OCTOBER 2024 VOL.4 ISSUE 10

SVCE | Sri Venkateswara College of Engineering

CIRCUIT TIMES

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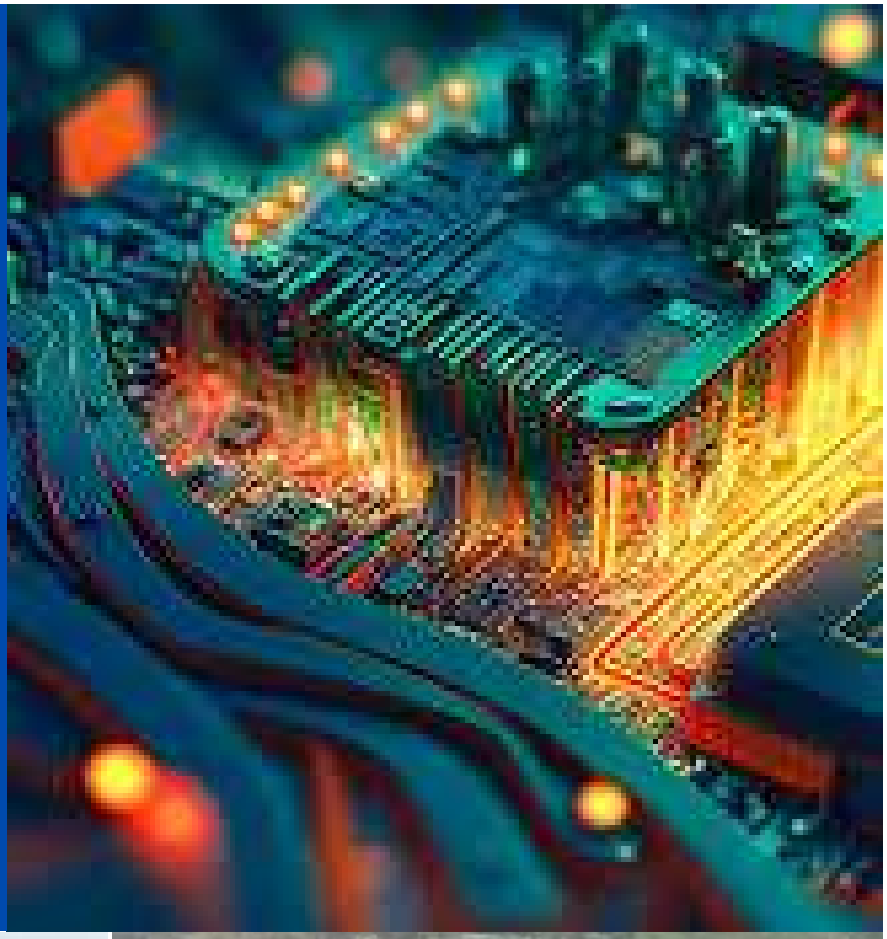


VISION OF DEPARTMENT

To lead the future of Electronics and Communication Engineering, through developing accomplished people, transformative research, distinguished academics, developing break-through innovations and sustainable solutions to serve society at the national and global level.

MISSION OF DEPARTMENT

By fostering a culture of continuous learning and knowledge acquisition in electronics and communication engineering through rigorous academic programs, research opportunities, industry collaborations, with provision of necessary resources and support.

By nurturing an environment that empowers learners to progress and reach their full potential, contributing to the advancement of Electronics and Communication Engineering and prosper in their careers.

By contributing to society through innovative and sustainable engineering solutions to tackle national and global issues, thereby enhancing the quality of lives and communities.

FACULTY ARTICLE

PROGRAMMING IN EMBEDDED SYSTEMS USING LAMBDA

Dr.A.Ramya, M.E., Ph.D,
Assistant Professor, Department of Electronics and Communication Engineering,
Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur

Exploring the Lambda Concept:

In the modern tech landscape, understanding lambda functions and their applications is essential for Engineering students. These concepts frequently arise in technical interviews, coding assessments and even practical applications in fields like embedded systems, signal processing and cloud computing. Let's dive into why the lambda concept is critical for Electronics and Communication Engineering students.

1.LAMBDA FUNCTION

In programming, a lambda function is an anonymous function-meaning it's a function without a formal name. Often used for short, quick operations, lambda functions streamline code and make it more readable. By defining functions inline, lambdas let you perform calculations, data filtering, and transformations on the fly. Lambda functions have various applications in functional programming languages, like Python and JavaScript, which are frequently used in automation, data processing and embedded systems-all relevant to Electronics and Communication Engineering.

