

TECH HERTZ'21 NEWS LETTER JUN 2021 - AUG 2021

ECE

DEPARTMENT OF Electronics and Communication Engineering

ABOUT

- J.N.N Institute of Engineering has been at the forefront of imparting high-quality technical education in the state of Tamil Nadu. With state-of-the-art infrastructure in all branches of engineering, dedicated and qualified staff, a highly conducive environment for the teaching-learning process, and a lush green campus, J.N.N stands out as a professionally managed institution. The institute has consistently produced outstanding engineers who have excelled in their careers, occupying responsible positions in some of the best-known enterprises in India.
- Promoted by the Alamelu Ammaal Educational Trust, formed in memory of the Chairman's mother, J.N.N Institute of Engineering is located just 25 km away from the city of Chennai. It has well-connected routes frequented by city buses, making it accessible for students, staff members, the community, and visitors who enjoy the aesthetic view of the college with its green color shades.
- The institution provides university-level education through a wider and dynamic network, catering to the demands of both university-level education and the economic development of the region, with wider opportunities. The location and range of academic offerings at both UG and PG levels have lifted the intake capacity regionally and nationally. The infrastructural development also portrays enrollment growth.

J.N.N strives to impart high patterns of discipline with futuristic techniques through dedicated staff members. It is a place for making students technologically superior and ethically strong. The environmentally friendly place of opportunities enhances skills and personal development. J.N.N has also signed Memorandums of Understanding with top-level industries and training providers to develop new skills and abilities.



VISION

• Cultivating innovative and entrepreneurial Electronics and Communication Engineering graduates to ethically address global challenges through quality teaching and learning practices.

MISSION

• To facilitate a state-of-the-art teachinglearning process, imparting comprehensive knowledge in electronics and communication engineering and related interdisciplinary areas.

• To foster a sense of curiosity, critical thinking and ethical practices in students, preparing them for a continuous learning.

• To instill innovative team work and industry collaboration for enhancing entrepreneurial skills, employability and research capabilities in graduates.

PROGRAMME OUTCOMES

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: 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 provide valid conclusions.

PO5: 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.

PO6: 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.

PO7: 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.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: 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.

PO11: 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.

PO12: 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.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

PEO1: Our graduates will have skills to become successful in academics, industries, or as entrepreneurs.

PEO2: Our graduates with a research inclination will be solving various complex social issues using advanced tools and technologies.PEO3: Our graduates will practice engineering with ethics, human values, and environmental consciousness.

PROGRAMME SPECIFIC OBJECTIVES (PSO)

PSO1: Analyses and develop solutions in domains like IOT, Embedded, VLSI and other emerging technologies.

PSO2: Understand and architect wired and wireless analog and digital communication systems and products.

LEADERSHIP CHAIRMAN VICE CHAIRMAN



Shri. S. Jayachandran B.Sc., B.L Founder & Chairman, J.N.N Group of Institution.

We are committed in opening up high quality tertiary education to students and to provide opportunity to acquire, understand and apply disciplinary and inter-disciplinary knowledge as well as related skills and attitudes, to think rationally and to enhance their personal development. Situated in the capital city of Tamil Nadu, our college bridges the education and values in its relationship with business, government, research organizations and universities. I would like to reaffirm my sincere personal commitment to help each of you to succeed your academic endeavours. I would like to reaffirm our sincere personal commitment to help each to succeed in your academic endeavours. I heartily welcome our students and wish them the very best for a successful and glorious future.



Mr. Naveen Jayachandran Vice-Chairman, J.N.N Group of Institutions

Our motto, "Learning Today. Leading Tomorrow", permeates every aspect and activity at J.N.N Over the past 12 years, Institute of Engineering J.N.N has successfully imbibed several of the proven best practices from the best of engineering institutions around the world, adapted them to make them better suited to the ground realities and introduced many of its own innovations in engineering education. Together, these have ensured that an educational experience at J.N.N Institute of Engineering is truly transformational for thousands of aspiring young J.N.N Institute of Engineering. has been very proactive in recognising the global and national trends in shifts in the technical landscape and has been pioneering several innovations in technical education. J.N.N is also embracing the latest technologies, teaching methodologies, well equipped facilities and understands the aspirations of the student community.

From The Desk of Principal



Since its inception in the year of 2008, the college has been striving towards maintaining high academic standards and excellence in many fields. We are committed to provide our students with a wide variety of opportunities in order to help them attain their highest potentials.

As the principal I am proud of my students who have achieved high standards in academics and various cocurriculum activities. Our objective is to turn the challenges of the changing world into wisdom of opportunity for the future. We have a dedicated team of faculty, striving hard to provide the students with the latest knowledge and skill that would help them to stand out in this fiercely competitive world. Our campus is vibrant with energy, enthusiasm and activity.

