



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

December 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 DECEMBER-2024

- **Alumni Activities**
- **Professional Society Activities**
- **Student Achievements**
- **Staff Achievements**

ALUMNI ACTIVITIES

TURNING SETBACKS INTO COMEBACKS: THE TIME IS NOW



MR. SHELTON MAHARESH.S

BATCH : 2006 - 2010

SENIOR AI - DATA SCIENCE MANAGER & DATA SCIENTIST

ADIDAS

AUSTRIA, EUROPE



11:30 AM TO 1:00 PM



17.12.2024



THIRD YEAR ONLY



AV HALL, LIBRARY

From Setbacks into Comebacks: Mr. Maharesh's Inspiring Journey

Mr. Maharesh, Senior AI - Data science Manager and Data Scientist, Alumni from the Batch of 2006-2010, shares his incredible journey of resilience, perseverance, and continuous learning. He emphasizes the power of turning setbacks into opportunities and learning from failures – crucial skills that helped him navigate challenges in his career, ultimately leading him to his current role at Adidas, one of the world's leading sportswear companies.

ALUMNI ACTIVITIES

Turning Setbacks into Comebacks: A Journey of Resilience



Perseverance is Key: Mr. Maharesh underscored the significance of not giving up in the face of obstacles. He shared several personal stories where initial failures turned out to be crucial learning experiences, ultimately leading to breakthroughs in his career.

The Power of Failure: According to Mr. Maharesh, failure should never be feared but embraced as a stepping stone to success. He encouraged students to use failure as a tool for growth, not as a reason to retreat.

Continuous Learning: With rapid advancements in AI and data science, staying updated with new technologies, tools, and methodologies is critical. He highlighted the importance of self-learning, taking online courses, attending seminars, and networking within the industry to stay relevant.

Determination in the Desired Domain: In his speech, Mr. Maharesh stressed that passion and determination in the chosen domain are pivotal in achieving career success. His message resonated with the students, motivating them to remain committed to their academic and professional pursuits.

ALUMNI ACTIVITIES

Turning Setbacks into Comebacks: A Journey of Resilience



The session ended with an engaging Q&A, where students eagerly posed questions about career planning, overcoming challenges, and navigating the job market. Mr. Maharesh answered each query with clarity and enthusiasm, offering practical advice and thoughtful insights that inspired the students.

His words left a lasting impression on the audience, providing them with both inspiration and a clearer vision for their career paths. Many students expressed how much they valued the opportunity to interact with someone who had walked the path they were about to embark on and come out successful.

The event was a resounding success, leaving the students motivated and empowered to face their challenges head-on, with a renewed sense of determination to make the most of their time at college and beyond.

Professional Society Activities

Ocean Tech Exploration at NIOT



IEEE Members Dive Deep: A successful one-day workshop on "National Institute of Ocean Technology (NIOT)" was held on December 19th at NIOT, Pallikaranai, Chennai. The event, tailored for 3rd and 4th-year students, provided valuable insights into ocean technology and its modern engineering applications, combining technical knowledge with hands-on learning."

Professional Society Activities

Workshop at NIOT - Glimpse



The workshop offered a comprehensive exploration of cutting-edge ocean technologies, encompassing key areas such as ocean-based renewable energy systems, advanced underwater communication systems, and innovative coastal engineering solutions. Participants gained valuable insights into the potential of harnessing ocean energy sources like waves and tides for sustainable power generation, explored the latest advancements in underwater communication technologies crucial for underwater exploration and data transmission, and examined innovative approaches to coastal protection and sustainable development.

Professional Society Activities

Workshop at NIOT - Glimpse



Primarily for IEEE members, the workshop fostered a strong emphasis on industry-academia collaboration. Participants gained firsthand experience with cutting-edge technologies, exploring potential research areas and career paths within the ocean engineering domain. This collaborative initiative not only equipped students with valuable knowledge and practical skills but also inspired them to pursue innovative solutions in this dynamic field. The successful workshop concluded at 12:00 Noon, reaffirming the college's dedication to providing students with high-quality learning experiences that bridge the gap between academia and industry.

STUDENT ACHIEVEMENTS

Internship at National Institute of Ocean Technology (NIOT)



Our III ECE students: Pranav J, Keertana Natarajan, and Patrick Cruz Peeris J are successfully completed their **Internship at NIOT, Chennai**. During their tenure, they designed and tested the Intelligent Depth Sensor 8CB4000-I of the Tsunami BPR System . Their efforts were highly appreciated by Dr. Arul Muthiah, Scientist, Ocean Observation System , NIOT. Furthermore, he has expressed his willingness to continue collaborating with our students on this project.