2.KEY AREAS FOR ELECTRONICS AND COMMUNICATION ENGINEERING STUDENTS

2.1 Programming in Embedded Systems and Signal Processing

- Embedded systems increasingly rely on high-level programming languages to enable complex operations while maintaining efficiency. Using lambda functions, ECE students can write concise, efficient code for microcontrollers and embedded applications, which often handle data transformations and real-time event responses.
- In digital signal processing, for instance, lambda functions can be handy for inline filtering and transformation of data streams, simplifying code by avoiding verbose function definitions.

2.2 Lambda in Cloud Computing and serverless Architecture

- AWS Lambda, a serverless compute service by Amazon, is another vital concept for ECE students, especially those interested in IoT and cloud-based applications. AWS Lambda allows you to run code in response to events without managing infrastructure, ideal for IoT devices that need efficient data handling and event-driven responses.
- Understanding AWS Lambda and similar services (like Azure Functions and Google Cloud Functions) will be useful as IoT.
- Familiarize yourself with the syntax:

```python
double = lambda x: x * 2
```

2.3 Lambda Matters

The lambda concept goes beyond coding; it encompasses a mindset of writing efficient, functional and versatile code. Mastering lambda functions enables ECE students to excel in interviews, tackle real-world problems and leverage cutting-edge technologies. Whether you are interested in embedded systems, signal processing or cloud computing, lambda functions open doors to exciting opportunities and help you stand out in the tech landscape.

2.4 Real-Time Application of Lambda Functions

Signal Filtering in Embedded Systems Lambda functions are especially useful in real-time applications where concise, efficient code is critical, such as signal processing in embedded systems. Consider a scenario in which you are working with an IoT device (like a wearable health monitor) that collects continuous data from sensors such as heart rate or temperature. Often, raw sensor data needs to be cleaned or filtered in real-time before further processing or storage.

2.5 Code With Lambda

Here's how lambda functions can be used for real-time signal filtering in this scenario. The heart rate monitor sensor produces some noisy data due to physical movement. To smooth out this noise, you can apply a simple moving average filter. Using a lambda function, you can write this filter directly within your data pipeline without creating a separate function, saving both space and execution time. In Code Implementation, the device reads a new heart rate value every second. Using a lambda function, you can apply a moving average filter on the fly to smooth the sensor data.

- Familiarize yourself with the syntax:

```python
#Sample heart rate readings
heart_rate_data = [80, 82, 83, 100, 78, 85, 90]
#Moving average filter with lambda window_size = 3
smoothed_data=list(map(lambdai:sum(heart_rate_data[i:i+
window_size])/window_size,
range(len(heart_rate_data) - window_size + 1)))
print(smoothed_data)
# Output might look like [81.67, 88.33, 87.0, ...]
```

3.BENEFITS:

- **Efficiency**: Lambda functions reduce overhead by allowing concise, inline code that executes fast on limited hardware.
- **Real-Time Processing:** Since the lambda expression is directly applied within the data pipeline, it enables real-time filtering without needing additional memory or computational resources.
- **Scalability:** Lambda functions can be easily adapted to different filter types or window sizes, making them flexible for diverse sensor types or applications. This approach showcases the power of lambda functions in real-time signal processing within embedded systems.

4.CODE WITHOUT LAMBDA

Here's how the moving average filter code would look without using a lambda function. Instead of an inline lambda, we will define a separate function to calculate the moving average.

- Familiarize yourself with the syntax:

```python code without Lambda
heart_rate_data = [80, 82, 83, 100, 78, 85, 90]
def moving_average(data, window_size):
averages = []
for i in range(len(data) - window_size + 1):
window_avg = sum(data[i:i + window_size]) / window_size
averages.append(window_avg)
return averages
window_size = 3
smoothed_data = moving_average(heart_rate_data, window_size)
print(smoothed_data)
#Output might look like [81.67, 88.33, 87.0, ...]
```

FACULTY PARTICIPATION

(SEMINAR/FDP/STTP/WORKSHOP/ONLINE COURSE/CONFERENCE)

- **Mrs.S.Mary Cynthia** participated in **Six Days Online Faculty Development Program** on the topic of **"Recent Trends in Biomedical Engineering"** organized by Department of Nanobiomaterials, SIMATS, Engineering, SIMATS, Thandalam from 07.10.2024 to 12.10.2024


SIMATS ENGINEERING
Approved By AICTE | IET-UK Accreditation

CERTIFICATE
OF PARTICIPATION

This certificate is presented to

Mr / Ms S.MARY CYNTHIA

SRI VENKATESWARA COLLEGE OF ENGINEERING

has participated in 6 Days Online Faculty Development Program (FDP) on
"Recent Trends in Biomedical Engineering"
Organized by the Department of Nanobiomaterials,
SIMATS Engineering, SIMATS, Thandalam,
Chennai 602105, Tamil Nadu, India. Held on 07th - 12th Oct 2024

