SANTHIRAM ENGINEERING COLLEGE
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Nandyal - 518501, Nandyal Dist., Andhra Pradesh
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# SPECTRUM

Signals of Innovation, Waves of Excellence

ECE DEPARTMENT NEWSLETTER | VOLUME 6 | ISSUE 2 | ACADEMIC YEAR 2024-25

## IGNITING IDEAS, EMPOWERING FUTURES.

Driving innovation in Electronics & Communication Engineering for a smarter, connected tomorrow.




**TECHNOLOGY**
Emerging Technologies

**COMMUNICATION**
Wireless & Networks

**INNOVATION**
Research & Projects

**ACHIEVEMENT**
Student Success

**ECE DEPARTMENT NEWSLETTER**

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NANDYAL, ANDHRA PRADESH
APRIL - JUNE 2024

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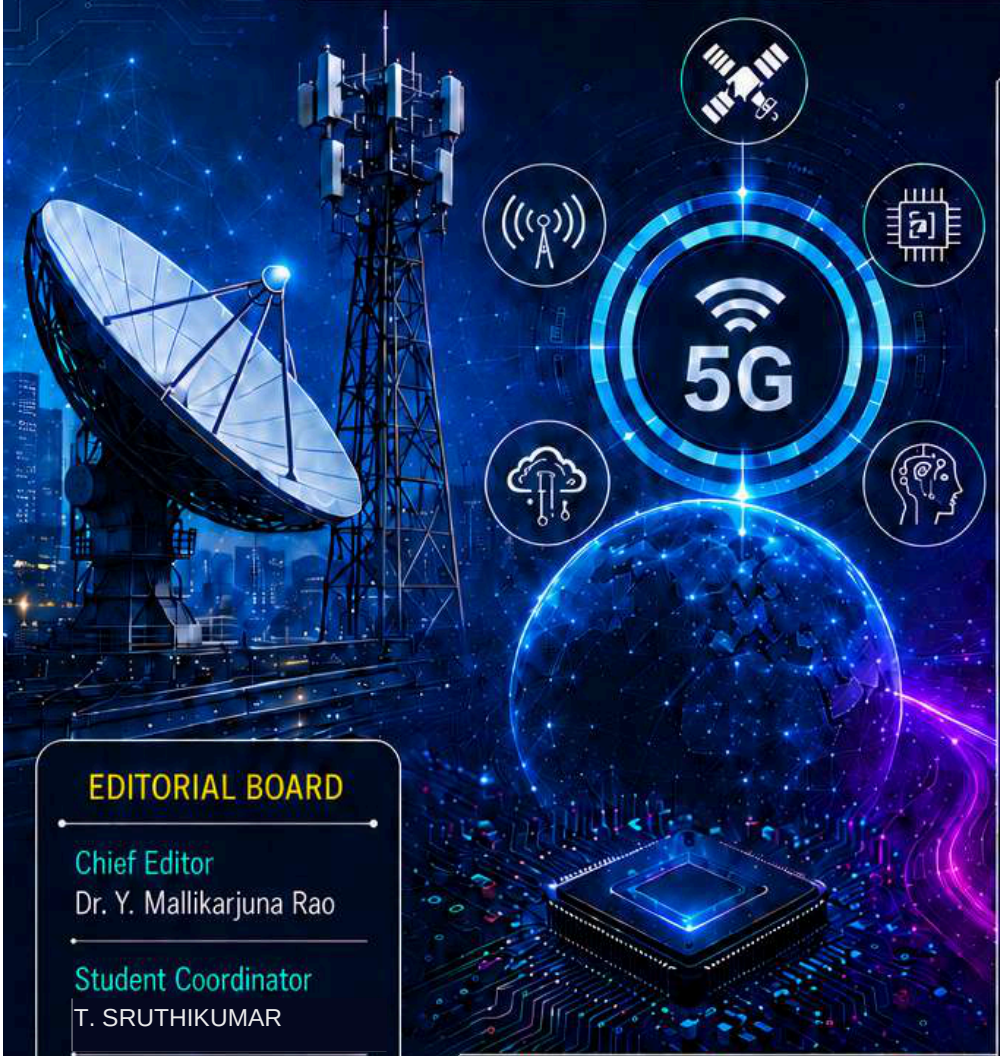
VOLUME 6 | ISSUE 2 | ACADEMIC YEAR 2024-25 | APRIL - JUNE 2025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# ABOUT THE COLLEGE



Santhiram Engineering College (SREC), Nandyal, sponsored by M/s Sri Shirdi Sai Educational Academy, was established in 2007 under the able guidance of Dr. M. Santhiramudu, Chairman, with the noble motto "Education for Peace and Progress." The institution is autonomous from the academic year 2023–24 and is accredited by NAAC with Grade A (3.2/4.0) and by NBA for its B.Tech. programmes in ECE and CSE. Approved by AICTE, New Delhi, recognised by UGC under Sections 2(f) and 12(B), and permanently affiliated to JNTUA, Ananthapuramu, SREC is also a recognised research centre and spot evaluation centre of JNTUA. Spread across a serene 10.5-acre green campus, the college offers digitally equipped classrooms, state-of-the-art laboratories, quality research, publications, patents, funded projects, excellent placement opportunities, and secure hostel facilities for both boys and girls. With 19 years of academic excellence, University Gold Medals, State Prathibha Awards, and a wide range of undergraduate, postgraduate, MBA, and MCA programmes, SREC continues to nurture competent, innovative, and socially responsible professionals.



