



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

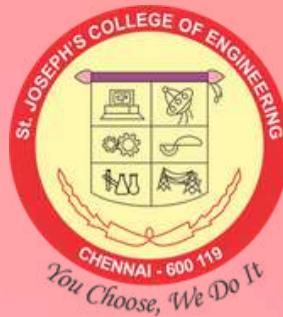
March 2025



**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

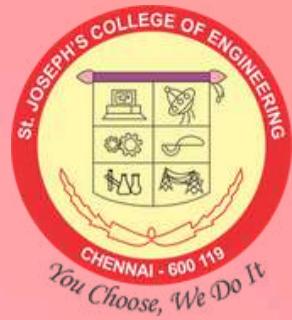
Core Competence: Inculcate innovative skills, research aptitude, team-work, ethical practices in students so as to meet expectations of the industry as well as society.

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 MARCH-2025**

- **Alumni Activities**
- **Placement Empowerment Program**
- **Workshop Organized**
- **Professional Society Activities**
- **ED Cell Activities**
- **Industrial Visit**
- **MoU**
- **Consultancy Project**
- **Student Achievements**
- **Staff Achievements**
- **College Day**
- **Sports Day**

## ALUMNI ACTIVITIES

Mr. Jayaseelan J  
(2018 – 2022)  
St.Joseph's College of Engineering  
Senior Project Engineer  
Soliton Technologies  
Chennai

Ms. Jaswanthika R  
(2020 – 2024)  
St.Joseph's College of Engineering  
Project Engineer  
Soliton Technologies  
Chennai

The image features two portraits side-by-side. On the left is Mr. Jayaseelan J, a young man with dark hair and a beard, wearing a light-colored plaid shirt. On the right is Ms. Jaswanthika R, a young woman with dark hair pulled back, wearing a white and black patterned top. Both are standing against a yellow background with a decorative floral pattern. Between them is the logo for Soliton, which consists of three blue wavy lines above the word "Soliton". Below each portrait is a caption. The caption for Mr. Jayaseelan J includes his name, years at the college, current employer, and location. The caption for Ms. Jaswanthika R includes her name, years at the college, current employer, and location.

A Pre-Placement Alumni Talk, featuring Mr. Jayaseelan J and Ms. Jaswanthika R from **Soliton Technologies**, provided valuable insights to third-year ECE students about Soliton's work environment. Students were enlightened with crucial preparation strategies for technical rounds and interviews, as well as the importance of networking for career growth. The alumni emphasized skills like embedded systems, hardware design, and signal processing, alongside soft skills such as confidence and problem-solving, equipping students with essential knowledge for placements, hackathons, and future success at Soliton.

## ALUMNI ACTIVITIES

### Mock Interview Marathon



Get ready to ace your interviews! The ECE Department recently supercharged the 2022-2026 batch with a **Mock Interview Marathon** on March 22nd, 2025. Students got a front-row seat to real-world interview scenarios, receiving invaluable feedback from our rockstar alumni currently shaping industries. This power-packed event wasn't just practice., it was a launchpad, equipping students with the confidence and skills to conquer upcoming job placements and industry expectations!

## PLACEMENT EMPOWERMENT PROGRAM



The PEP VLSI Design Centre, in collaboration with the Department of ECE, organized a **Techtalk Session on VLSI Design** “Driving Innovation: The Role of Semiconductors in Industry” featuring the highly respected Mr. Meiyappan Annamalai, our Elite Alumni batch of 2012-2016. His in-depth knowledge and approach to “Driving Innovation: The Role of Semiconductors in Industry” made this event a truly valuable experience for everyone involved.

## PLACEMENT EMPOWERMENT PROGRAM

### RTL to GDSII using Synopsys tools



The PEP VLSI Design Centre, in collaboration with the ECE Department, successfully concluded a five-day Employability Enhancement Course on **RTL to GDSII using Synopsys tools**, providing 89 students with hands-on training in RTL design, logic synthesis, floor and power planning, placement and routing, clock tree synthesis, and static timing analysis. Students gained practical experience with industry-standard tools like Design Compiler, ICC2, VCS, and Verdi, while exploring diverse design methodologies including SoC, ASSP, and ASIC approaches, thereby enhancing their employability in the VLSI industry.

