



# **TECH HERTZ'22**

**NEWS LETTER**

**SEP 2022 - NOV 2022**



**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 interdisciplinary 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 endeavors. I would like to reaffirm our sincere personal commitment to

help each to succeed in your academic endeavors. 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 recognizing 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.



# PRINCIPAL



**Dr. K. Ganesan**

At J.N.N Institute of Engineering, we believe in providing the best learning experience through an experiential learning process that has been devised and drawn up by the management, faculty members, and administrators together. We have a common purpose mindset and language that permeates throughout the whole institution, and we are guided by four key principles:

- (i) Assure the best learning outcomes through strategic planning.
- (ii) Create seamless service through engineered operational quality.

(iii) Build a strong relationship among the stake holders.

(iv) Delight the stakeholders with personalized care of service quality.

We are delighted to offer our services to prospective students and other stakeholders. The management, faculty members, and staff are committed to contributing significantly to the growth and support of our students to help them reach the zenith of their prospective professional career and personal life. We are always here to address your queries and provide you with the best education possible.

## 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


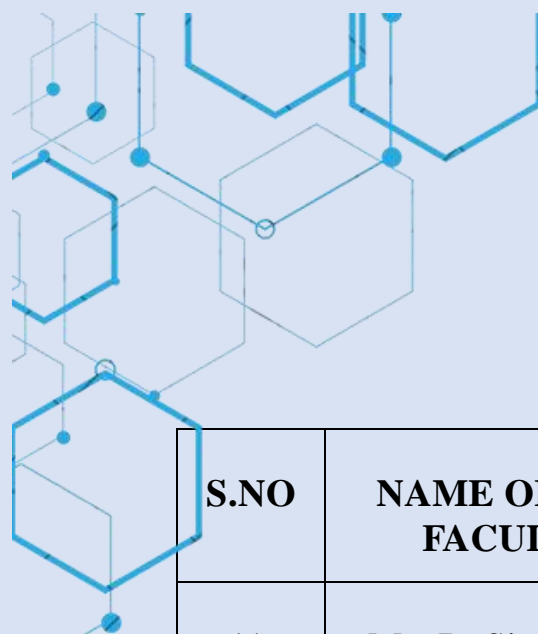
**“INNOVATION IS THE ABILITY TO SEE THE CHANGE AS AN OPPORTUNITY – NOT A THREAT”**

**-STEVE JOBS**



## LIST OF FACULTY

S.NO	NAME OF THE FACULTY	QUALIFICATON	DESIGNATION
1.	Dr. D. Joseph Jeyakumar	M.E.Ph.D	Professor
2.	Mr. U. Siddharth Nambi	M.E	Associate Professor
3.	Mrs. N. Revathy	M.E	Associate Professor
4.	Dr. R. Senthil Rama	M.E.Ph.D	Associate Professor
5.	Dr. N. Hemalatha	M.E.Ph.D	Associate Professor
6.	Mrs. R. Nithya	M.E	Assistant Professor
7.	Mr. M. Mariselvam	M.E	Assistant Professor
8.	Mr. R. Partheepan	M.E	Assistant Professor
9.	Mrs. N. Malathy	M.E	Assistant Professor
10.	Mr. S. Tamilvanan	M.TECH	Assistant Professor





S.NO	NAME OF THE FACULTY	QUALIFICATON	DESIGNATION
11.	Ms. B. Shanmathi	M.E	Assistant Professor
12.	Mrs. P.B. Smitha	M.E	Assistant Professor
13.	Mrs. R. Rajarajeswari	M.E	Assistant Professor
14.	Dr. J. Vijay Anand	M.TECH, Ph.D	Associate Professor
15.	Mr. K.T. Pannerselvam	M.E	Assistant Professor
16.	Mrs. T. Indhumathi	M.E	Assistant Professor



## Newsletter – Technology Workshops, Events, and Extra-Curricular Activities

*September - November 2022*

### Workshop on Advanced Concepts of NUMPY and IoT Using Python

*Date: 26th September 2022*

In a bid to further enhance the technical skills of our students, a workshop focusing on **Advanced Concepts of NUMPY and IoT (Internet of Things) Technology** using Python was conducted on the 26th of September, 2022. The session was expertly guided by **Mr. Muhammed Ilyas**, CEO of **IT Experts Training**. His insightful and engaging approach enabled students to dive deep into the advanced functionality of the **NUMPY library**, which is vital for handling large datasets and mathematical operations. In addition, the workshop also focused on the integration of **Python** with **IoT**, a rapidly growing field that merges

physical devices with the digital world.



