

PULSE



SAKTHI POLYTECHNIC COLLEGE
(AICTE Approved || Government Aided Institution)
(NBA Accredited – Civil, Mech., ECE, EEE and Metallurgy)
SAKTHI NAGAR – 638 315



EDITORIAL BOARD

<u>Chief Editor</u>	<u>Staff Editor</u>	<u>Student Editors</u>
Mr.K.SARAVANAN Head of the Department	Mrs.R.CHITRA WORKSHOP INSTRUCTOR	S.ABDULVADUTH S.GOUTHAMSAKTHI

Volume - 2
Issue -1

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



NEWS LETTER 2024-2025 – ODD SEM

PULSE



SAKTHI POLYTECHNIC COLLEGE
 (AICTE Approved || Government Aided Institution)
 (NBA Accredited – Civil, Mech., ECE, EEE and Metallurgy)
SAKTHI NAGAR – 638 315



EDITORIAL BOARD

<u>Chief Editor</u>	<u>Staff Editor</u>	<u>Student Editors</u>
Mr.K.SARAVANAN Head of the Department	Mrs.R.CHITRA WORKSHIP INSTRUCTOR	S.ABDULVADUTH S.GOUTHAMSAKTHI

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NEWS LETTER 2024-2025 – ODD SEM



Padma Bhushan
Arutselvar Dr. N.MAHALINGAM, B.Sc., F.I.E.
Founder – Sakthi Polytechnic College.

Arutselvar DR. N.MAHALINGAM a legendary Gandhian by principle, a patriotic and proud son of the soil, Dr. N.MAHALINGAM was a man of pious living. His exemplary social contributions in numerous fields of socio-economic spectrum have benefited scores of institutions and individuals inspired by him during his long career. The government of India duly recognized his meritorious deeds and honored him with the prestigious Civilian Award - PADMA BHUSHAN. Dr. N. Mahalingam is also a recipient of many awards and titles conferred upon him by various educational, social and cultural institutions. As an industrialist he has several important positions and has played major roles fostering the development of agricultural, industrial, human resource and institutional development at the State and National levels. He is the Pioneer of sugar industry. He has rendered notable literary contributions. His social and humanitarian considerations took his journey beyond the boundaries of industries and scholarly tents he nurtured.



CHAIRMAN

Dr. M. MANICKAM, M.sc., M.B.A.

Dr. M. Manickam, the eldest son of Arutchelvar Dr N Mahalingam, is an industrialist, educationalist and an outstanding administrator with an M.B.A from the University of Michigan, U.S.A. He is the chairman of NIA educational institutions and Vice- Chairman of Sakthi Sugars. Under his capable guidance and stewardship, Sakthi Sugar Mills has expanded and set-up institutions in many places. Through his constant efforts, Sakthi Auto Components Ltd has modernized and expanded. He had been the President of the "All India Sugar Manufacturers Association" and currently he is the President of Indian Sugar Technologists Association. He was awarded an Honorary Doctorate Degree by Tamil Nadu Agricultural University. He evinces keen interest in the development of Good Infrastructure in the technical institute.



CORRESPONDENT

THIRU.G MUNIASAMY, B.TECH., MBA

Sakthi Polytechnic College is an Institution with a difference, started with the mission of providing quality technical education to rural youth at affordable cost. It is the vision of our beloved Founder Chairman Arutchelvar Dr. N Mahalingam, to empower the rural youth with technical knowledge and skills to train them as the most suited manpower to meet the needs and demands of the growing industrial scenario. We

ensure that with the vast potentials for growth and avenues for development, Sakthi Polytechnic College will enhance the capabilities and nurture the latent talents of youth to emerge as entrepreneurs rather than job seekers.