HoD
Dr. R. Geetha

Coordinator
Dr. K. P. Indira

Principal
Dr. B. Ramesh

- **Mr.K.Venkatesh** participated in **one day workshop** on the topic of **"Fintech and Blockchain"** organized by Department of Information Technology, Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur on 09.10.2024
- **Mrs.S.M.Mehazabeen** has successfully completed the Microsoft India and SAP India-led Faculty Development Program on **"Applied AI: Practical Implementations"** under the TechSaksham Program from 14.10.2024 to 18.10.2024


Microsoft edunet foundation SAP

TechSaksham

CERTIFICATE

TSPLMS_597234

This is to certify that

Mehzabeen S M

from **Sri Venkateswara College of Engineering**
for successful completion of Microsoft India & SAP India led
Faculty Development Program on "Applied AI: Practical Implementations" under
TechSaksham Program from "14th Oct 2024 - 18th Oct 2024".

Gunjan C. Patel
AI National Skills Director
Microsoft Philanthropies

Dr. Sunil Luthra
Director, Training and Learning Bureau
AICTE

Rahul Baheti
Chief Business Officer
SAP India

Nagesh Singh
Executive Director
Edunet Foundation

FACULTY PARTICIPATION

(SEMINAR/FDP/STTP/WORKSHOP/ONLINE COURSE/CONFERENCE)

- **Mr.P.Arul** participated in **Ten Days workshop series** on the topic of **"From Scratch to Deployment: Hands-On Model Building with Keras and TensorFlow"** organized by Department of Computer science and Engineering, Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur from 14.10.2024 to 25.10.2024

- **Dr.T.J.Jeyaprabha** participated in **Five Days Online Faculty Programme** on the topic of **"Current Trends in IT Industry"** organized by Department of Information Technology, Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur from 21.10.2024 to 25.10.2024

- **Mrs.M.Stella Mercy** participated in **Five Days Online Faculty Programme** on the topic of **"Advanced Communication Systems"** organized by National Institute of Technical Teachers Training and Research, Chennai from 21.10.2024 to 25.10.2024

FACULTY PARTICIPATION

(SEMINAR/FDP/STTP/WORKSHOP/ONLINE COURSE/CONFERENCE)

- **Mrs.S.M.Mehazabeen** has successfully completed **One week Faculty Development Program (Online)** on **"Research Innovations and Implementation Methods (RIIM 2024)"** conducted by **IMS Engineering College, Ghaziabad, Uttar Pradesh** from 21.10.2024 to 25.10.2024

IMS Engineering College, Ghaziabad

CERTIFICATE

OF APPRECIATION

This is to certify that

Ms. Mehzabeen S M

Assistant Professor

from

Sri Venkateswara College of Engineering

has successfully attended One-week Online Faculty Development Program (FDP) on **"Research Innovations and Implementation Methods (RIIM-2024)"** under the aegis of Internal Quality Assurance Cell (IQAC) during 21st Oct to 25th Oct 2024, organized by the Department of Electronics and Communication Engineering at IMS Engineering College, Ghaziabad, Uttar Pradesh, India.

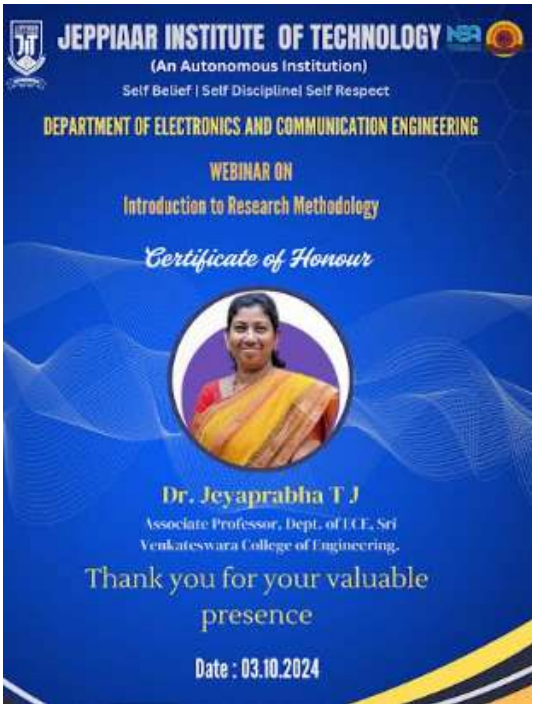
Dr. Ajay Kumar, Asst. Prof.-ECE (Coordinator)

