming social outreach program to Little Flocks Children Home in Kondamanhalam. The day was filled with joy, laughter, and learning as our students interacted with the children through various activities, including storytelling, games, and craft sessions. We also introduced them to the fascinating world of basic electronics, sparking their curiosity and inspiring them to explore science and technology. The visit was a memorable experience, leaving us with a renewed sense of purpose and the determination to continue making a positive impact on the community.**

## **NGO Activities**



### **ECE Students Brighten the Day at Dazzling Stone Orphanage**

**On August 29, 2024, ECE students from St. Joseph's College of Engineering visited Dazzling Stone Orphanage in Kundrathur. The day was filled with heartwarming interactions and unforgettable moments with the children. We were amazed by their talents, engaged in fun activities, and witnessed the dedication of the orphanage staff. Our visit was a reminder of the positive impact we can make on the lives of these children through small acts of kindness.**

## **Industrial Visit**



### **ECE Students Explore the Pondicherry Lighthouse!**

**On August 6, 2024, a group of 51 students from the ECE department visited the Pondicherry Lighthouse. The students were welcomed by the lighthouse authorities and received a comprehensive briefing on the lighthouse's history, purpose, and operations. They also enjoyed a guided tour, exploring the various navigational equipment and learning about the challenges of maintaining such a vital landmark.**

## **Industrial Visit**



**On August 7, 2024, a class of ECE students from SJCE visited the Pondicherry Lighthouse, where they were divided into smaller groups for effective interaction. They attended an introductory session and a guided tour, gaining insights into the operational principles and technology of lighthouses, including lighting and navigation. The students explored the historical significance and technological advancements of lighthouses, recognized their critical role in maritime safety and navigation, and learned about the maintenance procedures and challenges faced by lighthouse authorities. The visit provided a comprehensive understanding of lighthouse operations and their importance in ensuring safe maritime navigation**

## **Industrial Visit**



**ECE Final year students from St. Joseph's College of Engineering embarked on a fascinating journey to the Pondicherry Lighthouse on August 7, 2024. They have gained valuable insights into its operations, history, and significance in maritime navigation. They learned about the technology used, the challenges faced by lighthouse authorities, and the critical role lighthouses play in ensuring safe navigation. This educational experience enriched the students' understanding of maritime infrastructure and its importance.**

## **Industrial Visit**



**On August 12, 2024, third-year Electronics and Communication Engineering students from St. Joseph's College of Engineering embarked on an enriching educational excursion to the Indian Space Research Organisation (ISRO) facility in Sriharikota. The visit offered students a unique opportunity to witness firsthand the cutting-edge advancements in India's space program and to grasp the practical relevance of their academic pursuits.**

## **STUDENT ACHIEVEMENTS**



### **ECE Students Shine at INVENTIFY '24**

Nilopher Taj and Udhayamathi from the second-year ECE department brought home a third-place win and a cash prize of Rs. 3,000 at the INVENTIFY '24 - Hardware Innovation Challenge held on August 29-30, 2024. Their innovative project, "Renewable Battery from Agricultural Wastes," showcased their creativity and problem-solving skills. We congratulate Nilopher and Udhayamathi on their outstanding achievement!

## Students Achievements

The following students from ECE Department won competition conducted in various Engineering colleges.

S. NO	NAME	YEAR	NAME OF THE EVENT	ORGANIZED BY	POSITION	CASH PRIZE (Rs.)
1.	M.R. NANDHINI	II	BRAIN BUSTER	VELAMMAL ENGINEERING COLLEGE	I	1000
2.	R. ANANTH KUMAR	III	TECH QUIZ	MIT, ANNA UNIVERSITY	II	-
3.	J. JAISHREE	III	TECH GRILL	MIT, ANNA UNIVERSITY	II	-
4.	B. JOHNDE BRITTO	III	TECHINT	MIT, ANNA UNIVERSITY	II	-
5.	R. KARTHIK	III	TINK TEST	MIT, ANNA UNIVERSITY	I	500
6.	P. KAVIYA	III	TECHINT	MIT, ANNA UNIVERSITY	I	500
7.	S. LITHIN	III	TECH QUIZ	MIT, ANNA UNIVERSITY	I	500
8.	P. PRASANTH	III	TECH GRILL	MIT, ANNA UNIVERSITY	I	500

## **JETSIGNUM' 24**

### **A NATIONAL LEVEL TECHNICAL SYMPOSIUM**

The National Level Technical Symposium JETSIGNUM'24, held on August 31, 2024, was a resounding success. With 316 participants from 42 colleges, the event showcased the vibrant and innovative spirit of engineering students. The symposium featured a variety of technical events, where teams competed for prizes. The winners of the I, II, and III prizes received cash rewards of Rs. 3000, Rs. 2000, and Rs. 1000, respectively. The symposium provided a platform for students to showcase their skills, network with peers, and learn from industry experts. A total of Rs. 30,000 prize money was awarded.