## VISION

To become a nucleus for pursuing technical education and pool industrial research and developmental activities with social-conscious and global standards.



## MISSION

To provide Advanced Educational Programs and prepare students to achieve success and take leading roles in their chosen fields of specialization by arising a self-sustained University.

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# ABOUT DEPARTMENT




Anticipating the growing importance of electronics and wireless communication in modern society, the Department of Electronics and Communication Engineering was established in 2007 with a vision to impart quality technical education and nurture innovation among young minds. The department began with an initial intake of 60 students, which was increased to 90 in 2008 and further to 120 in 2009, reflecting the rising demand for skilled electronics and communication engineers. To meet the expanding needs of the industry and academia, the department introduced a Master of Technology (M.Tech) program in VLSI System Design in 2011 with an intake of 18 students, recognizing the immense potential in the area of Very-Large-Scale Integration (VLSI) design. In tune with the advancements in embedded technology and its applications, a new postgraduate program. The department's B.Tech-ECE program has been accredited by the National Board of Accreditation (NBA) for a period of three years, from the academic year 2023–24 to 2025–26, in recognition of its robust academic framework, quality teaching, and outcome-based education.

## VISION

Emerge as a centre for quality education in Electronics & Communication Engineering to create competent professionals

## MISSION

1. Offer quality programs in Electronics & Communication Engineering aimed at fulfilling the needs of society and industry.
2. Impart skills and develop scientific temper to solve complex technological problems of current times.
3. Nurture ethics, talent, and entrepreneurship to inculcate professional development of students.

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# PROGRAMME OUTCOMES (POs) & PSOs

1. **PO1: Engineering Knowledge:** Apply knowledge of mathematics, science, engineering fundamentals, and ECE specialisation to solve complex engineering problems.
2. **PO2: Problem Analysis:** Identify, formulate, review research literature, and analyse complex engineering problems to reach appropriate conclusions.
3. **PO3: Design and Development of Solutions:** Design solutions for complex engineering problems and develop system components or processes that meet specified needs, considering public health, safety, culture, society, and the environment.
4. **PO4: Conduct Investigations:** Use research-based knowledge and methods, including experimentation, analysis, and interpretation of data, to obtain valid conclusions.
5. **PO5: Modern Tool Usage:** Create, select, and apply suitable techniques, resources, and modern engineering and IT tools for modelling, analysis, and solution of complex engineering problems.
6. **PO6: Engineer and Society:** Apply contextual knowledge to assess societal, health, safety, legal, and cultural issues related to professional engineering practice.
7. **PO7: Environment and Sustainability:** Understand the impact of engineering solutions in societal and environmental contexts and demonstrate awareness of sustainable development.
8. **PO8: Ethics:** Apply ethical principles and commit to professional ethics, responsibilities, and norms of engineering practice.
9. **PO9: Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse and multidisciplinary teams.
10. **PO10: Communication:** Communicate effectively with the engineering community and society through reports, documentation, presentations, and clear technical communication.
11. **PO11: Project Management and Finance:** Demonstrate knowledge of engineering and management principles and apply them in individual and team work to manage projects effectively.
12. **PO12: Life-Long Learning:** Recognise the need for and engage in independent and life-long learning to adapt to technological changes.

# PROGRAMME SPECIFIC OUTCOMES (PSOs)

- **PSO1:** Apply the principles of electronic devices, circuits, embedded systems, VLSI, and communication engineering to design, analyse, and implement electronic systems.
- **PSO2:** Design and develop solutions in analogue and digital communication, wireless networks, signal processing, and related applications using modern tools.
- **PSO3:** *Develop innovative, sustainable, and industry-oriented solutions through research, teamwork, ethical practice, and continuous learning in emerging areas of Electronics and Communication Engineering.*

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# MESSAGES

## CHAIRMAN'S MESSAGE



It gives me immense pleasure to present SPECTRUM, the newsletter of the Department of Electronics and Communication Engineering. It reflects the academic achievements, innovative activities, research contributions, and creative spirit of our students and faculty members.

I appreciate the efforts of the Department of ECE in nurturing competent professionals through quality education, innovation, and value-based learning. I extend my best wishes to the editorial team, faculty members, and students for the continued success of SPECTRUM.

**Chairman**

## MANAGING DIRECTOR'S MESSAGE



I am delighted to share my message for SPECTRUM, the newsletter of the Department of Electronics and Communication Engineering. This publication is a proud reflection of the department's commitment to academic excellence, innovation, research, and student development.

I encourage students to make the best use of the opportunities provided by the institution, strengthen their technical knowledge, and develop the skills needed to serve society with responsibility and confidence. I convey my best wishes to the faculty, students, and editorial team.