PRINCIPAL

**Dr.S.SENTHILARASU M.E.,Ph.D.,MISTE.,
PRINCIPAL (IN-CHARGE)**

Technology is the need of the hour. In this era of Globalization when there is a need for an enormous number of technically qualified personnel, Polytechnics play a vital role in supplying the Industries, the inputs of their choice. Keeping this in mind our beloved Founder Arutselvar Padma Bhusan Dr N. Mahalinam established Sakthi Polytechnic College with a foresight and vision in this predominantly rural and agricultural area of Sakthi Nagar. The main aim of this Institution is to bring technical education within the reach of the rural youth. We ensure that our Institution with its excellent infrastructure, well qualified staff and conducive atmosphere for learning will go a long way in motivating the rural students to become leaders of technology in future. With Sakthi to lead them, Technical Education is no longer a distant dream for rural youth but very much a reality within their reach.

**DIRECTOR****DR. K.R MUTHUSWAMY M.E., Ph.D.,**

“A desire can change nothing, a decision can change something but a determination can change everything”. It gives me immense pleasure to welcome you all to Sakthi Polytechnic College, an eco-friendly campus that strives with a goal to attain excellence by empowering students with sound knowledge, wisdom and experience. Our strength lies in creating pleasant ambience with an excellent infrastructure, qualified and experienced faculty, commitment to personal care, motivation to excel in academic/extracurricular activities and continuous interaction with industry. Over the past 41 years, the college has witnessed a strong blend of state-of-the-art infrastructure and dedicated human resource committed to provide professional education with thrust on creativity and innovation. The motivating environment in SPC for knowledge assimilation, generation and dissemination with a sense of social responsibility, human values and concern for environment has carved a niche for itself among the best technical Institutes.

HOD's Desk



I am pleased to lead the Department of Electronics and Communication Engineering at Sakthi Polytechnic College. Our department is dedicated to imparting quality technical education, with a strong emphasis on innovation, ethics, and practical learning. We aim to develop competent engineers who are industry-ready and socially responsible. To support this goal, we regularly conduct seminars, workshops, industrial visits, and hands-on training sessions. Our focus also extends to soft skills, wellness programs, and entrepreneurial development to ensure holistic student growth. The faculty team is highly committed and plays a key role in guiding and mentoring students. We also encourage strong industry-institute interaction and alumni engagement to bridge the gap between academics and real-world applications. I urge all students to stay motivated, embrace continuous learning, and actively participate in all academic and co-curricular initiatives. Together, let us work towards achieving excellence and building a better future.

– **Mr. K. Saravanan, M.E., M.S., Lecturer (Selection Grade I), HOD In-Charge**

VISION OF THE INSTITUTE

To excel in imparting value-based technical education to produce industry-competent engineers and socially responsible citizens.

MISSION OF THE INSTITUTE

M1: To impart transformative technical education through innovative teaching and learning methodologies.

M2: To enhance academia-industry partnership through internships and collaborative projects.

M3: To impart requisite skills to enhance employability and entrepreneurship.

VISION OF THE DEPARTMENT

To become a center of repute and to impart high-quality technical education in the field of Electronics and Communication Engineering to develop highly competent and ethical engineers.

MISSION OF THE DEPARTMENT

M1: To create a learning environment for excellence in the field of Electronics & Communication Engineering.

M2: To provide ethical and value-based education through various activities addressing societal needs.

M3: To instill self and continuous learning attitude, professional ethics, and entrepreneurial skills.

M4: To strengthen the industry-institute partnership through various interactions.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: To prepare the students to take up careers in Communication Networking, Embedded Systems, VLSI Design, and Electronic Manufacturing Industries.

PEO2: To prepare the students to pursue higher education and adopt emerging trends through continuous learning.

PEO3: To prepare the students to become socially responsible and successful entrepreneurs.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Apply the fundamental concepts of Electronics and Communication Engineering in designing various systems and applications in domains like Communication, Networking, Embedded Systems, and VLSI.

PSO2: Simulate, verify, and test electronic circuits using state-of-the-art software tools.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ECE Department Events Summary

S.No	Event Name	Date	Description
1	Induction Program for II Year	12.06.2024	Motivational session introducing students to academics and departmental activities.
2	Welcome Party for II Year	09.07.2024	Cultural event to warmly welcome second-year students.
3	Book Festival Visit (II & III Year Students)	10.08.2024	Visit aimed at encouraging technical reading and exploration.
4	Forum Meeting on Basics of Solid State Devices	05.09.2024	Expert talk by Mr. Abishek from KVI Micro System on solid-state electronics.
5	Student-Teacher Interaction Meeting	14.10.2025	Discussion to enhance communication between faculty and students.