## PLACEMENT EMPOWERMENT PROGRAM

### Beyond 5G to 6G: Shaping the Future of Telecom with AI and Generative AI



ECE Department offered an Employability Enhancement Course (EEC) titled "**Beyond 5G to 6G: Shaping the Future of Telecom with AI and Generative AI**" from March 17-22, 2025. This course, conducted in association with the Placement Empowerment Program Centre and TelcoLearn, focuses on AI-driven network solutions, hands-on deep learning models, generative AI and LLM applications, industry-ready capstone projects, and proficiency in AI/ML tools. Led by Mr. Sanjay Kumar, CEO and Founder of TelcoLearn, the program aims to equip students with practical skills in AI and machine learning for the telecom industry. The venue for the course is the Centre for Innovation at the Engineering Campus.

## Workshop Organised

A three-day workshop on "MATLAB for Image Processing and AI".



ECE Department in collaboration with **Mathworks and ARK Infosolutions Pvt. Ltd.**, hosted a three-day workshop on "MATLAB for Image Processing and AI" from March 25th to 27th, 2025. This workshop, aimed at second-year ECE students, delved into the fundamentals of MATLAB and Simulink, explored the latest technological trends, and provided hands-on experience in image processing and AI applications.

## Professional Society Activities



### IMD Visit Enlightens Students on Weather Radar Technology!

On March 10, 2025, a group of ECE students gained invaluable insights into electromagnetic wave interactions and radar meteorology during a visit to the **India Meteorological Department (IMD)** in Chennai. Experts, Dr. B. Arul Malar Kannan and Mr. Yash Garg, covered ground-based observation methods, the evolution of weather radars, and live Doppler radar operations. Students explored historical references, the troposphere, and technological advancements in weather radar systems. The IMD scientists shared operational aspects and challenges, providing a practical understanding of this crucial technology.

## Professional Society Activities

### OPTICA Student Chapter



We're excited to announce that the Optica Student Chapter within the Department of Electronics and Communication Engineering at St. Joseph's College of Engineering has been awarded an **annual fund of \$500!** This achievement highlights the dedication and hard work of our students and faculty in the field of optics. We look forward to seeing the innovative projects and initiatives this funding will support.

## Professional Society Activities

### OPTICA Student Chapter



**Eclipse Euphoria**, organized by the Department of Electronics and Communication Engineering in collaboration with the Optica Student Chapter at St. Joseph's College of Engineering, was an engaging event held on March 27, 2025. This event featured a blend of technical and non-technical activities, offering participants a comprehensive experience. It aimed to foster creativity, innovation, and camaraderie among students while enhancing their knowledge in the fields of optics and engineering.

## Professional Society Activities

### IEEE APS One-Day Workshop on "Antennas for IoT, 5G & Beyond"



The Department of Electronics and Communication Engineering, in collaboration with the **IEEE Antenna Propagation Society (Madras Section)**, successfully conducted a one-day workshop on "Antennas for IoT, 5G & Beyond" on March 21, 2025, at St. Joseph's College of Engineering in Chennai. The workshop provided participants with an in-depth exploration of cutting-edge antenna technology, focusing on design, optimization, and practical applications within IoT and 5G systems. The event aimed to equip attendees with essential knowledge for addressing the challenges and innovations in modern wireless communication.

## ED Cell Activities



ECE students from our college distinguished themselves at the THUNIVU 1.0 event, organized by Startup TN and NPR College of Engineering, by being the **only student team to reach the finals**, amidst a competition of approximately 100 teams, including established startups. The team, comprising R S Akash (III ECE), Hasan Dhanish (II ECE), Manoj N (II ECE), and Aathavan Valanarasu L V (II ECE), presented their **innovative startup theme**, "NIYA THERAPY - Enhancing Autism Therapy using VR," showcasing their talent and potential in technological innovation.

## ED Cell Activities



On February 28, 2025, students from the ED Cell of the ECE Department gained invaluable insights into entrepreneurship. A dynamic session led by Mr. Naveed Ahamed, Southern Regional Head of the **Wadhwani Foundation**, highlighted the crucial role of entrepreneurship in economic growth and career development. Celebrating 25 years of empowering entrepreneurs, the foundation emphasized key skills like creativity, problem-solving, and resilience. Students explored startup opportunities, government initiatives, and strategies for overcoming business challenges.