**Managing Director**

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# MESSAGES

## PRINCIPAL'S MESSAGE



It gives me immense pleasure to present SPECTRUM, the newsletter of the Department of Electronics and Communication Engineering. The newsletter reflects the academic achievements, innovative activities, research contributions, and creative spirit of our students and faculty members. I encourage students to pursue knowledge with curiosity, discipline, integrity, and a commitment to excellence. I appreciate the Department of ECE for nurturing competent professionals through quality education, innovation, and value-based learning. My best wishes to the editorial team, faculty members, and students for the continued success of SPECTRUM.

**Principal**

## HoD'S MESSAGE



I am delighted to share my message for SPECTRUM, the newsletter of the Department of Electronics and Communication Engineering. This publication reflects our department's commitment to academic excellence, innovation, research, and student development. We aim to provide a strong learning environment that enables students to build sound technical knowledge, problem-solving ability, professional ethics, and confidence. I encourage every student to participate actively in academic, research, and co-curricular activities. My best wishes to all faculty members, students, and the editorial team.

**Head of Department**

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Signals Ideas Innovation

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Towards a Smarter Connected World...


## PROGRAMS ORGANISED




A **"One Day Program on Entrepreneurial Ecosystem"** was held for faculty on **17 Apr, 2025. Dr. T. Ramashri, professor** from Sri Venkateswara University, Tirupati, acted as a resource person.

## FACULTY ACHIEVEMENTS

1. Dr.G. Sowmya, Assoc.Professor has reviewed papers for the 1st **International Conference on Green Artificial Intelligence and Industrial Applications (GreenAI-2025)**, during 03-04 Apr, 2025 at GITAM, Hyderabad, India.
2. Dr.G. Sowmya, Assoc.Professor has participated in **Intellectual Property UTSAV**, during 21-26 April, 2025 organized by Ministry of Education's Innovation Cell (MIC) at New Delhi, India.
3. Mr. Javid Basha has been awarded **Ph.D. Degree** from JNTUA, ANTHAPURAMU.
4. Dr. Javid Basha, Asst. Professor serves as a **reviewer** for the following Journals:
   1. Transactions on Electrical and Electronic Materials (TEEM).
   2. International Journal of Informatics and Communication Technology.
   3. AEU – International Journal of Electronics and Communications.
5. Mr. S. Mohammad Eliyas, Asst.Professor received a **Certificate of Appreciation** for his instrumental role as **SPOC** for the **SWAYAM-NPTEL Local Chapter**, Santhiram Engineering College, Nandyal from **IIT MADRAS.**

## FACULTY DEVELOPMENT PROGRAMS

1. The following Faculty members attended Faculty Development Program on **"Advanced Communication Systems and It's Challenges (FDP4CET-18)"** during 23-27 June, 2025 organized by the Department of ECE, Andhra Loyola Institute of Engineering and Technology, Vijayawada.
   - Dr.S. Javid Basha, Asst.Professor
   - Dr.K. Rajkumar, Asst.Professor
   - Mr.S. Rambabu, Asst.Professor
   - Mr.S. Mohammad Eliyas, Asst.Professor
   - Mr.V. Sankarnath, Asst.Professor
2. Mr.S. Rambabu, Asst.Professor has participated in a Two-week Faculty Development Program on **"Semiconductor Devices, Circuits & Sensors: Applications and Research Perspective"** during 09-20 June,2025 organized **Electronics & ICT Academy NIT Patna.**
3. Mrs. G. Neelima, Asst.Professor has participated in One-week Faculty Development Program on **"Harnessing NI LabVIEW and Industrial Automation: Advances and Applications"**, during 12-17 June, 2025 organized by the Vardhaman College of Engineering, Hyderabad.
4. The following Faculty members attended Professional Development Program on **"National Education Policy & Education 4.0"** during 16-21 June, 2025 organized by the RGM Engineering College, Nandyal.
   - Dr.N. Praveen Kumar, Asst.Professor
   - Ms.V. Nagamani, Asst.Professor




## FACULTY PATENTS

1. Dr.M.V. Subramanyam, Professor published patent entitled **"Reconfigurable TCAM/BCAM Memory Architecture Using CNTFET Cell Structures"** in Jun-2025.
2. Dr.G. Sowmya, Assoc.Professor published patent entitled **"Low-Power FPGA-Based Online Testable Carry Select Adder Using Compressor-Driven Architecture for High-Speed Arithmetic Operations"** in Jun-2025.
3. Mr.N. Sreenivasa Rao, Asst.Professor published patent entitled **"Heart Stroke Risk Prediction Using Machine Learning"** in Jun-2025.
4. Mrs.V. Nagamani, Asst. Professor published patent entitled **"Emphasizes Intelligent Routing, Security and Mobility Aspects Often Relevant in WSNS"** in Jun-2025.
5. Mrs.B. AlekyaHimabindu, Assistant. Professor published patent entitled **"U-NET Architectural Model for Semantic Segmentation of Aerial Images"** in Jun-2025.
6. Mrs.V. Nagamani, Asst. Professor published patent entitled **"Emerging Ternary Arithmetic Architectures Using GNRFETs and Resistive Memory"** in Jun-2025.

