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# CIRCUIT TIMES

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**S**  **CE** | SRI VENKATESWARA  
COLLEGE OF  
ENGINEERING

DEPARTMENT OF  
ELECTRONICS AND  
COMMUNICATION  
ENGINEERING

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## VISION OF THE DEPARTMENT

To excel in offering value based quality education in the field of Electronics and Communication Engineering, keeping in pace with the latest developments in technology through exemplary research, to raise the intellectual competence to match global standards and to make significant contributions to the society.

## MISSION OF THE DEPARTMENT

- To provide the best pedagogical atmosphere of highest quality through modern infrastructure, latest knowledge and cutting edge skills.
- To fulfill the research interests of faculty and students by promoting and sustaining in house research facilities so as to obtain the reputed publications and patents.
- To educate our students, the ethical and moral values, integrity, leadership and other quality aspects to cater to the growing need for values in the society.

## Program Educational Objectives (PEOs)

PEO1: Create value to organizations as an EMPLOYEE at various levels, by improving the systems and processes using appropriate methods and tools learnt from the programme.

PEO2: Run an organization successfully with good social responsibility as an ENTREPRENEUR, making use of the knowledge and skills acquired from the programme.

PEO3: Contribute to the future by fostering research in the chosen area as an ERUDITE SCHOLAR, based on the motivation derived from the programme.

## Program Specific Outcomes (PSOs)

PSO-1: An ability to apply the concepts of Electronics, Communications, Signal processing, VLSI, Control systems etc., in the design and implementation of application oriented engineering systems.

PSO-2: An ability to solve complex Electronics and communication Engineering problems, using latest hardware and software tools, along with analytical and managerial skills to arrive appropriate solutions, either independently or in team.

# FACULTY ARTICLE

## 6G Technology in India-an overview

Mrs.K.Srividya, Assistant Professor/ECE

### 6G Technology in India

India with the vision of becoming the biggest telecom exporter for some time recently and the latest announcement by the government on taking the lead in developing 6G technology services in India has received a warm welcome by all. In the connected world, the evolution of wireless networks is constantly progressing. With 5G technology, the world has witnessed a revolutionary shift in mobile communication, offering unprecedented speed, low latency, and massive connectivity. The recently revealed Bharat 6G Vision Document encompasses India's 6G roadmap and execution plans for this ambitious vision.

### The Next Level Technology:

6G technology is the next generation of mobile networks that is expected to be even more diverse than their predecessors and likely to provide higher capacity, much faster internet speeds, connectivity, and ultra-low latency. According to experts in the field, the 6G network is expected to be 100 times faster than the current 5G network, offering data speeds of up to 1 terabyte per second. The 6G network will also have the ability to support

millions of devices simultaneously, making it an ideal technology for applications such as the Internet of Things (IoT), autonomous vehicles, and smart cities.

The development of 6G technology is still in its infant stage, and it is expected to take some time before the network is available to consumers. However, countries such as Japan, China, and South Korea have already begun research and investments in 6G technology. India has joined the race to develop 6G technology and has already announced its plans to form a high-level panel to evaluate the potential of 6G technology and recommend steps for its adoption.

### India's Unique Approach to Developing 6G Technology:

India has always been at the forefront of technological advancements, and the country's approach to developing 6G technology is unique. Unlike other countries, which are focusing solely on research and development, India is taking a more holistic approach by involving various stakeholders in the process.

The Indian government has announced plans to form a high-level panel consisting of experts from industry, academia, and government agencies to evaluate the potential of 6G technologies and recommend steps for its adoption. The panel will also work towards identifying key technology trends, research directions, and potential applications of 6G technology.

The panel's formation is a significant step towards developing a unique 6G network in India. By involving experts from various fields, the government aims to create a network that is tailored to the needs of the country. India has a unique set of challenges, such as a vast rural population, limited infrastructure, and a diverse landscape. Hence, the network's design must consider these factors to ensure that it is effective and accessible to everyone. Another significant step that India is taking toward developing a unique 6G network is by promoting indigenous innovation. The Indian government through its 'Make in India' concept has launched several initiatives to encourage homegrown technologies in various sectors. In the telecom sector, the government via the 'Make in India' initiative aims to promote the manufacturing of telecom equipment in India.