## ED Cell Activities



On 26th March 2025 , a group of fifty II year ECE students visited the **Incubation Cell at IIT Research Park , Chennai**. The visit aimed to provide insights into the dynamic startup ecosystem, focusing on innovation, entrepreneurship, and technology commercialization. Students interacted with entrepreneurs, mentors, and industry experts, gaining knowledge about business model development, funding processes, and real-world applications of emerging technologies. The exposure to cutting-edge projects and entrepreneurial challenges inspired fresh ideas and practical perspectives, making the visit a valuable learning experience.

## ED Cell Activities



The **45-hour Startup Practice Venture Creation Internship**, organized by the **Centre for Entrepreneur Development (CED)**, Anna University in collaboration with Wadhwani Foundation, aimed to provide II and III-year ECE students with hands-on experience in startup creation spanning from **25th Feb to 29th March 2025**. A batch of 40 students participated in learning the practical aspects of entrepreneurship, including idea generation, business planning, and market research.

## Industrial Visit



ECE Department organized a highly informative industrial visit to **Neyveli Lignite Corporation Limited (NLCIL)** from March 10-14, 2025. Over 175 third-year students and 6 faculty members gained firsthand experience in lignite mining and power generation. The visit included observing open-cast mining operations at Coal Mine 1, understanding the heavy machinery involved, and discussing environmental challenges. Students also learned about NLCIL's afforestation efforts for ecological balance and explored the historical significance of lignite mining at the NLCIL museum. This experience provided valuable insights into sustainable industrial practices and NLCIL's contribution to India's energy sector.

## MoU

Memorandum of Understanding (MoU) Signed with Wadhwani Foundation to Enhance Collaboration in High-Impact Education, Entrepreneurship, and Skill Development Solutions.

### MEMORANDUM OF UNDERSTANDING

SHAPING FUTURE ENTREPRENEURS



Department of Electronics and Communication Engineering (ECE), has entered into a **Memorandum of Understanding (MoU)** with the **Wadhwani Foundation**. This collaboration aims to enhance high-impact education, entrepreneurship, and skill development solutions. The partnership focuses on "Shaping Future Entrepreneurs" and reflects the college's commitment to "Quality Education" alongside "Originality, Innovation, and Infrastructure." This MoU signifies a significant step in providing students with opportunities to develop entrepreneurial skills and access resources provided by the Wadhwani Foundation.

## MoU

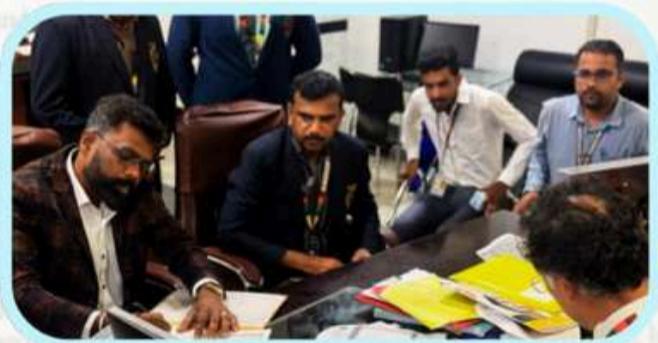
Memorandum of Understanding (MoU) Signed with Pumo Technovation to Enhance Collaboration in Software Development, Hardware Automation and Skill Development.

EMPOWERING INNOVATION AND EXCELLENCE

### MEMORANDUM OF UNDERSTANDING



PUMO TECHNOVATION  
INDIA'S ADVANCED TECH CAMPUS



ECE Department has signed an **MoU with “ Pumo Technovation ”** in the presence of Mr. Muthu Kumar - Director , Pumo Technovation. This Collaboration aims to bridge the gap between academic knowledge and industrial opportunities , equipping young engineers with the tools, mentorship and resources needed for a dynamic ecosystem of innovation and technological advancements in hardware and software based product development.

## Consultancy Project



A **consultancy project on drone-based environmental monitoring and disaster management** was undertaken by our ECE faculty team for Advantech Instruments and Services. The team focused on applying drone technology for enhanced environmental monitoring and disaster management. The collaboration aimed to develop innovative solutions using advanced drone capabilities. The project lasted for four months from December 2024 to March 2025, with a sanctioned budget of Rs 80,000.