ECE Induction Program for II Year - 12.06.2024**Welcome Party for II Year - 09.07.2024****ECE Book Festival Visit - II & III Year Students - 10.08.2024**



Forum Meeting on Basics of Solid State Devices



Student-Teacher Interaction Meeting – ECE Department



STUDENT CORNER

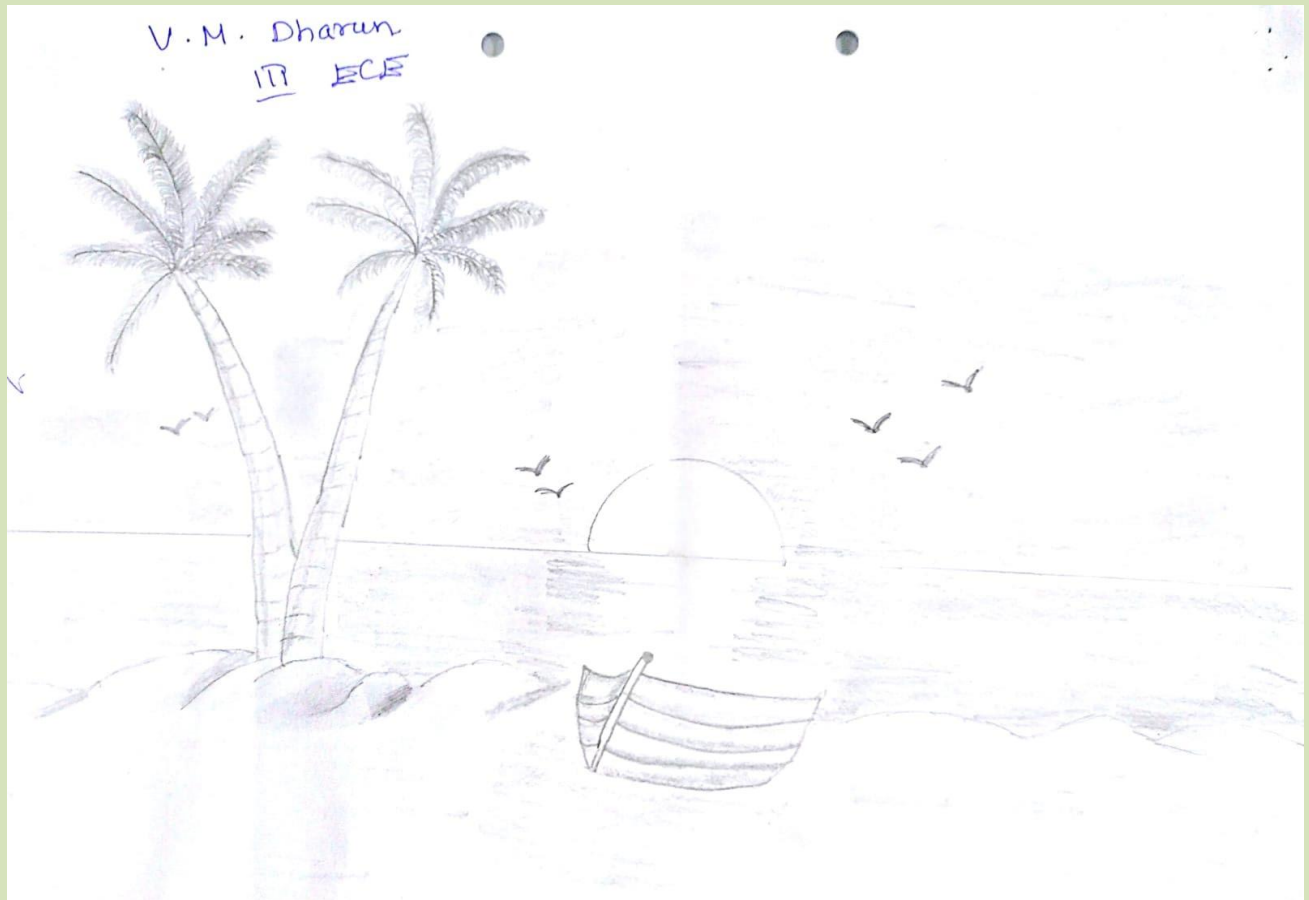
சிறா வர்சையில் பாரதியார்
கவிதை

M. Gowtham

III ECE

சுழுகு துழுக்துச் சொந்தக்காரர்
சுத்தந்த கதந்திரம் பாரதியார்!
இந்தியா இதனா நடந்தியவர்!
ஈர நெஞ்சம் துழுக்துக் கலந்தவர்!
உணர்வில் துழுக்துக் கலந்தவர்.
உதக்கம் வளந்தித் மகாநிஞர்!
எழுச்சி அடைபு பேச்சுநாள்!
என்றும் துந்தி இதுநாள்!
புயல் நீக்கி ஆய்வாளர்!
சுற்றும் வள்கி உழுக்துவர்!
சுதக்கி சாலை உணர்ந்தியவர்!
புனை பொலி அத்திசு டி
எழுதியவர்!

- பாரதியார்.



ARTICLE

AI-Powered Communication Networks: The Future of Intelligent Connectivity

Artificial Intelligence (AI) is transforming communication networks by making them smarter, faster, and more efficient. As the demand for high-speed internet, connected devices, and seamless communication continues to grow, AI-powered communication networks are becoming the backbone of next-generation technologies such as **5G, 6G, the Internet of Things (IoT), and smart cities**.

Traditional communication networks require constant human monitoring to manage traffic, detect faults, and optimize performance. AI changes this approach by enabling networks to analyze large volumes of data, predict network congestion, identify faults, and automatically make decisions in real time. This results in improved network reliability, reduced downtime, and enhanced user experience.

One of the major applications of AI is **intelligent network management**. AI algorithms continuously monitor network conditions and automatically allocate bandwidth where it is needed most. This ensures smooth video streaming, uninterrupted online meetings, faster downloads, and better service quality, even during peak usage.