## STUDENT CONFERENCE PUBLICATIONS

1. Mrs. Badri Mounika, et.al, **"Novel Quaternary Circuits based on Hybrid GNRFET-RRAM Technology"** ( ICTMIM ) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
2. Mr. J Venkata Sekhar, et.al, **"An Accurate Model of Coupled MWCNT based TSVs to Reduce the Crosstalk Issues"** (ICOEI) 24-26 Apr, 2025, Tirunelveli, India. **(Scopus Indexed)**
3. Mr. M. Madhuram, et.al, **"Design of CMOS D Flip-Flop with Different Supply Voltages"** (ICOEI) 24-26 Apr, 2025, Tirunelveli, India. **(Scopus Indexed)**
4. Mr. M. Mani Neelakanta, et.al, **"An Efficient Technique to Implement the Multivalued Logic Gates using Nano-FETs"** (ICTMIM) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
5. Ms. P. Shiny, et.al, **"Ternary Adder and Multiplier Circuit Designs with GNRFET and RRAM Technologies"** (ICTMIM) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
6. Ms. Sreelatha, et.al, **"Crosstalk Analysis of MWCNT based Through Silicon Vias for Quaternary Logic Applications"** (ICTMIM) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
7. Ms. P. Lakshmi Lavanya, et.al, **"Design of Adder Circuits using GNRFETs in Ternary Logic"** (ICTMIM) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
8. Ms. S. Fareeda Banu, et.al, **"Design of Adder Circuits using GNRFETs in Ternary Logic"** (ICTMIM) 7-9 Apr, 2025, Kanyakumari, India. **(Scopus Indexed)**
9. Mr. Panyam Lokesh, et.al, "High-Efficiency CNTFET-Based Inverter and Pass Transistor Design for Hamming Code Encoder and Decoder" (STCR) 9-10 May, 2025, Bannari Amman Institute of Technology, India. (Scopus Indexed)
10. Ms. Shaik Ruksana, et.al, **"Minimizing Delay, Power and PDP in Ternary Logic Circuits: A GNRFET-RRAM Approach"** (STCR) 9-10 May, 2025, Bannari Amman Institute of Technology, India. (Scopus Indexed)




## MOOCS THROUGH NPTEL

1. A total of **233** students have completed NPTEL on **Statistical Data Analysis using R, Introduction to Internet of Things** during Jan-Apr,2025.



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Towards a Smarter Connected World...

## FDPS THROUGH NPTEL

1. The following faculty were completed NPTEL-FDP on **Cloud computing** during Jan-April,2025.
   - **Mr. K. Vinod Kumar**, Asst.Professor
   - **Mr. V. Sankarnath**, Asst.Professor
   - **Mr. S. Mohammad Eliyas**, Asst.Professor
   - **Mrs. P. Mary Swetha**, Asst.Professor
2. **Mr. K. Abdul Rahman**, Asst.Professor was completed NPTEL-FDP on **Introduction to Internet of Things** during Jan-April,2025.
3. **Mr. P. Surendra Babu**, Asst.Professor was completed NPTEL-FDP on **Computer Networks and Internet Protocol** during Jan-April,2025.
4. **Mrs. S. Jayamangala**, Asst.Professor was completed NPTEL-FDP on **Introduction to Machine learning** during Jan-April,2025.
5. **Mrs. B. Alekya Himabindu** was completed NPTEL-FDP on **Reinforcement Learning** during Jan-April,2025.




## MOOCS THROUGH NPTEL

1. A total of **233** students have completed NPTEL on **Statistical Data Analysis using R, Introduction to Internet of Things** during Jan-Apr,2025.




## STUDENT CONFERENCE PUBLICATIONS

1. **Mrs. Badri Mounika**, et.al, has presented a paper **"Novel Quaternary Circuits based on Hybrid GNRFET-RRAM Technology"** in the 2025 5th International Conference on Trends in Material Science and Inventive Materials (ICTMIM) held from 7-9 Apr, 2025 at Kanyakumari, India. **(Scopus Indexed)**
2. **Mr. J Venkata Sekhar**, et.al, has presented a paper **"An Accurate Model of Coupled MWCNT based TSVs to Reduce the Crosstalk Issues"** in the 2025 8th International Conference on Trends in Electronics and Informatics (ICOEI) held from 24-26 Apr, 2025 at Tirunelveli, India. **(Scopus Indexed)**
3. **Mr. M. Madhuram**, et.al, has presented a paper **"Design of CMOS D Flip-Flop with Different Supply Voltages"** in the 2025 8th International Conference on Trends in Electronics and Informatics (ICOEI) held from 24-26 Apr, 2025 at Tirunelveli, India. **(Scopus Indexed)**
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9. **Mr. Panyam Lokesh** et.al, has presented a paper **"High-Efficiency CNTFET-Based Inverter and Pass Transistor Design for Hamming Code Encoder and Decoder for Fault-Tolerant Data Transmission"** in the 2025 Fourth International Conference on Smart Technologies, Communication and Robotics (STCR) held from 9-10 May, 2025 at Bannari Amman Institute of Technology, Sathya Mangalam, India. **(Scopus Indexed)**
10. **Ms. Shaik Ruksana** et.al, has presented a paper **"Minimizing Delay, Power and PDP in Ternary Logic Circuits: A GNRFET-RRAM Approach"** in the 2025 Fourth International Conference on Smart Technologies, Communication and Robotics (STCR) held from 9-10 May, 2025 at Bannari Amman Institute of Technology, Sathya Mangalam, India. **(Scopus Indexed)**