## STUDENT ACHIEVEMENTS



Rajapriya Dharshini and her team from III ECE, who emerged victorious at the Infineon Launchpad Hackathon! Their exceptional VLSI skills were on full display with their project, "Build a SOC: The Tiny MCU," which earned them the top **prize of Rs. 15,000/-**. This national-level 36-hour event provided a platform for students nationwide to demonstrate their engineering abilities and creativity, and "Team Y's" victory reinforces Department's commitment to fostering a culture of innovation and excellence.

## STUDENT ACHIEVEMENTS



**Congratulations to Cephas Coots S V, a second-year ECE student, who received a Certificate of Excellence for his outstanding performance in the "DROPLET 2025" program organized by the India Meteorological Department! This intensive program focused on Doppler Weather Radar technology, and Cephas's dedication and enthusiasm earned him well-deserved recognition. This achievement highlights the caliber of students in our ECE program and their pursuit of excellence.**

## STUDENT ACHIEVEMENTS



Kudos to Cephas Coots S V and Anushri Raja, both second-year ECE students, for their active participation in the recent DROPLET 2025 program! Hosted by the **India Meteorological Department**, this intensive workshop provided a deep dive into the world of Doppler Weather Radar (DWR) technology. Cephas and Anushri's engagement in DROPLET 2025 demonstrates their commitment to exploring cutting-edge technologies and expanding their knowledge beyond the classroom.

## STUDENT ACHIEVEMENTS



II Year Students from ECE Department won the **first prize of Rs 10,000 at the EmpowerTech National Hackathon 2025** held at Vellore Institute of Technology, Chennai. The winning team, comprising Swathi M, Vignesh R, Sangeeth Kumar L M, and CS Steve Christian Samuel, developed a "Writing Assistant for People with Specific Learning Disability (SLD)," mentored by Dr. R. Niruban and Dr. D. Lakshmi