Students were introduced to practical problem-solving strategies using Python, which not only honed their programming skills but also gave them a solid foundation for future projects in **IoT**. The workshop sparked the interest of many students, as it highlighted the potential of combining programming with real-world applications in IoT. This event was an enriching experience, preparing our students for challenges in the evolving tech industry.





### IoT Technology Seminar

*Date: 28th September 2022*

The IoT journey continued on the 28th of September, 2022, with a **seminar on IoT Technology**. **Mr. Siva Kumar**, CEO of **Skill Up by Simplilearn**, led the seminar with an in-depth discussion on **IoT Architecture and Models**. This seminar was designed to give students an understanding of how IoT systems are structured, along with the various models that drive their development. Mr.

Kumar explained how these architectures are applied in **Embedded Systems**, which are crucial for designing and developing IoT solutions.

The session was particularly valuable for students aspiring to work in the **Embedded Systems** and **IoT design** fields, as it provided them with practical knowledge on how devices interact within a network, the complexities of IoT design, and the latest trends in IoT technology. With the increasing significance of IoT across industries, this seminar was a stepping stone for student's keen on pursuing careers in this transformative field.



## **Add-on Course: Advanced Java Programming**

*Date: 12th September 2022 – 20th September 2022*

To provide students with more specialized knowledge, an **Add-on Course on Advanced Java Programming** was conducted from 12th to 20th September 2022. The course was taught by **Ms. V. Valarmathi**, a visiting professor from **IT Experts Systems**. This course was designed to offer students a deep dive into **Java programming** at an advanced level, with a focus on developing skills for large-scale software development.

Through hands-on sessions, students learned about the latest features of Java, its role in enterprise-level applications, and its compatibility with modern-day technologies like **cloud computing** and **big data**. The course was highly interactive, and students were encouraged to develop practical skills by building their own projects using Java. By the end of the course, participants were equipped with the knowledge to tackle complex

software development challenges and were better prepared for careers in technology.



## **Extra-Curricular Activity: Holistic Health Awareness**

*Date: 18th November 2022*

As part of the institution's commitment to promoting well-rounded development, an **Extra-Curricular Activity** was conducted on 18th November 2022 to incorporate **holistic health** into students' lives. This activity, conducted by **Ms. Subha**, our Physical Director, focused on the importance of physical and mental well-being. The session provided students with valuable tips on maintaining a balanced lifestyle, stress



management, and physical fitness.

The activity aimed to emphasize the role of **holistic health** in the life of a student, encouraging them to not only focus on academics but also on personal well-being. Engaging in such activities helps students stay active, sharp, and balanced, which in turn enhances their overall academic and personal growth. It was a refreshing break from the rigors of academics, promoting a healthier and more productive lifestyle.



### **National Level Symposium**

*Date: 4th November 2022*

One of the most anticipated events of the year, the **National Level Symposium**, was held on the 4th of November 2022,

hosted by the **ECE Department**. This year's symposium brought together students and experts to engage in various technical activities, including **Code Debugging, Projects Mania, Paper Presentations**, and **Technical Memes**, among others.

The event was organized by **Mr. Vignesh Chandasekaran**, Founder & CEO of **Vault Infos**, who played a pivotal role in curating the event's structure and ensuring that students had an enriching experience. Some of the most popular events included **Passing the Pass**, a team-based problem-solving activity, and **Dump Charade**, a fun and creative game that brought out students' innovative thinking.

The symposium provided a platform for students to showcase



their talents, learn from industry experts, and network with like-minded individuals. The event was a resounding success, offering participants an opportunity to engage in meaningful interactions and broaden their horizons in the tech space.



