



# **TECH HERTZ'21**

**NEWS LETTER**

**MAR 2021 - MAY 2021**



**DEPARTMENT OF  
Electronics and Communication  
Engineering**

# ABOUT



**J.N.N INSTITUTE OF  
ENGINEERING  
AUTONOMOUS**

NAAC 'A' Grade | Approved by AICTE | Affiliated to Anna University

- 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 teaching-learning 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:** Analyse 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.



# LEADERSHIPS

## 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.

## VICE CHAIRMAN



**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, J.N.N Institute of Engineering 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 shift 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



**Dr. G. Gunasekaran**

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 co-curriculum 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.

## HEAD OF THE DEPARTMENT



**Dr. D. Joseph Jeyakumar**

HOD OF ECE DEPT.

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 its 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 FACULTY

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

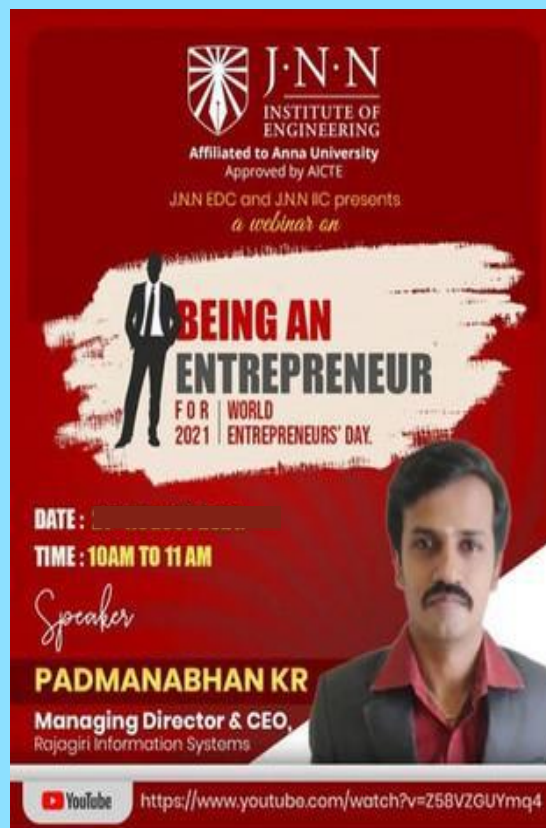


<b>S.NO</b>	<b>NAME OF THE FACULTY</b>	<b>QUALIFICATON</b>	<b>DESIGNATION</b>
11.	Mr. S. Tamilvanan	M.TECH	Assistant Professor
12.	Mrs. R. Chandralekha	M.E	Assistant Professor
13.	Ms. B. Shanmathi	M.E	Assistant Professor
14.	Ms. S. Soundarya	M.E	Assistant Professor
15.	Ms. D.V. Swathi	M.E	Assistant Professor
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





# Webinar



A webinar has been held on the topic  
“Being an Entrepreneur” on behalf of  
World Entrepreneurs’ day

It was conducted by Mr. K R Padmanaban,  
the Managing Director and CEO of Rajagiri  
Information Systems.





# Seminar



Young Indians  
Chennai  
Entrepreneurship vertical has  
organized a  
seminar on the  
topic Social  
Media  
Management

Ms. Trisha hosted the  
seminar for more  
than 100 students by  
equipping them on  
how to manage  
social media assets  
for personal brand  
development.

## EVENTS

### March 2021

#### 1. Computer and Data Security

- *Type:* Guest Lecture (Online)
- *Date:* 25/03/2021
- *Details:* This guest lecture provided valuable insights into the principles of computer and data security. Participants learned about key security practices, data protection techniques, and modern cybersecurity challenges in the IT sector.
- *Speaker:* Mr. Muhammed Ilyas, CEO, IT Experts Training, NIIT

### April 2021

#### 2. Industry Application on IoT Using Python

- *Type:* Guest Lecture (Online)
- *Date:* 07/04/2021
- *Details:* This session explored the integration of Python programming in IoT applications. The lecture covered industry-relevant examples, showcasing how Python simplifies IoT development and implementation in various sectors.
- *Speaker:* Mr. Socrates Krishnamurthy, Data Expert





## Seminar

# *Wireless Communication*



### Wireless Communication Students Explore Latest Developments in 5G and Human Bond Communication

The recent Wireless Communication Seminar offered an enlightening experience for students and professionals eager to delve into the future of connectivity.

The event focused on cutting-edge advancements in 5G Communication and introduced the concept of Human Bond Communication (HBC)—an emerging paradigm reshaping the way we interact with technology and each other

### In this newsletter:

Seminar and free resources, and more.

### Interactive Sessions and Demonstrations

Participants engaged in hands-on demonstrations of 5G-enabled devices and simulations showcasing the power of ultra-reliable, low-latency networks. Experts illustrated the practical implications of HBC through case studies in healthcare and virtual collaboration.



## Looking Ahead

As technology continues to evolve, 5G and Human Bond Communication stand at the forefront of a more connected, empathetic, and innovative future. This seminar has inspired students to explore these transformative fields, preparing them to be pioneers in the next wave of wireless communication advancements.



## Key Highlights from the Seminar

**Latest Advancements in 5G Communication**  
Students were introduced to the transformative potential of 5G networks, which are revolutionizing industries with unprecedented speed, reliability, and low-latency communication.

### **Key topics included:**

**Massive MIMO and Beamforming:** How these technologies enhance network capacity and coverage.

**5G in IoT Ecosystems:** Exploring how 5G enables smart cities, autonomous vehicles, and industrial automation.

**Edge Computing Integration:** Real-world applications of distributed computing at the network edge to improve data processing efficiency.

**Sustainability in 5G:** Efforts to reduce energy consumption in network operations.

[See full case study on website](#)



## Resource person with designation

**Dr. Ramjee Prasad**  
**Professor, Aruhus**  
**university, Denmark**





## Introduction to Human Bond Communication (HBC)

The seminar unveiled the groundbreaking concept of Human Bond Communication, focusing on the fusion of technology and human interaction to create seamless, empathetic connections.

**What is HBC?** A vision for leveraging communication technologies to enhance interpersonal understanding, mental well-being, and collaborative productivity.

**Wearable Tech and HBC:** How wearables like smartwatches and health monitors can facilitate emotional and physiological connectivity.

**Applications in Healthcare:** Real-time monitoring and support for mental health through connected devices.

**Challenges and Ethics:** Addressing privacy concerns and ensuring equitable access to HBC technologies.

## **EDITORIAL BOARD**

<b>Academic Year</b>	<b>Editorial Members</b>
<b>MAR-MAY 2021-2021</b>	<b>Faculty Coordinators:</b> Ms. B. Shanmathi  <b>Student's Convenors:</b> 1.Vignesh Rohith R, 4 <sup>th</sup> year 2.Loghanandhini K, 3 <sup>rd</sup> year 3.Godson J, 2 <sup>nd</sup> year