## STUDENT ACHIEVEMENTS



TEAM MEMBERS - II ECE

Hemavarshini R  
Abinaya B S  
Aishwarya R

MENTORS

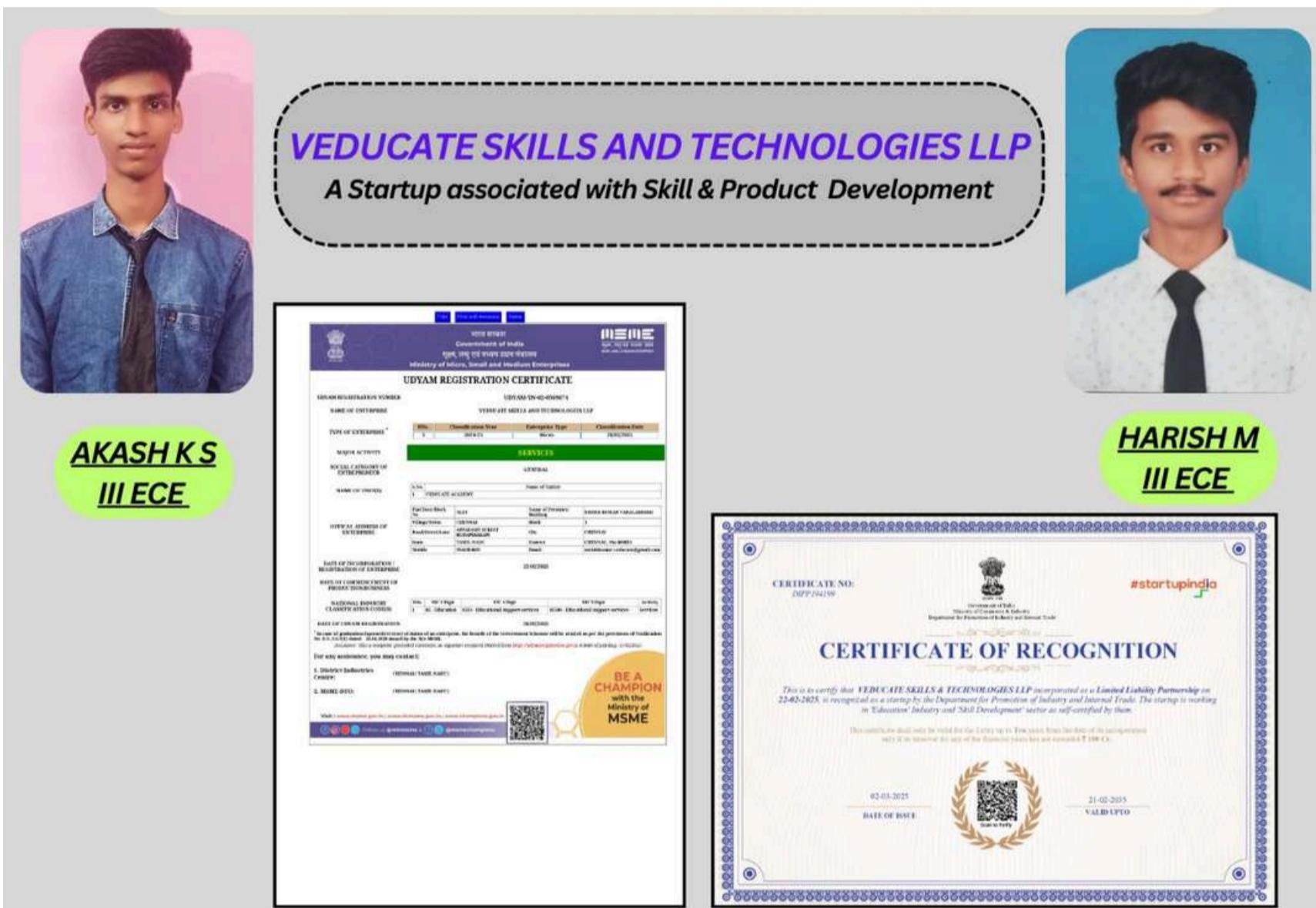
Dr.D.Sumithra Sofia  
Mr.G.D.Vignesh

₹ 10,000  
CASH PRIZE

II Year students of ECE Department, under the team name "BRAIN DRAINERS," won a **special prize of ₹10,000** at the TNWISE-2025 Hackathon, Tamil Nadu's largest hackathon for women in science and engineering, held at KIT-CBE. Hemavarshini R, Abinaya B S, and Aishwarya R developed a project on "Virtual Reality for Autism Spectrum Disorder," mentored by Dr. D. Sumithra Sofia and Mr. G.D. Vignesh. This achievement highlights the college's commitment to fostering innovation and supporting women in STEM, in collaboration with TANCAM and TIDCO.

## STUDENT ACHIEVEMENTS

### Studentpreneur Startup Synergy Ventures



### STARTUP REGISTRATION!!!

Our third-year ECE students, K.S. Akash and M. Harish, registered their startup, "V Educate Skills and Technologies LLP," on March 2, 2025. The startup focuses on skill and product development

## **STUDENT ACHIEVEMENTS**

**Sai Ananya R of III Year ECE won first prize with a cash award of Rs. 1000 in Creative Writing(English).**

**Yuthika A of III Year ECE won Second prize with a cash award of Rs.600 in Oratorical (English) and Second prize with a cash award of Rs.600 Oratorical (Tamil).**

**Kaviarasu S, Renisha V, Indran B of III Year ECE won first price in Circuit Debugging at SRM Institute of Science and Technology .**

**The project ideas of Iankumaran R,Bharat Mahadevan R, Deepak B and Akash K of II Year ECE were recognized as Best Idea Presenters at the National Level Virtual Innovate Hackathon organized by EMATIX Embedded & Software Solutions Inc.**

## STAFF ACHIEVEMENTS

**Naan Mudhavan Niral Thiruvizha'25**



The ECE department is celebrating a significant achievement at the Naan Mudhavan Niral Thiruvizha'25, with **five projects among the top 1000 selected for a Rs. 10,000 project development fund**. Heartfelt congratulations to the dedicated project guides, Dr. Vinayaga Priya, Mrs. M. Angelin Ponrani, Dr. Simon Prabhu, and the collaborative team of Mr. Lingeshwaran & Dr. Rajeshkannan, for their exceptional guidance and contribution to this success.

## STAFF ACHIEVEMENTS

### OUTREACH PROGRAM



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 hands-on training on "Harnessing the Power of Open Source Frameworks for 5G Test Bed Deployment" at the following venues:

1. SRK Institute of Technology, Vijayawada, Andhra Pradesh.
2. Sri Venkateswara College of Engineering Technology, Chittoor, Andhra Pradesh.