### Clubs/Association Inauguration and Activities

**IoT Club Inauguration** The Department of Electronics and Communication Engineering (ECE) at JNN Institute of Engineering (J.N.N.I.E) organized the inauguration of the **IoT Club** on **November 29th, 2022**, at the Seminar Hall. The event was graced by **Dr. Swarna Ravindra Babu**, Founder of **Coovum Technologies**, a pioneer in smart IoT solutions. Dr. Babu highlighted the future

potential of IoT, encouraging students to embrace innovation in this domain.

The event also featured a presentation by the club leaders, **Pattapu Kartheeck** (President) and **Simhadri** (Vice President), who outlined the club's vision, mission, and planned activities. The IoT Club, a student-led initiative, aims to foster learning, creativity, and innovation by organizing workshops, projects, competitions, and industry collaborations in the realm of IoT. The club is mentored by **Ms. Malathy N**, AP/ECE.

### IoT Club Activities

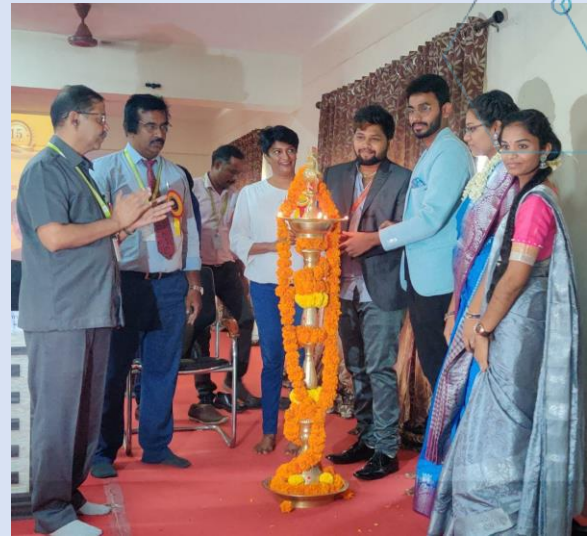
- **Class Timetable Integration:** Dedicated hours for IoT-related activities have been incorporated into the class timetable.
- **Sessions Conducted by Ms. N. Malathy and Mr. Panneerselvam:** A series of hands-on sessions were organized to provide students with a foundational understanding of IoT, including



programming with  
Arduino boards and  
sensors.



## VLSI Club Inauguration



On **February 14th, 2023**, the ECE Department inaugurated the **VLSI Club** at the Seminar Hall of J.N.N.I.E. The inauguration was officiated by **Mr. Kumar**, Chief Mentor, **VLSI Mentors**. This initiative aligns with the Department's strategic partnership with **VLSI Mentor**, aimed at enhancing competitive skills under the **National Skill Qualification Framework (NSQF)**, accredited by AICTE.

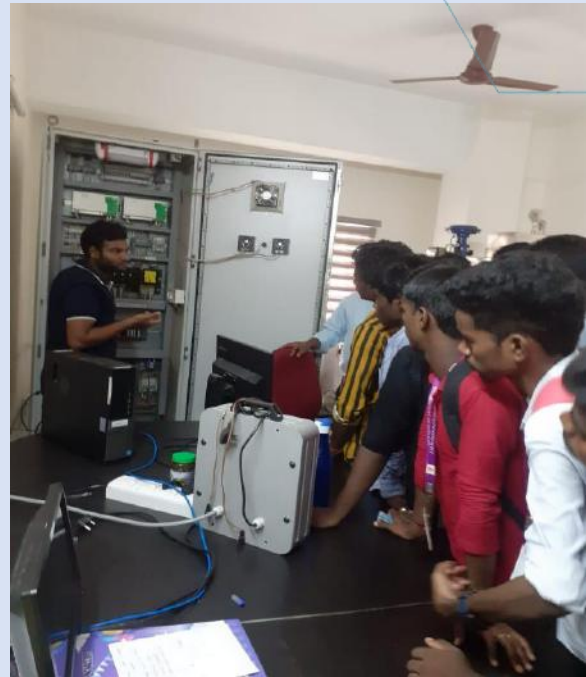
## *NEONTRIX'22 - 11th National Technical Symposium*

The ECE Department hosted the **NEONTRIX'22**, a **National Level Technical Symposium**, on **November 18th, 2022**. The symposium featured an exciting blend of technical, non-technical, and on-the-spot events.