STUDENT ACHIEVEMENTS

Internship at DADB - German Academy of Digital Education

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in association with

PLACEMENT EMPOWERMENT PROGRAM CENTRE
5G/6G TECHNOLOGY INNOVATION CENTRE

DA DB German Academy of Digital Education

5G Application Engineer (Intern)
DADB - German Academy of Digital Education


SHARON ROSE J


JOSIKA V S


PRINCY S


NARASIMAN D


HENSLIN STUWARD K

BATCH: 2021 - 2025

Monthly Stipend: ₹ 20,000

Internship Duration: 4 Months

Five of our Final-Year students have secured a 4 - Month Internship as 5G Application Engineers at **DADB - German Academy of Digital Education**, with a **stipend of ₹ 20,000 per Month** for each individual. The aforementioned students have also received access to the Telecom Sector Skill Council (TSSC) recognized "5G Communication Technology" certification course worth ₹ 20,000 for their upskilling.

STUDENT ACHIEVEMENTS

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Since 1994 *

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CONGRATULATIONS



JOHANN NITIN G
**TECHNICAL SUPPORT
ENGINEER**

ZOHO

**CTC
5.6 lakhs
per Annum**

**Batch
2021-2025**

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**The Choice of
Disciplined Toppers**

Johann Nitin G, a Final Year ECE student, has secured a promising career as a **Technical Support Engineer at ZOHO** with a **CTC of 5.6 Lakhs Per Annum**. In this role, Johann will be responsible for providing technical assistance to customers, troubleshooting software issues, and ensuring customer satisfaction. He will be a valuable asset to the ZOHO team, contributing his technical expertise and problem-solving skills to support their growing customer base.

STUDENT ACHIEVEMENTS

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CONGRATULATIONS



BENITA JAEL J
COGNIZANT
GenC



Batch
2021-2025

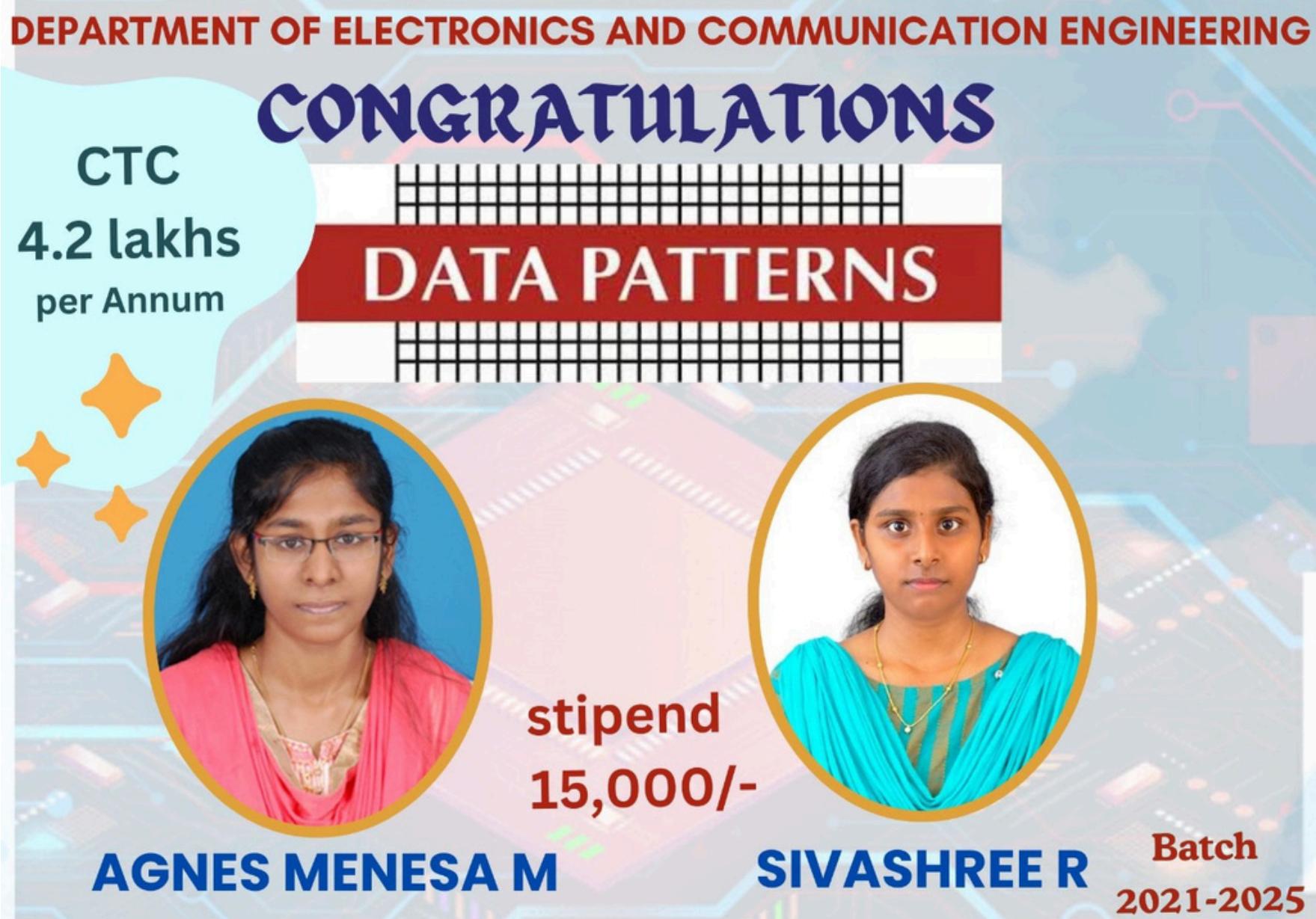
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Benita Jael J (Batch 2021-2025) has achieved a significant milestone by securing a placement at **Cognizant's GenC program with a CTC of 4 lakhs per annum**. The GenC program provides a comprehensive training and development experience for fresh graduates, equipping them with the necessary skills to excel in their roles within the IT industry. This program will provide Benita with valuable industry exposure, mentorship opportunities, and a strong foundation for a successful career at Cognizant.