Prof. (Dr.) Priyanka Bhardwaj Dean R&D and HoD-ECE

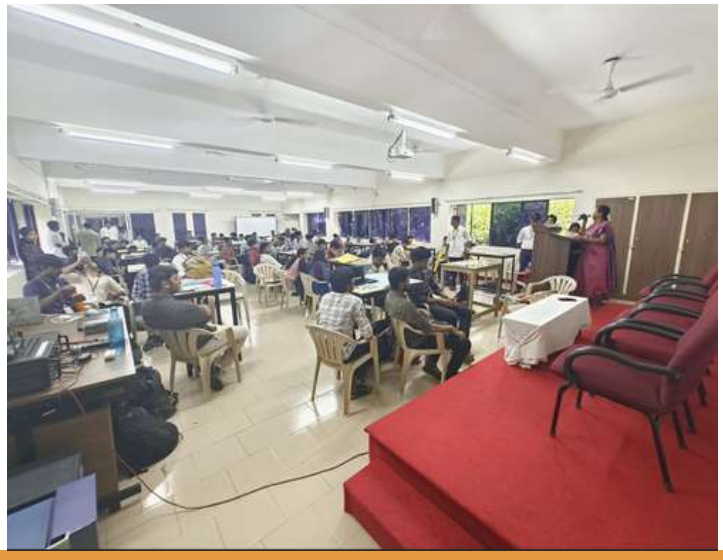
Prof. (Dr.) Shailesh Tiwari Director

FACULTY ACHIEVEMENTS

- **Dr.T.J.Jeyaprabha, Associate Professor/ECE** has delivered a Technical talk on the topic of **"Introduction to Research Methodology"** organized by the Department of Electronics and Communication Engineering held at **Jeppiaar Institute of Technology (Autonomous), Sunguvarchatram, Sriperumbudur (Taluk)** on 03.10.2024



- **Dr.R.Gayathri, Professor/ECE** has delivered a **Technical talk** on the topic of **"Recent Innovation and Advances in Optical Network"** organized by the Department of Electronics and Communication Engineering held at **St.Peter's College of Engineering and Technology (Autonomous), Chennai** on 04.10.2024
- **Dr.T.J.Jeyaprabha, Associate Professor/ECE** acted as a **chief guest of honour** for **GDSC inauguration** organized by the Department of Computer science and Engineering held at **Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur** on 19.10.2024



FACULTY ACHIEVEMENTS

- **Mr.S.Senthil Rajan, AP/ECE** has delivered a **Technical talk** on the topic of **"Design and Analysis of RF/Microwave Filters" in five days Value Added Course (5 Days) on "AI-Enhanced Antenna Design and Testing Techniques for Next-Gen Biomedical and 5G/mm-Wave Applications"** organized by the Department of Electronics and Communication Engineering in association with Idea Laboratory held at **Rajalakshmi Engineering College (Autonomous), Chennai** on 22.10.2024
- **Dr.S.Vidhyashree, AP/ECE** has delivered a **Technical talk** on the topic of **"Design and Analysis of Broadbanding Microstrip Reflectarray Antenna" in five days Value Added Course (5 Days) on "AI-Enhanced Antenna Design and Testing Techniques for Next-Gen Biomedical and 5G/mm-Wave Applications"** organized by the Department of Electronics and Communication Engineering in association with Idea Laboratory held at **Rajalakshmi Engineering College (Autonomous), Chennai** on 23.10.2024


RAJALAKSHMI ENGINEERING COLLEGE
INSTITUTION'S INNOVATION COUNCIL
IEEE RAJALAKSHMI ENGINEERING COLLEGE STUDENT BRANCH
IEEE AP-S

CERTIFICATE
OF APPRECIATION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Mr. S. Senthil Rajan, Assistant Professor [SG]

from the Department of ECE, Sri Venkateswara College Of Engineering has acted as a **RESOURCE PERSON** in the Five Days Value Added Course on "AI-Enhanced Antenna Design and Testing Techniques for Next-Gen Biomedical and 5G/mm-Wave Applications" during 22nd - 26th October 2024 organized by the Department of ECE in association with Idea Lab at REC

Dr. L. Bhagyalakshmi, Prof. & Head, ECE
Dr. M. Palanivelan, Idea Lab & Director, PG Studies
Dr. S. N. Murugesan, Principal

- **Dr.T.J.Jeyaprabha, Associate Professor/ECE** acted as a **chief guest of honour** for **E-Cell inauguration** organized by **Sri Venkateswara College of Engineering (Autonomous), Sriperumbudur** on 29.10.2024