## **JETSIGNUM' 24**

### **A NATIONAL LEVEL TECHNICAL SYMPOSIUM**

The CHAZON FEUD event at the National Level Technical Symposium JETSIGNUM'24 was a thrilling competition that tested the knowledge and skills of 38 teams. The event featured a variety of rounds, including written tests, debates, and presentations. After intense competition, the winning team, consisting of Santhanakrishnan V B, Gopisaran B, and Shiva Subhan S from MEPCO Schlenk Engineering College, Sivakasi, emerged victorious, securing the first prize of Rs. 3000. The second prize of Rs. 2000 went to the team from Sri Sairam Engineering College, while the third prize of Rs. 1000 was awarded to the team from Sree Sastha Institute of Engineering and Technology.



## **JETSIGNUM' 24**

### **A NATIONAL LEVEL TECHNICAL SYMPOSIUM**

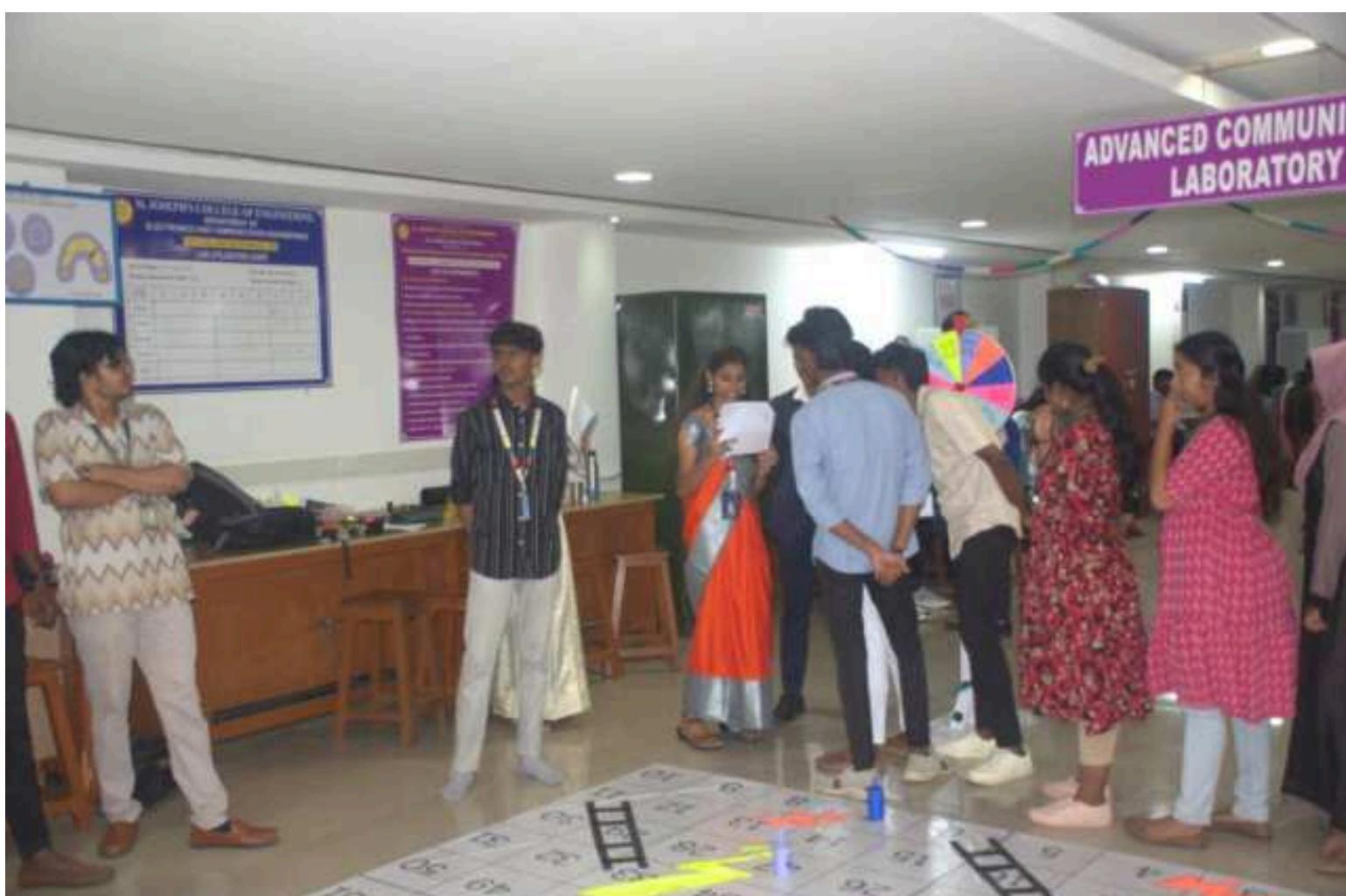
The CIPHER CHASE event at the National Level Technical Symposium JETSIGNUM'24 was a thrilling competition that tested the problem-solving and analytical skills of 47 teams. Participants were tasked with solving a series of challenging puzzles and riddles within a set time limit. After intense competition, the winning team, consisting of Lamisha A and Ratika Shree SS from Sri Sairam Institute of Technology, emerged victorious, securing the first prize of Rs. 3000. The second prize of Rs. 2000 went to the team from S.A. Engineering College, while the third prize of Rs. 1000 was awarded to the team from The New College.