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# SPECTRUM

ECE NEWSLETTER — JANUARY–MARCH 2025

VOL. 6 | ISSUE 1
ACADEMIC YEAR 2024-25


## DEPARTMENT ACHIEVEMENTS

1. **Mr. S. Mohammad Eliyas** has been awarded a **Certificate of Appreciation** for his instrumental role as **SPOC** for the **SWAYAM-NPTEL Local Chapter** at Santhiram Engineering College, Kurnool, Andhra Pradesh, which was rated 'A' based on performance in NPTEL Online Certification Courses.
2. The Department has been selected to establish the **PNT Lab** under the IIT Tirupati Navavishkar I-Hub Foundation (IITTNiF), with **Dr. G. Sowmya** as the project coordinator. The proposal value is **₹4.00 Lakhs.**




## FACULTY PATENTS

1. IPR India Patent and Trademark Office has Published Patent to **Dr. N. Praveen Kumar** for his innovative Design of **"Developing Efficient Electronic Health Record Systems Using Secure Wireless Communication"** of March 2025.




## WORKSHOPS ATTENDED

1. **Mrs. S. Jayamangala** has participated in **One Week Short Term Training Program** on **"Artificial Intelligence Techniques, Machine Learning, and Data Science with Research Applications and Research Paper Writing with AI Tools"** during 20-25 Jan, 2025 organized by the Francis Xavier Engineering College, Tamil Nadu.
2. **Mr. M. Mahesh** Kuma has participated in a workshop on **'Academic to Entrepreneun – Harnessing Knowledge for Impact,'** organized by the Management & Entrepreneurship and Professional Skill Council held on 18 Feb, 2025.
3. **Mr. S. Mohammad Eliyas** has participated in a workshop on **NPTEL** organized by the IIT, Madras.



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## FACULTY ACHIEVEMENTS

1. **Dr. Y. Mallikarjuna Rao** has achieved **100% result** in the **IoT subject** for IV B. Tech I-Sem, Sections A & B.
2. **Dr. Sowmya** has achieved **100% result** in the **Smart Sensor (SS)** subject for IV B. Tech I-Sem, Section B.
3. **Mr. V. Sankarnath** has achieved **100% result** in the **Web Technology (WT)** subject for IV B. Tech I-Sem, Section B.
4. Mrs. B. Alekhya Hima Bindu has **reviewed papers** for the **3rd Congress on Control, Robotics, and Mechatronics (CRM 2025)**, during 01-02 Feb, 2025 at SR University, Warangal, India.
5. Mrs. B. Alekhya Hima Bindu has **reviewed papers** for the **2nd World Congress on Smart Computing (WCSC 2025)**, during 22-23 Feb, 2025 at the School of Engineering, Babu Banarasi Das University, Lucknow, India.
6. Mrs. B. Alekhya Hima Bindu has qualified for **UGC-NET**, December 2024.
7. Mr. N. Sreenivasa Rao has qualified for the **GRADUATE APTITUDE TEST IN ENGINEERING (GATE)**, March 2025.




## FACULTY CONFERENCE PUBLICATIONS

1. **Mr. S. Rambabu**, et.al, has presented a paper **"An Effective FPGA-based Real-time System for Measuring Temperature and Light Intensity Using UART Protocol"** in the 6th International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2025) held on 7-8 Jan, 2025 at Paranuchal University, Nepal. **(Scopus Indexed)**
2. **Mr. S. Rambabu**, et.al has presented a paper **"CNTFET-RMGDI Based Full swing BCD to Seven Segment display for low power application"** in the 3th International Conference on Electronics and Renewable Systems (ICEARS 2025) held on 11-13 Feb, 2025 at St. Mother Teresa Engineering College, Tuticorin, Tamil Nadu, India. **(Scopus Indexed)**
3. **Dr. G. Sowmya**, et.al, **"A 2.45 GHz Rectifier Matching Circuit for Radio Frequency Energy Harvesting"** for an IEEE Microwaves, Antennas, and Propagation Conference (MAPCON). **(Scopus Indexed)**
4. **Mr. P. Surendra Babu** has presented a paper **"Design of adder Circuits Using GNRFETs in Ternary Logic"** in the 7th International Conference on Intelligent Sustainable Systems (ICISS 2025) at SCAD College of Engineering and Technology, Tirunelveli, India. **(Scopus Indexed)**
5. Mrs. S. **JayaMangala** has presented a paper **"Crop Disease and Pest management in Agriculture via UAV Remote sensing and Advanced Machine Learning Models"** in the 3rd international conference on Integrated Circuits and Communication Systems (ICICACS-2025) at M. Visvesvaraya College of Engineering, Raichur during 21-22 Feb, 2025. **(Scopus Indexed)**