FACULTY PUBLICATION

- **Dr.R.Gayathri, Mrs.S.M.Mezhabeen, Mrs.S.Mary Cynthia, Mr.M.Venkatesan** and **Mrs. S.Nandhini** published a patent titled **"Development of Neuro-Bionic Prosthetic Hand Control using EEG"**, in **Intellectual Property Rights, Application number: 202441076602 A,** filed on 09.10.2024 and published on 18.10.2024.
- **Dr.P.Pattunnarajam** presented a paper tilted **"Innovative Approaches in Advanced VLSI Design for High-Performance Computing Applications"** in Second IEEE International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI 2024) organized by **JCT College of Engineering, Coimbatore** from 28.10.2024 to 30.10.2024
- **Mr.L.K.Balaji Vignesh** and **Mr.A.Mahadevan** presented a paper tilted **"Innovative Approaches in Advanced VLSI Design for High-Performance Computing Applications"** in Second IEEE International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI 2024) organized by **JCT College of Engineering, Coimbatore** from 28.10.2024 to 30.10.2024

Multibiometric Authentication System using Gesture Recognition

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***Abstract*— To successfully increase the security of the system in today's environment, person authentication is required. It is undeniably true that most individuals would prefer to be authenticated in the simplest and most transparent way possible, without having to remember a personal identification number. Identity verification is necessary for many everyday activities. Both the ear and the palm's features are recorded, and corresponding feature vectors are created. The score level values are obtained following the fusion process, and the values below the threshold values are deleted and the values over the threshold values are authenticated using the Gaussian Log Gabor filtering method. In this regard, a multi-biometric system based on a person's gesture can be employed. It uses the complementing physical and behavioral characteristics of the ear and palm, two separate biometrics. The transfer function is the log Gabor method. The system's reliability is effectively increased by the aforementioned technique. The main benefit was created based on the merging of two biometric systems to enhance performance as a whole. Various feature extraction, feature matching, and data fusion approaches are used to determine the saliency and correlation of the data that each sensor has collected. The outcomes also imply that the proposed algorithms outperform existing algorithms in terms of performance.**

Keywords*— *Ear and palm authentication, Gaussian filtering, Biometrics, Log gabour feature extraction.

I. Introduction

Systems are necessary in today's society to give people safe spaces and services. This is often done by gathering some sort of data from the person and comparing it to the system's database of legitimate users. The term "biometrics" describes a person's physiological or behavioural characteristics that can be used to uniquely identify that person using any one of the biometric systems or a combination of any two characteristics. Computer science uses realistic authentication, often known as biometric authentication. Today, proving a person's identity is often required in order to enter a prohibited place. Tokens, passwords, and other convectional systems can be used to accomplish this [1, 2]. They may, however, be shared, taken, lost, or destroyed. Therefore, the use of biometric systems for accurate individual identification is successful. Due to its significance for many different multimedia applications, image authentication approaches have recently attracted a lot of attention. More and more digital photographs are being sent over insecure networks like the Internet. Several strategies are employed to safeguard the validity of multimedia images [3]. These methods include traditional cryptography, and image-based digital signatures. According to the service they offer, such as stringent or selective authentication, tamper detection, location and reconstruction capabilities, and robustness against various desirable image processing activities, image authentication systems are categorized. Biometrics is concerned with physical or behavioural traits that can be used to identify people. The dual nature of the ear and palm motions is taken into account in the suggested solution for simple authentication and prevention of theft from unauthorized users. For instance, proving a person's identification is frequently required in order to access high security areas, enter an organization, or utilize e-commerce services. Passports, tokens, keys, access cards, personal identification numbers, passwords, and other traditional methods of identification are available. Passwords, etc., may be forgotten, cracked, or shared, and it may be stolen, lost, or duplicated. These flaws also prevent the organization from correctly identifying a person [4]. The distinguishing characteristics' individuality, durability, and the ability to collect are lost. The development of ear with palm biometrics has been greatly influenced by the expanding demand for novel biometric procedures.

II. Related Works

Liu Shen et al., in the year 2014, presented a pipeline for a biometric recognition system, a framework for ear recognition is put forth. For ear localization and CNN for ear recognition, it makes use of support vector machines. The proposed method's viability has been assessed. This study uses CNNs to produce accuracy of 97.9% without any image preprocessing, demonstrating the potential of the suggested method for biometric recognition.