## **JETSIGNUM' 24**

### **A NATIONAL LEVEL TECHNICAL SYMPOSIUM**

The RYZ-N-FALL event at the National Level Technical Symposium JETSIGNUM'24 was a thrilling competition that tested the problem-solving and analytical skills of 32 teams. Participants were tasked with solving a series of challenging puzzles and riddles within a set time limit. After intense competition, the winning team, consisting of Shiyam A, Mohammed Umar A, and Aprin Banu S from A.M. Jain College and Sri Sairam Engineering College, emerged victorious, securing the first prize of Rs. 3000. The second prize of Rs. 2000 went to the team from Sri Sairam Engineering College, while the third prize of Rs. 1000 was awarded to the team from Prince Shri Venkateshwara Arts and Science College.



## **JETSIGNUM' 24**

### **A NATIONAL LEVEL TECHNICAL SYMPOSIUM**

The NOVA X event at the National Level Technical Symposium JETSIGNUM'24 was a thrilling competition that tested the problem-solving and analytical skills of 31 teams. Participants were tasked with solving a series of challenging puzzles and riddles within a set time limit. After intense competition, the winning team, consisting of Hariharan D, Sandeep Kumar P, Dhanush K, and Nakul S from Sri Sairam Engineering College, emerged victorious, securing the first prize of Rs. 3000. The second prize of Rs. 2000 went to another team from Sri Sairam Engineering College, while the third prize of Rs. 1000 was awarded to a team from Sri Sairam Institute of Technology.



## JETSIGNUM' 24

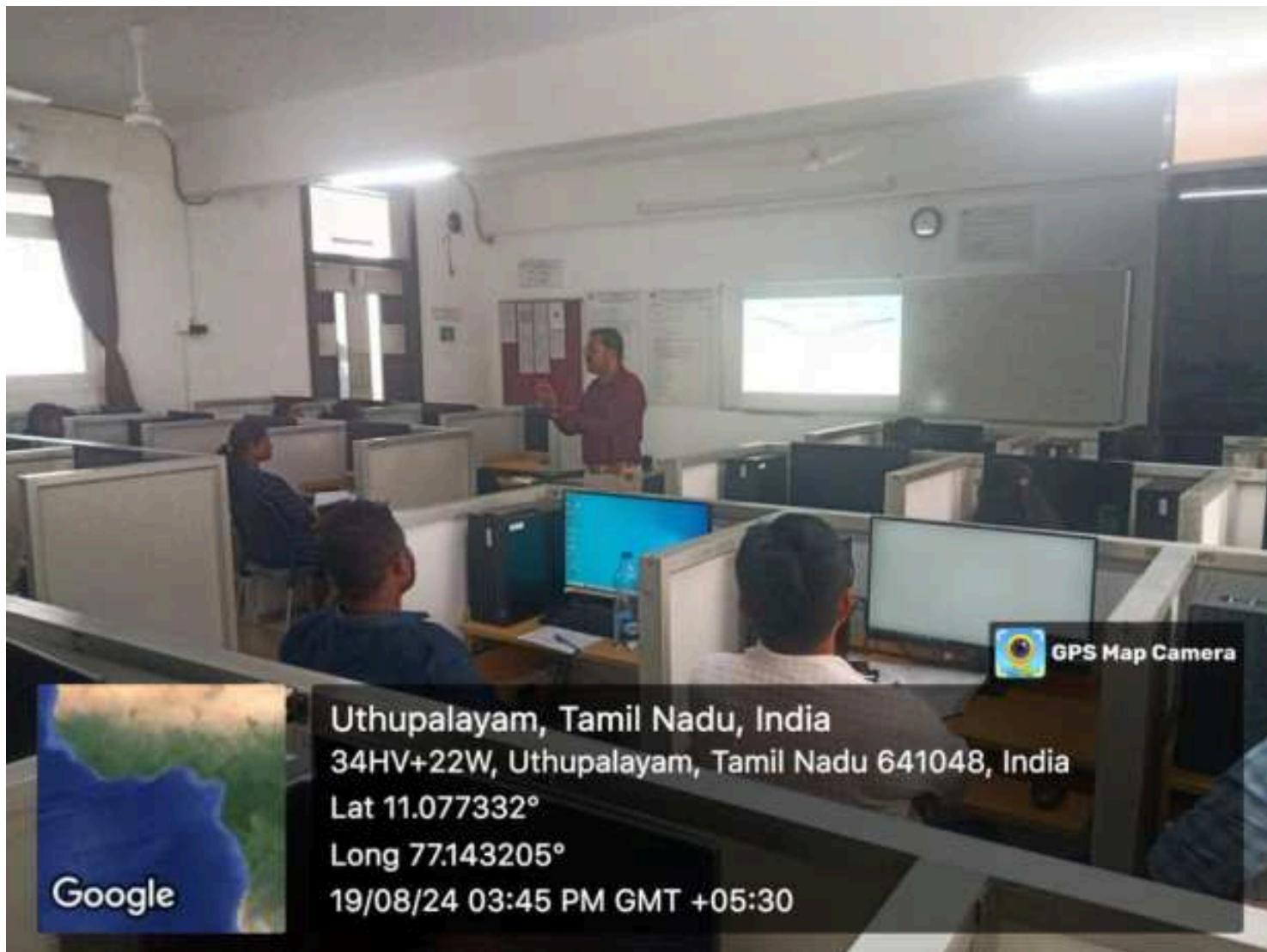
### A NATIONAL LEVEL TECHNICAL SYMPOSIUM