## STUDENT ACHIEVEMENTS

1. **A. Mouli Vardan** (22XS5A0401), has participated in the **"18th National Level Techeical Symposium - Pravaha-2K25"** held on 18 Feb, 2025 at RGM **Nandyal and won** First prize.
2. The following students participated in the **"18th National Level Technical Symposium - Pravaha-2K25"** held on 18 Feb, 2025 at RGM Nandyal.
   i. G. Naga Vaishnavi (21XS1A0431)
   ii. B. Sunandha (23XS1A0406)
   iii. Akshaya (23XS1A0453)
   iv. M. Srivani (23XS1A0454)
   v. V. Sumanth Kumar (23XS1A0460)
   vi. S. Naga Karthik (23XS1A0490)
   vii. P.R.S. Vardhan Babu (22XS1A0468)
   viii. S. Dhanush (22XS1A0474)
3. The following students participated in the **National Level Students Meet** in **Kabaddi (Men)** during 07-09 Feb, 2025 in **"QIS FEST-2025"**, Ongole.
   i. P. Arjun (23XS1A0484)
   ii. P. Aravind (23XS1A0485)
   iii. P. Naga Chaitanya (23XS1A0477)
4. The following students participated in the National Level Students Meet in **VOLLEY BALL (Men)** during 07-09 Feb, 2025 in **"QIS FEST-2025"**, Ongole.
   i. B. Bharath Tejeswar Reddy (22XS1A0403)
   ii. K. V. Dhanesh Yadav (22XS1A0438)
   iii. C. Ismail (22XS1A0416)
5. **S. Venkata Sai Kumar** (23XS1A0491) has participated in the National Level Students Meet in **CHESS (Men)** during 07-09 Feb, 2025 in **"QIS FEST-2025"**, Ongole.
6. A Total of 500 ECE Students were participated in PPTs, quizzes, and Ideathon in the two-day National Level Technical Symposium **"EMINENCE-SIGMA 2K25"**.
7. **N. Sandeep Kumar** (22XS1A0447) has participated in the Men's **Badminton** event in the **"12th JNTUA Games Meet"**, held at JNTUA College of Engineering, Kalikiri during 21-22 Mar, 2025. He was awarded the **Runner-up Prize.**
8. The following students participated in the Men's Volley Ball event in the **"12th JNTUA Games Meet"** held at JNTUA College of Engineering, Kalikiri, during 21-22 Mar, 2025.
   i. S. Charan Kumar (23XS1A0489)
   ii. B. Bharath Tejeswar Reddy (22XS1A0403)
   iii. K. V. Dhanesh Yadav (22XS1A0438)
   iv. C. Parusuram (22XS1A0417)
9. The following students participated in the **Women's Throwball** event in the **"12th JNTUA Games Meet"** held at JNTUA College of Engineering, Kalikiri, during 21-22 Mar, 2025.
   i. A. Haritha (22XS1A0428)
   ii. G. Naga Jyothi (22XS1A0428)
   iii. U. Leela Gayathri (22XS1A0494)
10. B. Sravani (23XS1A0405), II-B. Tech II-Sem has participated in the **Woman's Badminton** event at the **"12th JNTUA Games Meet"**, held at JNTUA College of Engineering Kalikiri, during 21-22 Mar, 2025.
11. C. Ismail (22XS1A0416), III-B. Tech II-Sem, participated in the **Men's Badminton event** at the **"12th JNTUA Games Meet"** held at JNTUA College of Engineering, Kalikiri, during 21-22 Mar, 2025.
12. The following students participated Paper Presentation in a **National Level Technical Symposium event-KITES-2K25** held on 07 Mar, 2025 at Dr. K.V. Subba Reddy Institunt of Technology, at Sanool, and won the **Third Prize.**
   i. N. Pramod (22XS1A0460)
   ii. N.P. Gayathri (22XS1A0459)
13. The following students participated **Paper** Presentation in a **National Level Tech, Management & Cultural Fest** event held on 21 Mar, 2025 at SVR Engineering College, Nandyal. 21-22 Mar, 2025.
   i. C.V. Karimulla (23XS1A0416)
   ii. D. Yogendra Sai Teja (23XS1A0418)
   iii. S. Naga Karthik (23XS1A0490)
14. The following students participated Paper Presentation in a workshop on **AI-ML & 24 Hours Hackathon**, during 22-23 Mar, 2025 at Techscelerate BITS, Hyderabed.
   i. T. Sruthi Kumar (23XS1A04B5)
   ii. V. Sumanth Kumar (23XS1A04C6)
   iii. V. Imam Hussain (23XS1A04C2)
   iv. P. Sravan Kumar (23XS1A04B5)
   v. S. Dhunush (23XS1A0474)
   vi. T. Syam Sai Charan (23XS1A04B6)