FACULTY PROPOSAL SUBMISSION

- **Mr.P.Arul** and **Dr.A.Ramya** received **Rs.1,00,000 seed money** for the research proposal titled **"Risk assessment and prediction of heart related diseases using multimodal CNN and HRV parameters"** through **SVCE Intramural Research Grant** (Academic year 2024-2025) on 10.10.2024

STUDENT PARTICIPATION

(Co-curricular Activities/Extra-curricular Activities)

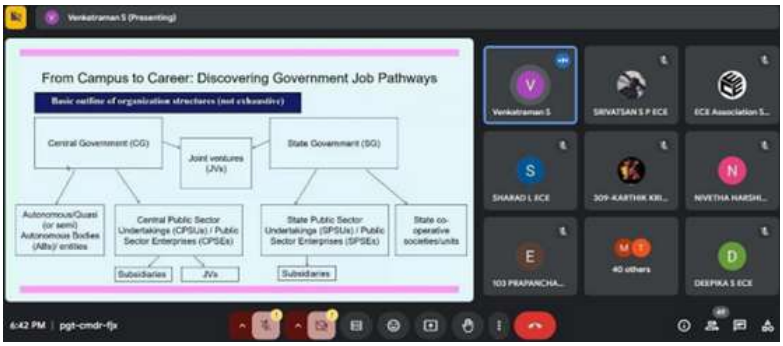
- **Ms.A.S.Nivashini** and **Mr.K.Mukesh (II Year ECE)** has participated in **CHEMINNOTHON'24 (Internal Hackathon)** organized by Department of Chemical Engineering, Sri Venkateswara College of Engineering (Autonomous), Chennai from 18.10.2024 to 19.10.2024

- **Mr.S.K.Vikash (III Year ECE)** has participated in **Paper presentation (KRATORQ'24)** in the topic of **"Wearable Sensor for Elderly People"** organized by Department of Mechanical Engineering, **SRM Institute of Science and Technology, Vadapalani Campua, Chennai** from 22.10.2024 to 23.10.2024

- **Ms.R.Bawadharani Sree (II Year ECE)** has participated in **Paper Presentation (Spark 2 Science)** held at **Sri Venkateswara College of Engineering (Autonomous), Chennai** on 25.10.2024

EVENTS ORGANIZED

- The **Electronics and Communication Engineers Association (ECEA)** of Sri Venkateswara College of Engineering, Sriperumbudur organized an **online guest lecture** on **"From Campus to Career: Exploring Government Job Pathways"** on 19.10.2024 from 6.30 p.m to 8.00 p.m. The session was handled by **Mr.S.Venkataraman (PG Alumnus 2018-2020), Management Trainee (Electronics) at a CPSE, Government of India** to pre-final and final-year students.



- The Department of Electronics and Communication Engineering organized an **Industry supported course (EC22504-Physical VLSI Design)** on the topic of **"Implementation Strategies"** at function hall on 25.10.2024. The session was handled by **Dr.Arun Janarthanan and Ms.Anusha Krishnamurthy from "HCL Technologies"** to pre-final-year students.

BIS ACTIVITIES

- **Mr. A. Mahadevan, Mr. L.K. Balaji Vignesh, Mr.D.Silambarasan and third year students** were attended the **World Standards Day-2024 celebrations** in **Kalaivanar Arangam, Chennai** on 14.10.2024 organized by **Bureau of Indian Standards, Ministry of Consumer Affairs, Food and Public Distribution, Government of India, Chennai Office.**

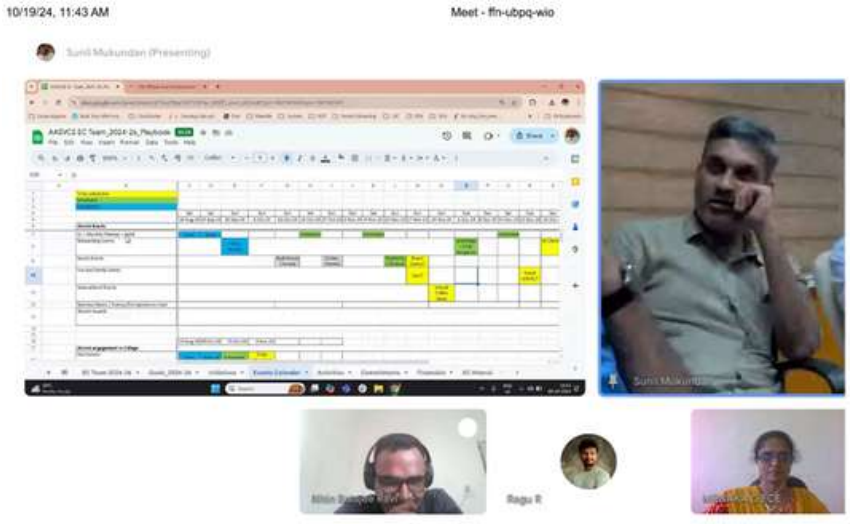
INDUSTRIAL VISIT

- **Around 116 Students** from **Third-year ECE and Four Faculty Members** have undergone Industrial visit to **Vi Microsystems Private Limited, Perungudi** on **28.10.2024 and 29.10.2024**