Dr. G. Gunasekaran



Dr. D. Joseph Jeyakumar

HEAD OF THE DEPARTMENT

Dear Students, Faculty, and Readers, it is my pleasure to share updates and achievements from the Department of Electronics and Communication Engineering (ECE). Our department continues to uphold is commitment to academic excellence, innovative research, and fostering a vibrant learning environment. Thank you for your continuous support and enthusiasm together, we can achieve greater heights

"INNOVATION IS THE ABILITY TO SEE THE CHANGE AS AN OPPORTUNITY – NOT A THREAT" -STEVE JOBS

LIST OF FACULTIES

S.NO	NAME OF THE FACULTY	QUALIFICATON	DESIGNATION
1.	Dr. D. Joseph Jeyakumar	M.E, Ph.D.	Professor
2.	Dr. A.V. Mayakannan	M.E, Ph.D.	Professor
3.	Mr. U. Siddharth Nambi	M.E	Associate Professor
4.	Mrs. N. Revathy	M.E	Associate Professor
5.	Mrs. R. Nithya	M.E	Assistant Professor
6.	Mr. M. Mariselvam	M.E	Assistant Professor
7.	Mr. R. Partheepan	M.E	Assistant Professor
8.	Mr. M. Karthikprabhu	M.E	Assistant Professor
9.	Mr. J. Praveen Kumar	M.E	Assistant Professor
10.	Mrs. N. Malathy	M.E	Assistant Professor

11.	Mr. S. Tamilvanan	M.TECH	Assistant Professor
12.	Mrs. R. Chandralekha	M.E	Assistant Professor
13.	Ms. B. Shanmathi	M.E	Assistant Professor
14.	Ms. S. Soundarya	M.E	Assistant Professor
15.	Ms. D.V. Swathi	M.E	Assistant Professor
16.	Ms. S. Indria	M.E	Assistant Professor
17.	Mrs. A. Evangelin Ebenezer	M.E	Assistant Professor
18.	Mrs. R. Rajarajeswari	M.E	Assistant Professor
19.	Mrs. T. Indhumathi	M.E	Assistant Professor
20.	Ms. C. Ramya	M.E	Assistant Professor

EVENTS

ONLINE SEMINAR

Date: 22nd August 2021 Speaker: Dr. Ramanathan, Professor, Madanappale Institute

On 22nd August 2021, an insightful **Online Seminar** on **Performance Evaluation and Benchmarking** in **Computer Architecture and Organization** was conducted, aimed at giving students an in-depth understanding of evaluating computer systems' performance. The seminar was led by **Dr. Ramanathan**, a renowned professor from **Madanappale Institute**.

The session began with an introduction to computer architecture, including the basic design principles behind modern processors, memory systems, and other hardware components. Dr. Ramanathan focused on how system architects can evaluate and benchmark various components of a computer system ensure optimal to performance. He discussed essential topics like performance metrics, benchmarking tools, and techniques used to assess and compare the performance of different processors, memory configurations, and other hardware setups.



Students were also introduced to real-world applications of performance evaluation, emphasizing its importance in industries where high-performance computing is essential, such as gaming, data science, and artificial intelligence. By the end of the seminar. participants had gained а comprehensive understanding of how performance benchmarking is a vital part of developing efficient, cost-effective computer systems.

The seminar also provided a platform for students to interact with Dr. Ramanathan, ask questions, and engage in discussions on the practical challenges of performance evaluation. This session was beneficial for students aspiring to pursue careers in hardware design, computer architecture, and performance optimization.

Seminar on I-Class E Amplifier Design in Electronic Circuits

Date: 22nd August 2021 Speaker: Dr. S. Rajkumar, Associate Professor, Sastra University, Thanjavur

The same day, 22nd August 2021, saw another enlightening **Online Seminar**, this time focused on **I-Class E Amplifier Design** in the field of **Electronic Circuits**. The seminar was delivered by **Dr. S. Rajkumar**, Associate Professor at **Sastra University, Thanjavur**.

Dr. Rajkumar's session focused on the **I**-Class **E** amplifier, a highly efficient amplifier design that has become popular in modern **power electronics** and **radio** **frequency** applications. The seminar explored the fundamental principles behind the I-Class E amplifier, including its design methodology, efficiency benefits, and key characteristics.

Dr. Rajkumar elaborated on how the **I-Class E amplifier** operates, providing students with an understanding of the importance of each circuit component (such as **inductors**, **capacitors**, and **transistors**) and their role in achieving high power efficiency. He discussed how this amplifier design, which is widely used in **wireless communication systems**, **audio amplifiers**, and other power applications, offers a significant reduction in power losses when compared to traditional amplifiers.

The seminar also included a detailed walkthrough of how students can simulate the I-Class E amplifier using tools like MATLAB, encouraging SPICE and participants explore practical to implementations of the theory discussed. Additionally, Dr. Rajkumar shared his insights into the challenges engineers face while working with these amplifiers and offered advice on how students could prepare themselves for careers in electronic circuit design, telecommunications, and power systems.

Both seminars on 22nd August 2021 offered students a chance to expand their technical knowledge in critical areas of **computer architecture** and **electronic circuits**. The sessions not only introduced new concepts but also equipped students with the tools and understanding to apply this knowledge in real-world scenarios. With expert guidance from distinguished professors like **Dr. Ramanathan** and **Dr. Rajkumar**, students have gained a deeper appreciation for the intricate details involved in **performance benchmarking** and **amplifier design**.



As our institution continues to host valuable seminars and workshops, these events remain instrumental in shaping the next generation of engineers and researchers. Stay tuned for more learning opportunities in the coming months

Fresher's Day



Welcoming all our students gladly to college after online orientation program for the past month



National

Sports Day



Our Department of ECE students have participated and won the prizes in sports day which was conducted on August 2021.

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