STUDENT ACHIEVEMENTS



Congratulations to Agnes Menesa M and Sivashree (Final year ECE) on their successful placements at **Data Patterns (India) Ltd.**!

Following a highly successful internship with a **stipend of ₹15,000**, both Agnes and Sivashree have secured fantastic offers with a **CTC of ₹4.2 Lakhs per annum**. Data Patterns is a leading player in the defense and aerospace sectors, known for its cutting-edge technology and innovative solutions. This placement provides Agnes and Sivashree with an excellent opportunity to contribute to critical national projects and embark on rewarding careers in a dynamic and challenging industry.

STUDENT ACHIEVEMENTS

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CONGRATULATIONS



VAISHNAVI S
WNS Vuram

WNS VUram

CTC
5.5 lakhs
per Annum

Batch
2021-2025

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Vaishnavi S, a Final year ECE student, has secured a placement at **WNS Vuram** with a **CTC of ₹5.5 Lakhs per annum**. WNS Vuram is a global leader in business process management (BPM) and business transformation services. Vaishnavi's role will likely involve working on projects related to process automation, data analytics, or technology consulting, contributing to the company's mission of driving digital transformation for its clients.

STUDENT ACHIEVEMENTS

SIH Finalist & Mentor: The Journey of Charan Velavan



The image is a digital certificate or congratulatory card for Charan Velavan. At the top, it features the logo of the Department of Electronics & Communication Engineering. Below that, there are logos for the Ministry of Education, Smart India Hackathon 2024, and MoE's Innovation Cell (Government of India). The central text reads "#SmartIndiaHackathon2024 World's Biggest Open Innovation Model". Below this, large red text says "CONGRATULATIONS" and blue text says "SIH 2024 Design Mentor". To the left, it says "Ministry of Education's Innovation Cell (MIC) Alumni". To the right, it says "Nodal Centre: KCG College of Technology". In the center is a portrait photo of Charan Velavan, described as an "IV Year ECE Student".

Charan Velavan from IV Year ECE has served as the "**SIH 2024 Design Mentor**" in the Smart India Hackathon 2024 at the nodal centre: KCG College of Technology. He is the winner of the Nokia Bangalore University Collaboration (NBUC) Ideathon 2024 and the AICTE ARM Inventors Challenge 2023. He is also a two-time SIH finalist (2023 & 2022).

STAFF ACHIEVEMENTS

OUTREACH PROGRAM



Interaction with industrial experts by our ECE Industry Coordinator Dr. D. Lakshmi at Electronics For You (EFY) Expo , Chennai Nandambakkam Trade Centre.

The **Electronics For You (EFY) Expo** is a premier electronics and embedded systems exhibition and conference held annually in Chennai, India. It brings together leading industry players, academic institutions, and technology enthusiasts to showcase the latest advancements in electronics, embedded systems, and related technologies.

STAFF ACHIEVEMENTS

OUTREACH PROGRAM



During the expo, Around 90 companies participated in this expo. Exhibitors include suppliers of core electronics components, test and measurement solutions, manufacturing equipment and design houses. It also highlighted advancements in automotive electronics, EVs, Industry 4.0, AI and IIoT.

Dr. D. Lakshmi, the ECE Industry Coordinator, actively engaged with various industrial experts, including representatives from leading electronics companies, research institutions, and government agencies. These interactions provided valuable insights into the latest industry trends, emerging technologies, and career opportunities in the field of electronics and communication engineering.

Dr. Lakshmi also explored potential collaborations between the industry and the ECE department, such as industry-sponsored projects, internships, guest lectures, and joint research initiatives. These interactions fostered a strong network between the department and the industry, benefiting both students and faculty members.