- **Technical Events:**  
Paper Presentation, Project Expo, Technical Quiz
- **Non-Technical Events:**  
Product Marketing, Connections, Free Fire

With over **100 registrations** from 15 institutions, the event culminated in a **Valedictory Ceremony**, where winners were honored with certificates.

## **Industrial Visits**



1. **Infercon Automation (May 2022):** ECE students visited **Infercon Automation Pvt. Ltd.**, Chennai, to explore automation solutions and the industry's advancements in process efficiency and safety.
2. **Regional Meteorological Centre, Chennai (April 17th, 2023):** Students gained insights into **meteorological procedures**, such as air pressure monitoring, cyclone warnings, and satellite image analysis.



## Student Achievements

- **Paper Presentation Winners:** The **Final Year ECE students** won **first place** in a paper presentation event at **Kings Engineering College, Chennai**.
- **Symposium Prizes:** Students such as **Vijitha, Somu Sathvika, Ravichandrika, Vasudha**, and others secured prizes in the symposium conducted by **RMK Engineering College**.
- **Ganesh P** (III Year) won **First Prize** at the **Paper Presentation** event during the **Technical Symposium** at **Kings Engineering College**.
- **R. Sharmila** (III Year) participated and won in various events at **Electric 2k22**, including **Paper Presentation, Circuit Debugging, and Technical Quiz**.
- **Shaik Ansar** (II Year) completed the **Machine Learning with Python** course in **October 2022**.

- **R. Sharmila** also successfully completed courses on **Data Science and Python for Data Science**.

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## Extra-Curricular Achievements

- **Zonal Basketball:** The team secured **4th place**, with students **Poorna Rakesh, Samadhi Jayanth, Sanchi Pavan, V. Rakesh**, and **Srikanth** representing the **ECE Department**.
- **Zonal Kabbadi:** The team finished as **Runners-up**, with students **Kovipavan, Jayasai, Venkatesh**, and **Giri** showing commendable performances.

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## Startup Initiatives - KK Innovators

The third-year ECE students launched **KK Innovators**, a startup focused on manufacturing **cost-effective E-Vehicles**. The startup was inaugurated by the

**Vice Chairman and Principal of J.N.N.I.E on November 14th, 2022, at the Incubation Centre.** The founding members include **Kathiravan A, Godson J, Arun Kumar L, Sanjay M, Lingashwaran R, Jagadish R, Bala K, and Vignesh S.**



## Faculty Achievements

### Ms. Malathy N:

- Published a **Patent** on "Machine Learning based Multi-Stage Solar Thermal Power Generation and Poly-

Generation System" (September 2022).

- Completed an **IoT Programming** course and an **Electric Vehicles and Mobility** course via Coursera (October 2022).
- Dr. Joseph Jeyakumar, Ms. Shanmathi B, Ms. Smitha P, Mr. Murali M, and Mr. Mariselvam M:** Published a paper titled "Hermitan matrices based malicious cognitive radio detection" in the **Indonesian Journal of Electrical Engineering and Computer Science** (May 2023).
- Dr. Srihari T:**
  - Participated in the **IP Awareness/Training Program** (December 2022).
  - Completed the **Incubation Management Program** on **Investment Management** at PSG College of Technology (December 2022).



## Looking Ahead

The Department of Electronics and Communication Engineering at JNNIE continues to thrive with numerous activities, achievements, and the dedication of both students and faculty. The ongoing development of the **IoT Club** and **VLSI Club**, alongside the establishment of student startups, showcases the department's commitment to fostering **innovation, industry collaboration, and entrepreneurship.**





# **EDITORIAL BOARD**

## **Editorial Members**

### **Faculty Coordinators:**

Mr. M. Mariselvam

### **Student's Convenors:**

1. Godson J, 3<sup>rd</sup> year
2. Valluru Mahesh Babu, 4<sup>th</sup> year
3. David Abishek. M, 2<sup>nd</sup> year