AI-powered communication networks also play a crucial role in **cybersecurity**. Machine learning models can detect unusual network activity, identify cyber threats, and respond to attacks much faster than traditional security systems. This helps protect sensitive data and ensures secure communication for individuals, businesses, and governments.

The integration of AI with **5G and future 6G networks** is opening new possibilities for autonomous vehicles, smart healthcare, industrial automation, and intelligent transportation systems. AI enables these networks to support millions of connected devices while maintaining high speed, low latency, and reliable connectivity.

For **Electronics and Communication Engineering (ECE)** students, AI-powered communication networks offer exciting career opportunities in wireless communication, embedded systems, network engineering, artificial intelligence, cybersecurity, and cloud computing. As industries continue to embrace digital transformation, professionals with expertise in AI and communication technologies will be highly sought after.

AI-powered communication networks are not just improving connectivity—they are redefining how people, devices, and industries communicate. By combining intelligence with advanced communication technologies, AI is creating a future where networks are self-learning, self-optimizing, and capable of delivering seamless digital experiences for everyone.

A.VALARMATHI
LECTURER/ECE

சுருக்கமான நிறைவுரை

"தொடர்ந்து கற்போம்... தொடர்ந்து வளர்வோம்... தொடர்ந்து சாதிப்போம்... ECE துறையின் அடுத்த செய்திமடலில் மீண்டும் சந்திப்போம். நன்றி!"

இறுதி கையொப்பம் (Newsletter Closing)

அன்புடன்,
ஆசிரியர் குழு (Editorial Board)
மின்னணுவியல் மற்றும் தகவல் தொடர்பியல் துறை
கல்வியாண்டு : 2024-2025

"அறிவால் உயர்வோம் • புதுமையால் முன்னேறுவோம் • தொழில்நுட்பத்தால் உலகை மாற்றுவோம்."