By promoting indigenous innovation, India aims to reduce its dependence on foreign technology and create a self-sufficient ecosystem.

This approach will not only boost the local economy but also ensure that the network is secure and reliable. Just as the applications of today are built on the foundation of multimedia, we envision future applications to use the digital world as the framework. Dynamic digital twin world would be accurate, high-resolution representations of the physical world.

#### **Conclusion:**

It is considered that this decade in India to be 'tech-ade' with immense movement happening in the technology space. However, the development of 6G technology is still in its early stages and will have its share of challenges. But by involving members from various ministries, research and development heads, telecom service providers, academia, and standardization bodies to make the 6G plan into a reality and also foster indigenous innovation, the government is geared up towards providing affordable and reliable connectivity to all.

# ACHIEVEMENTS

## FACULTY PARTICIPATION

- Mrs.S.Kousalya, Mrs.B.Sarala, Mr.P.Arul, Dr.K.Kavitha, Mr.L.K.Balaji Vignesh, Mr.D.Silambarasan has attended five days workshop on “Arm India VLSI to System Design: Silicon to End Application Approach” organized by All India Council for Technical Education (AICTE), Arm Education and STMICROELECTRONICS from 31st July 2023 to 4th August 2023.



- Dr.M.Bindhu, Mr.L.K.Balaji Vignesh has attended two days workshop on “Designing IoT Applications” organized by Department of Information Technology & Department of Mechanical Engineering, Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur from 2nd August 2023 to 3rd August 2023.

- Mrs.S.Mary Cynthia has participated in a five days Faculty Development Programme on “Python Programming” conducted by ICT Academy at Rajalakshmi Institute of Technology, Chennai from 1st August 2023 to 5th August 2023.



- Mr.P.Arul, Mr.N.Sathish, Dr.R.Priyadarshini has participated in "Digital India RISC V Symposium-A Tech Showcase for India's Future Electronics" organized by IIT Madras, Ministry of Electronics and Information Technology (MeitY), IITM Pravartak held on 6th August 2023.
- Mr.L.K.Balaji Vignesh has participated in three days Faculty Development Programme on "Idea Generation Methods" conducted by ICT Academy at Annai Veilakanni College for Women, West Saidapet, Chennai from from 7th August 2023 to 9th August 2023.

- Dr.D.Menaka has attended Two Weeks Faculty Development Program on "Machine Learning in the age of AI: Algorithms, Models and Beyond" organized by Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) conducted byKPR institute of science and technology, Coimbatore from 21st August 2023 to 01st September 2023.

- Mr.P.Arul, Mrs.S.Mary Cynthia, Dr.R.Priyadharshini, Dr.K.Kavitha, Mr.D.Silambarasan, Mr.L.K.Balaji Vignesh has participated in “Mulsemmedia and IoT- a natural combination” organized by VIT Chennai held on 30th August 2023.

## STUDENT PARTICIPATION

- 36 Students (02-II Year ECE, 34-III Year ECE) has participated in “Digital India RISC V Symposium-A Tech Showcase for India’s Future Electronics” organized by IIT Madras, Ministry of Electronics and Information Technology (MeitY), IITM Pravartak held on 6th August 2023.

- Dr.T.J.Jeyaprabha acted as Reviewer for the International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics (AIKIIIE-2023) organized by Rao Bahadur Y. Mahabaleswarappa Engineering College (RYMEC), Ballari, Karnataka on 02 & 03 November 2023.

- Dr.T.J.Jeyaprabha acted as a Reviewer for the manuscript A Block chain based Provably Secure Anonymous Authentication for Edge Computing-enabled published by The Journal of Supercomputing, Springer Nature SNAPP.