The AD-SURF event at the National Level Technical Symposium JETSIGNUM'24 was a thrilling competition that tested the problem-solving and analytical skills of 18 teams. Participants were tasked with solving a series of challenging puzzles and riddles within a set time limit. After intense competition, the winning team, consisting of Kavitha P, Subhiksha F, and Abhihake E from UCA College of Physiotherapy, Sri Sairam Engineering College, and St. Joseph's Institute of Technology, respectively, emerged victorious, securing the first prize of Rs. 3000. The second prize of Rs. 2000 went to a team from College of Fish Nutrition and Food Technology, while the third prize of Rs. 1000 was awarded to a team from LOYOLA ICAM College of Engineering.



## STAFF ACHIEVEMENTS

### OUTREACH PROGRAM



**Dr. M. Lingeshwaran**, an Assistant Professor in the Department of Electronics and Communication Engineering at St. Joseph's College of Engineering, Chennai, presented a talk on “Equivalent Circuit Modeling of Frequency Selective Surfaces” at a SERB-sponsored workshop on “From Theory to Practice: Millimeter Wave & THz Antennas for Modern Applications.” The workshop was held at KPR Institute of Engineering and Technology, Coimbatore, from August 19th to 23rd, 2024. Participants included undergraduate and graduate students, faculty members, and industry professionals.

## **STAFF ACHIEVEMENTS**

### **PATENTS PUBLISHED**

- 1. Mrs. R. Madhumitha Published a patent titled “Exploring Machine Learning approaches for automated Covid-19 detection and forecasting”.**
- 2. Mrs. E. Malarvizhi Published a patent titled “Intelligent Swarm Robotics System for autonomous inspection and maintenance of power transmission lines”.**
- 3. Mr G D Vignesh Published a patent titled “Multi-agent AI system for collaborative music composition and performance”.**
- 4. Dr. R. Niruban Published a patent titled “Multi-modal energy harvesting device utilizing ambient vibrations, thermal gradients, and radio frequency signals”.**

### **PUBLICATIONS**

**Dr. D. Lakshmi published a Journal titled” Hybrid model-based early diagnosis of esophageal disorders using convolutional neural network and refined logistic regression”, in EURASIP Journal on Image and Video Processing.**

## **Staff Achievements**

### **FDP ATTENDED**

- 1. Mrs. P. Thenmozhi attended an online FDP titled “Renewable Energy, Electric Vehicle Charging and Grid Integration: An Introduction” organised by Sri Sai Ram Institute of Technology from 12/08/24 to 17/8/24.**
- 2. Dr. S VINAYAGAPRIYA attended an online FDP titled” Statistical Analysis with Excel” organised by Research Foundation of India from 21.8.24 to 26.8.24.**
- 3. Dr. A. Simon Prabu attended an online FDP titled” Accelerating AI Driven Business Innovation: The Role of CPUs, GPUs, TPUs and NPUs” organised by SA Engineering College, Chennai from 16-08-2024 to 22-08-2024.**
- 4. Dr. S. Aghalya attended an online FDP titled” Industrial Applications of Embedded systems and IoT” organised by Rajalakshmi Engineering college, Chenai from 22.08.2024 to 28.08.2024.**

## JETSIGNUM'24

### *GLIMPSE OF JETSIGNUM'24*



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