ALUMNI ACTIVITIES

- **Dr. D.Menaka** and **Mrs. S. Kalyani,** Alumni coordinators successfully organized a guest lecture on **Computer Vision and Face Recognition** on 18.10.2024, featuring **Mr. Elango Meenakshi Sundaram (ECE alumnus Batch 1993-1997),** Co-founder and CTO of FaceTagr, as the guest speaker. Mr.Elango shared his deep insights into the rapidly evolving field of computer vision, focusing on the technologies and the algorithms behind face recognition systems. He also discussed real-world applications, challenges in the field and how FaceTagr is pioneering advancements in this area. The session was highly engaging, providing students and faculty with a practical understanding of how these technologies shape industries today.

- **Dr.D.Menaka, Head Alumni Relations, Executive member, SVCEAA** attended the executive meeting through virtual mode on 19.10.2024 and discussed the conduct of proconnect, project connect and the support of alumni towards Professor of practice, Internships and industrial collaborations.



ALUMNI ACTIVITIES

- **Dr.D.Menaka, Head Alumni Relations, Executive member, SVCEAA** coordinated the **Proconnect** series event on 25.10.2024. Around 220 students from ECE, IT, CSE, AD students attended this event and get benefitted.

ALUMNI TESTIMONIAL

Ms.Sowmya Venkateswaran,
Design Engineering Manager,
Cadence Design Systems, Bangalore

"I recently had the pleasure of revisiting Sri Venkateswara college of Engineering and being part of the Hackelite 2024. It gave me an opportunity to look at the projects that the students had built so far. I also gave a small talk on my professional journey and current work. The experience was both nostalgic and fulfilling, allowing me to reconnect with my roots and share insights with the current students. The students were very attentive and curious, asking insightful questions that sparked meaningful discussions. Their enthusiasm reminded me of my own days at the college and it was rewarding to see such interest in the topics. I had addressed the vast areas of engineering fields to the students were focusing on. I also appreciated the opportunity to connect with faculty members, reinforcing the strong sense of community that the college fosters. Overall, my visit was a wonderful blend of reflection and inspiration, and I left feeling energized by the potential of the students I met. I look forward to future opportunities to engage with the college community"**-Ms.Sowmya Venkateswaran, (Batch 2004-2008)**

PROGRAM OUTCOMES

PO1: Engineering Knowledge: 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.

PROGRAM OUTCOMES

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.

PROGRAM OUTCOMES

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 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 lifelong learning in the broadest context of technological change

PROGRAM EDUCATIONAL OBJECTIVES

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

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.

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PROGRAM OFFERED BY THE DEPARTMENT

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

EDITORIAL BOARD

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Assistant Professor/ECE

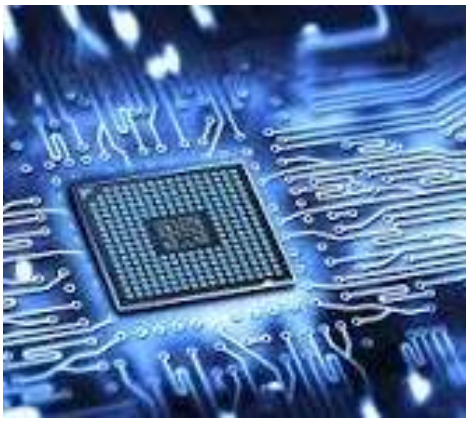
Sri Venkateswara College of Engineering

Autonomous Institution, Affiliated to Anna University, Chennai
Approved by the AICTE, Accredited by NAAC

ELECTRONICS AND COMMUNICATION ENGINEERING

ABOUT THE DEPARTMENT

The Department of ECE was started in the year 1985 and is presently accredited by the NBA. The postgraduate program (M.E) in Communication Systems was started in 2002. There are about 38 faculty members in the department and 14 of them are doctorates. The department is well equipped with lab facilities and software tools like IE3D, ADS, CST Studio, Lab View, Tanner Tools, Cadence, MATLAB, and Prototype Machine.