## REVIEWER/EDITORIAL BOARD MEMBERS

- Dr.T.J.Jeyaprabha, Mr.L.K.Balaji Vignesh acted as Reviewer for the IEEE International Conference - Networks, Multimedia and Information Technology (NMITCON) organized by Nitte Meenakshi Institute of Technology, Bengaluru, INDIA during 1st and 2nd September 2023 in association with IEEE Bangalore Section.



## FACULTY ACHIEVEMENT

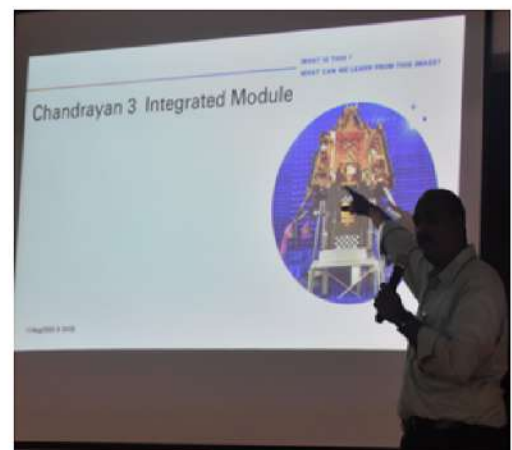
- Dr.A.Prasanth has delivered a guest lecture on the topic of “Recent Technologies in AI Enabled IoT” organized by AVS College of Technology, Salem held on 17th August 2023.
- Dr.T.J.Jeyaprabha received RAMFO Academic and Research Excellence Awards (RARE Awards) 2023-Distinguished Educator Award 2023 from RK Foundations on 12th of August 2023.



- Dr.T.J.Jeyaprabha gave an expert delivery on “HACKATHON PREP: Tips and Tricks (Pre-Hackathon Webinar) on 10th of August 2023 organized by the IETE-SF of ECE Department, Velammal Institute of Technology, Panchetti, Chennai.

## EVENTS

- ECEA, IETE-SF and RAIC of ECE Department lead by Dr.T.J.Jeyaprabha, ASP, ECE (Coordinator) and Mr.S.Elangovan, AP, ECE (Assistant Coordinator) inaugurated all 3 students clubs for the year 2023-24 on 11th August 2023. The invited dignitary was Shri.Arulmani Arunachalam, Subject Matter Expert Liquid Hydrogen Handling systems, Shell Shipping and Maritime Technology(SMT), Bangalore.



## Alumni Activities

- Mr.Ahnirudh Yeshwanth Raj, Ernst and Young LLP, 2015-19 Batch ECE alumnus delivered a lecture on the “Future of SAP Careers” on 8th August 2023.



- ECEA, IETE-SF and RAIC of ECE Department lead by Dr.T.J.Jeyaprabha, ASP, ECE (Coordinator) and Mr.S.Elangovan, AP, ECE (Assistant Coordinator) organized Circuit Debugging Event “Voltage Verdict” for the II year (2023-24) students on 31st of August 2023. The winners of the events were First Prize - Mr.Manikandan S and Karthickraja P, Runners - Subasri J and Shruthika.



## **EDITORIAL BOARD**

### **CHIEF EDITOR**

Dr.G.A.SATHISH KUMAR  
**HOD/ECE**

### **CO-EDITORS**

Dr. A. PRASANTH

**ASSISTANT PROFESSOR, ECE**

Mr. L.K. BALAJI VIGNESH

**ASSISTANT PROFESSOR, ECE**

### **STUDENT EDITORS**

Mr. V.S.PRITHIVIRAJ - IV Year ECE

# Programme Offered By Department of Electronics and Communication Engineering

- B.E – Electronics and Communication Engineering
- M.E – Communication Systems
- Ph.D / MS (by Research)

Approved as a research center by Anna University, Chennai. (More than 48 Scholars doing their doctoral studies through our research center)

## TOP RECRUITERS