STAFF ACHIEVEMENTS

OUTREACH PROGRAM



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5G/6G TECHNOLOGY INNOVATION CENTRE



Dr. A. M. Balamurugan, Associate Professor/ECE and Mr. M. Lingeshwaran, Assistant Professor/ECE, served as 5G consultants 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 Mother Theresa Institute of Engineering and Technology, Palamaner, Andhra Pradesh.

STAFF ACHIEVEMENTS

AICTE-Sponsored QIP Certification



Mrs. G. Anitha, Assistant Professor from the Department of ECE, successfully completed the AICTE-PG degree Quality Improvement Program in Machine Learning, organized by the **All India Council for Technical Education (AICTE) in collaboration with the Indian Institute of Information Technology, Surat (IIIT Surat)**, from June 30, 2024, to December 20, 2024. This program provided her with in-depth knowledge and hands-on training in core machine learning concepts, including supervised learning, unsupervised learning, deep learning, and natural language processing.

Through a combination of theoretical lectures, practical exercises, and industry-relevant case studies, the program equipped Mrs. Anitha with the necessary skills to effectively integrate machine learning concepts into her teaching and research activities. This significant achievement will enable her to provide students with a more comprehensive and up-to-date understanding of this rapidly evolving field, fostering innovation and preparing them for successful careers in the ever-changing technological landscape.

STAFF ACHIEVEMENTS

AICTE-Sponsored QIP Certification



Ms. P. Elaveni, Assistant Professor from the Department of ECE, has achieved a significant milestone by completing the prestigious AICTE Sponsored QIP PG Certification in "Machine Learning" from the Indian Institute of Technology, Bangalore. This program, renowned for its academic rigor and industry relevance, provided Ms. Elaveni with in-depth knowledge and practical skills in various machine learning domains, including supervised learning, unsupervised learning, and deep learning.

The comprehensive curriculum, delivered by eminent faculty from IIT Bangalore, equipped her with the necessary tools and expertise to effectively integrate machine learning concepts into her teaching and research activities within the ECE department. Notably, **Ms. Elaveni received her course completion certificate from the Hon'ble AICTE Chairman, Prof. TG Sitharam**, a testament to the high regard for this program and the significance of Ms. Elaveni's achievement. This professional development will undoubtedly enhance her teaching methodologies, inspire students, and contribute to the department's overall academic growth.

STAFF ACHIEVEMENTS

PUBLICATIONS

Vignesh, G.D, Assistant Professor, Department of ECE” High capacity performance signature of micro optical mechanical system switches based fiber Bragg grating scheme implementation in optical WDM data routed center networks”, Journal of Optical Communications, Vol No 46 Issue No 1 Page No 101-113, (December 2024),

Dr. P. Latha, Associate Professor, Department of ECE, has Published a Journal titled “Low-Profile Slotted Notch MIMO Antenna with Low Envelope Correlation Coefficient”, Microwave Journal, Volume 67, Issue 9, SEP 2024.

Mrs. M. Angelin Ponrani, Assistant Professor, Electronics and Communication Engineering has presented a paper titled “Enhancing UAV Communication performance through GCN - Driven Channel Adaptation” in International Conference on sustainable Communication Networks and application held during December 11- 13.2024.

Dr. J. Sivakumar, Associate Professor, Department of ECE has presented a paper ” Breast Cancer Detection Using Watershed and Back Propagation Algorithm”, in 5th International Conference on Innovative Trends in Information Technology(ICITIIT) October 2024.

STAFF ACHIEVEMENTS

PUBLICATIONS

Ramachandra Reddy K,” Enhancing earth target classification in hyperspectral imagery using graph convolutional neural networks and graph-regularized sparse coding”, Remote Sensing Applications: Society and Environment, Vol.37, Jan 2025

Mr. G.D Vignesh, Assistant Professor, Department of ECE published ” Revolutionizing Urban Mobility: A Comprehensive Exploration of IoT-Based Smart Parking Systems”, Lecture Notes in Networks and Systems, December 2024,

Staff Achievements

FDP ATTENDED

Dr. R. Niruban, Associate Professor, Department of ECE has successfully completed Advanced ATAL Training Program on “Exploring Advanced Data Science Tools Techniques and Trends” from 09/12/2024 to 14/12/2024 Conducted by Anand Institute of Higher Technology.

Dr.G. Sivagurunathan Associate Professor, Department of ECE has successfully completed Advanced ATAL Training Program on “Integrating Machine Learning and Deep Learning in Real-time IoT Systems” from 02/12/24 to 07/12/24 Conducted by Saveetha Engineering College.

PATENT PUBLISHED

Dr. P. Latha, Associate Professor, Department of ECE, has Published an International Patent titled "2x2 MIMO Antenna for 5G Communications."

TO KNOW MORE ABOUT DEPARTMENT ACTIVITIES

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