| S.No. | Registration Number | Name of the Student |
|---|---|---|
| 1 | 23XS1A0403 | Battu Rahul |
| 2 | 23XS1A0416 | Chinna Veeraiah Gari Karimulla |
| 3 | 23XS1A0418 | Darshanaboyina Yogendra Sai Teja Babu |
| 4 | 23XS1A0423 | Dudekula Idrush Basha |
| 5 | 23XS1A0424 | Dudekula Lokitha Reshma |
| 6 | 23XS1A0429 | Gogula Sumanth |
| 7 | 23XS1A0431 | Guddeti Surya Prakash Reddy |
| 8 | 23XS1A0434 | Hajumagari Shaik Yusuff Hussain |
| 9 | 23XS1A0441 | Kolli Amrutha |
| 10 | 23XS1A0445 | Kummari Mohana Krishna |
| 11 | 23XS1A0447 | Kuncha Dhanalakshmi |
| 12 | 23XS1A0448 | Kurukunda Raju |
| 13 | 23XS1A0449 | Lagisetty Yogananda |
| 14 | 23XS1A0453 | Mamilla Akshaya |
| 15 | 23XS1A0454 | Manava Srivani |
| 16 | 23XS1A0457 | Mangali Manohar |
| 17 | 23XS1A0458 | Manikindi Sunilkumar |
| 18 | 23XS1A0463 | Mittamedi Sree Ravindranath |
| 19 | 23XS1A0464 | Moddugalla Sunil |
| 20 | 23XS1A0472 | Naganandi Anusha |
| 21 | 23XS1A0474 | Nallabothula Rajesh |
| 22 | 23XS1A0477 | Padakandla Naga Chaitanya |
| 23 | 23XS1A0488 | Sampangi Vadde Vamshi Krishna |
| 24 | 23XS1A0492 | Santala Surendra |
| 25 | 23XS1A0498 | Shaik Jakeer Hussain |
| 26 | 23XS1A04A0 | Shaik Mabhu Subhani |
| 27 | 23XS1A04A3 | Shaik Naveed Basha |
| 28 | 23XS1A04A8 | Shaik Yaseen |
| 29 | 23XS1A04B1 | Soma Lakshmi Narasaiah |
| 30 | 23XS1A04B7 | Telugu Hussain Gowtham Babu |
| 31 | 23XS1A04B8 | Vadde Kumar Raja |
| 32 | 23XS1A04C2 | Vadla Imam Hussain |
| 33 | 23XS1A04C6 | Vustepalli Sumanth Kumar |
| 34 | 23XS1A04C7 | Yalluru Lakshmi Padmavathi |
| 35 | 23XS1A04D0 | Yapamani Lokesh |
| 36 | 24XS5A0402 | Kavali Gayathri |
| 37 | 24XS5A0406 | Pyapili Venkata Teja |
| 38 | 23XS5A0414 | M Giri Mahendrappa |
| 39 | 23XS5A0402 | C Mahivarun Reddy |

# SANTHIRAM ENGINEERING COLLEGE
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## DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

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# SPECTRUM

ECE NEWSLETTER – JANUARY–MARCH 2025

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ACADEMIC YEAR 2024-25


## DEPARTMENT ACHIEVEMENTS

1. **Mr. S. Mohammad Eliyas** has been awarded a **Certificate of Appreciation** for his instrumental role as **SPOC for the SWAYAM-NPTEL Local Chapter** at Santhiram Engineering College, Kurnool, Andhra Pradesh, which was rated **'A'** based on performance in NPTEL Online Certification Courses.
2. The Department has been selected to establish the **PNT** Lab under the IIT Tirupati Navavishkar I-Hub Foundation (IITTNif), with **Dr. G. Sowmya** as the project coordinator. The proposal value is **₹4.00 Lakhs**.




## FACULTY ACHIEVEMENTS

1. **Dr. Y. Mallikarjuna Rao** has achieved **100% result** in the **IoT subject** for IV B. Tech I-Sem, Sections A & B.
2. **Dr. Sowmya** has achieved **100% result** in the Smart Sensor **(SS)** subject for IV B. Tech I-Sem, Section B.
3. **Mr. V. Sankarnath** has achieved **100% result** in the **Web Technology (WT)** subject for IV B. Tech I-Sem, Section B.
4. Mrs. B. Alekhya Hima Bindu has reviewed papers for the **3rd Congress on Control, Robotics, and Mechatronics (CRM 2025)**, during 01-02 Feb, 2025 at SR University, Warangal, India.
5. Mrs. B. Alekhya Hima Bindu has reviewed papers for the **2nd World Congress on Smart Computing (WCSC 2025)**, during 22-23 Feb, 2025 at the School of Engineering, Babu Banarasi Das University, Lucknow, India.
6. Mrs. B. Alekhya Hima Bindu has qualified for **UGC-NET**, December 2024.
7. Mr. N. Sreenivasa Rao has qualified for the **GRADUATE APTITUDE TEST IN ENGINEERING (GATE)**, March 2025.