## STAFF ACHIEVEMENTS

### OUTREACH PROGRAM



**Mr. M. Lingeshwaran, Assistant Professor/ECE, served as a Resource Person in the workshop on Next Generation Mobile Communication and delivered a session on “Harnessing the Power of Open-Source Frameworks for 5G Test Bed Deployment” along with hands-on training on “5G Physical Layer with MATLAB 5G Toolbox,” organized by the Department of Electronics and Communication Engineering at Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai 603110**

## **STAFF ACHIEVEMENTS**

### **PUBLICATIONS**

- 1. Dr.S.AGHALYA, AASHIKA D M have received the award for the Best Paper entitled “NEUROFUSION ADVANCING BRAIN TUMOR DIAGNOSIS USING CNN ARCHITECTURES” presented at International Conference on Innovation in Computing and Communication' 25 (ICICC'25) organized by the Department of Electronics and Communication Engineering at Velammal College of Engineering and Technology (Autonomous), Madurai during 04-03-2025 & 05-03-2025.**
- 2.ATHA P., KELCI A and JOSHIKA G have presented a paper entitled LOW POWER HEART ABNORMAL IMPACTS ANALYSIS USING PHYSIOLOGICAL SIGNALS in 3rd International Conference on Innovative Materials and Smart Solutions for Sustainability (ICIMSSS-2024), 27 & 28 December 2024.**
- 3. LATHA P., NITHYANAND B and LINGESHWARAN J have presented a paper entitled GDI - Based Low Latency Sense Amplifier Design in International Conference on Information and Communication Systems (ICICS-2025), 4th & 5th Feb 2025.**
- 4. GUHAN V ; NISHANTH S ; P LATHA have presented a paper entitled Railway Safety Enhancement System in International Conference on Automation and Machine Learning using Robots and Artificial Intelligence Methods (AMLURAIM), 12 & 13 February 2025**
- 5. Salomi Margret M and Dr. P. Latha have presented a paper entitled Design and Analysis of 4x4 Wallace Tree Multiplier using Adder Circuit by Minimizing Partial Product Generation using Xilinx ISE Simulator in International Conference on Innovation in Computing and Communication (ICICC-2025), 4th – 5th March 2025**
- 6. GD. Vignesh , Assistant Professor, Department of ECE has been awarded as the "BEST PAPER PRESENTER" for the Paper entitled “Reliable Multihop Routing and Congestion Aware Chicken Swarm Optimization in Vehicular Ad-Hoc Network” on 3rd International Conference on Integrated Circuits and Communication Systems (ICICACS - 2025) organized by Department of Electronics and Communication Engineering, H.K.E. SOCIETY'S Sir M Visvesvaraya College of Engineering, Raichur during 21st & 22nd February 2025.**

## **Staff Achievements**

### **FDP ATTENDED**

**M.Angelin Ponrani, Assistant Professor , Department of ECE has completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) organized by Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai during FEB 17-27, 2025.**

**Vignesh GD from St Joseph's College of Engineering has completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) organized by Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai during FEB 17-27, 2025.**

## **Staff Achievements**

### **PATENT PUBLISHED**

**Dr. B Victoria Jancee , Associate Professor, Department of ECE**  
Published a patent titled “ Intelligent Lymphedema Management Smart Compression Garments Enhanced with IOT sensors and Machine Learning” and “Optimizing Industrial Plants Using Iot-Enabled Condition Monitoring and Asset Tracking With Wireless Sensor Networks”.

**Dr.J.Sivakumar, Associate Professor, Department of ECE**  
Published a patent titled “Smart Healthcare System for Early Disease Detection Using Machine Learning”.

## COLLEGE DAY CELEBRATIONS

ECE III year students have achieved a remarkable feat by winning four prizes in college day celebrations.



## FLASHBACK FLYERS

PANJALI  
SABATHAM



## COLLEGE DAY CELEBRATIONS



BEAT  
BREAKERS

BLACK  
SQUARD



## COLLEGE DAY CELEBRATIONS

ECE II year students have achieved a remarkable feat by winning three prizes in college day celebrations.



VINTAGE VIBES

TRIVIBE



MAANAADA  
MAYILAADA

## SPORTS DAY CELEBRATIONS

ECE III year students have achieved a remarkable feat by winning three prizes in sports day celebrations



**Basketball -  
Runners Up**

**Football -  
Runners Up**



**kho kho -  
Runners Up**

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