## FACULTY DEVELOPMENT PROGRAMS

1. The following faculty members attended **Five Days FDP** on **"Emerging Wireless Technologies for 6G"** during 06-10 Jan, 2025 organized by the Department of ECE, CVR College of Engineering, Ibrahimpatnam.
   - Mrs. S. JayaMangala
   - Mrs. G. Neelima
2. Mrs. B. Alekhya Hima Bindu has participated in a One-week FDP on **"Cross Roads of AI and Signal Processing"** during 27 Jan-01 Feb, 2025 organized by Shri Vile Parle Kelavani Mandal's Dwarkadas J. Sanghvi College of Engineering.
3. Mrs. G. Neelima has participated in a Five Days FDP on **"AI Tools"**, during 17-25 Feb, 2025 organized by the Department of CSE, Santhiram College of Engineering, Nandyal.
4. Ms. S. Jayamangala has participated in a national level one-week online FDP on **"Unlocking Innovation: Research Funding, Proposal writing, and IPR Strategies for Startups"** during 03-08 Mar, 2025 organized by the Department of EEE, Joginpally B R Engineering College, Hyderabad.
5. Dr. K. Rajkumar has participated in a FDP on **"Innovation & Entrepreneurship"**, during 24-28 Mar, 2025 organized by IISER, Tirupati.

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## FACULTY CONFERENCE PUBLICATIONS

1. **Mr. S. Rambabu**, et.al, has presented a paper **"An Effective FPGA-based Real-time System for Measuring Temperature and Light Intensity Using UART Protocol"** in the **6th** International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2025) held on 7-8 Jan, 2025 at Paranuchal University, Nepal. **(Scopus Indexed)**
2. Mr. S. Rambabu, et.al has presented a paper **"CNTFET-RMGDI Based Full swing BCD to Seven Segment display for low power application"** in the 3th International Conference on Electronics and Renewable Systems (ICEARS 2025) held on 11-13 Feb, 2025 at St. Mother Teresa Engineering College, Tuticorin, Tamil Nadu, India. **(Scopus Indexed)**
3. **Dr.G. Sowmya**, et.al, **"A 2.45 GHz Rectifier Matching Circuit for Radio Frequency Energy Harvesting"** for an IEEE Microwaves, Antennas, and Propagation Conference (MAPCON). **(Scopus Indexed)**
4. **Mr. P. Surendra Babu** has presented a paper **"Design of adder Circuits Using GNRFETs in Ternary Logic"** in the 7th International Conference on Intelligent Sustainable Systems (ICISS 2025) at SCAD College of Engineering and Technology, Tirunelveli, India. **(Scopus Indexed)**
5. Mrs. S. JayaMangala has presented a paper **"Crop Disease and Pest management in Agriculture via UAV Remote sensing and Advanced Machine Learning Models"** in the 3rd international conference on Integrated Circuits and Communication Systems (ICICACS-2025) at M. Visvesvaraya College of Engineering, Raichur during 21-22 Feb, 2025. **(Scopus Indexed)**

## FACULTY PATENTS

1. IPR India Patent and Trademark Office has Published Patent to **Dr. N. Praveen Kumar** for his innovative Design of **"Developing Efficient Electronic Health Record Systems Using Secure Wireless Communication"** of March 2025.




## WORKSHOPS ATTENDED

1. Mrs. S. Jayamangala has participated in One Week STTP on **"Artificial Intelligence Techniques, Machine Learning, and Data Science with Research Applications and Research Paper Writing with AI Tools"** during 20-25 Jan, 2025 organized by the Francis Xavier Engineering College, Tamil Nadu.
2. Mr. M. Mahesh Kuma has participated in a workshop on **'Academic to Entrepreneur – Harnessing Knowledge for Impact'**, organized by the Management & Entrepreneurship and Professional Skill Council held on 18 Feb, 2025.
3. Mr. S. Mohammad Eliyas has participated in a workshop on **NPTEL** organized by the IIT, Madras.

## FACULTY JOURNAL PUBLICATIONS

1. Dr.Y. Mallikarjuna Rao, et.al, **"A novel eye disease segmentation and classification model using advanced deep learning network"** for a Bio-Medical Signal Processing and Control indexed by SCI.
2. Dr.Y. Mallikarjuna Rao, et.al, **"A novel Energy Aware Cluster Head Selection Algorithm for Wireless Sensor Networks"** for a Telecommunications and Radio Engineering indexed by **Scopus**.
3. Mr.S. Javid Basha, et.al, **"High Performance and PVT Variation Tolerant Design for a Ternary Multiplier Using GNRFET Technology"**, Circuits, Systems, and Signal Processing, March 2025 indexed by SCI.
4. S. Javid Basha, et.al, **"An Efficient Technique to Design Ternary Logic Schematics with Pseudo N-GNRFETs"** in Russian Microelectronics Journal, vol. 53, Pgno: S68–S74, March 2025, indexed by Scopus.



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