SALIENT FEATURES OF ECE

- The Program has been accredited by the NBA since April 2002.
- Recognized by Anna University, Chennai as an approved research centre for Ph.D. and MS (by Research) with effect from May 2009.
- The major thrust areas of research are RF and Microwave Engineering, Wireless Networks, Network Security, VLSI, Cognitive Radio, Image & Signal Processing, Neural Networks & Soft Computing, Embedded Systems & IoT, Machine Learning, Nano Technology, Robotics, and Artificial Intelligence.
- The department is doing a good number of consultancy work in the field of PCB Prototyping and RF measurements using a Network Analyzer.
- On average over 75 companies visit our department for campus placements External Research grant of Rs 48.26 Lakhs received from ISRO and Cognizant Technology Solutions in the last five years for carrying out various projects.
- Students actively participate in research projects related to Wireless Communications, Networking, Embedded Systems & IoT, Virtual Reality, Robotics, Drones etc.
- Student Counselling Service at SVCE is committed one to promote the mental health and well-being of our students by providing accessible, quality mental health services.
- Student counsellors are available on campus for confidential counselling to all students.
- The department has signed over 12 MOUs with reputed companies to ensure the Industry Institute Interaction.
- Training programs are being conducted to enhance the employability skills of the students and also to achieve good placement in various Industries.

MESSAGE FROM HoD's DESK

The Department of ECE consistently does a commendable job in disseminating the latest knowledge and inviting specialists from diverse domains for discussions on the most recent advancement and trends besides conducting regular classes. We hope every student who visits our department has an engaging, motivating and positive experience. We consistently strive to ensure that instructors and other staff personnel possess the necessary abilities and knowledge to stimulate their students' intellectual curiosity, creativity and critical thinking. I hope you enjoy your time here and thoroughly use our amenities for promising career development

Dr. G.A. SATHISH KUMAR HoD/ECE

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SCAN & APPLY

CHOOSING SVCE: A PATHWAY TO SUCCESS AND GROWTH

- One of the prestigious and top ranked Autonomous engineering institution affiliated to Anna University, Chennai.
- Accredited by NAAC and NBA.
- Over 28 % of the alumni work abroad.
- Highest placement offers of Rs.25 LPA and 20 LPA in PayPal and Amazon.
- Highly qualified faculty and staff with an average experience of over 20 years.
- World class Laboratories to foster innovation and research.
- Alumni working in fortune 500 companies like Google, Microsoft, Facebook, Mercedes Benz, INTEL, etc.,
- State-of-the- art-campus with modern amenities in the industrial corridor of Chennai.

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A Bachelor's Degree in Electronics and Communication Engineering with expertise in one of the following specialization

HONOURS SPECIALIZATION

Wireless Communication Systems

VLSI

Antenna and Microwave Technology

Signal Processing and Data Science

IoT Systems and its Applications

Networking and Security

Our Recruiting Companies

accenture, amazon, Deloitte., Infosys, wipro, Ford, Cognizant, CATERPILLAR, SCHWING Stetter, FLSmidth, PayPal, verizon, SIEMENS, ASHOK LEYLAND, ABB, ThoughtWorks, Tech Mahindra, Atos Syntel, Capgemini, TCS 50, YAMAHA, TechnipFMC, HEXAWARE, freshworks, Informatica, vedanta, wood., SAINT-GOBAIN, HCL, HYUNDAI, Honeywell, TVS, flex., TEMENOS

Top Universities where our students are pursuing Higher Education

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE, PennState Great Valley, THE UNIVERSITY OF MELBOURNE, WISCONSIN, UNSW AUSTRALIA, Northeastern University, UNIVERSITY OF MARYLAND

MINORS

Artificial Intelligence and Machine Learning and Machine Learning

Data Science and Analytics

Robotics

Semiconductors

Advanced Communications

Bio-medical Signal Processing

And Many More....

Sri Venkateswara College of Engineering

Autonomous Institution, Affiliated to Anna University, Chennai
Approved by the AICTE, Accredited by NAAC

DEPARTMENT OF ELECTRONICS AND COMMMUNICATION ENGINEERING

M.E COMMUNICATION SYSTEMS

ADMISSIONS OPEN FOR THE ACADEMIC YEAR 2024-25

SVCE started the Department of Electronics and Communication Engineering in the year 1985. The Department offers B.E. in Electronics and Communication Engineering and M.E. in Communication Systems. It is also approved as aResearch Centre in Ph.D and MS (by Research) programmes by Anna University, Chennai.

ABOUT SVCE

Sri Venkateswara College of Engineering (Autonomous) is a premier self-financing institution started in the year 1985. The college offers 10 B.E/B.Tech Programmes and 10 M.E/M.Tech Programmes in Engineering and Technology. The Programs are approved by AICTE and the college is affiliated to Anna University, Chennai. The college is also accredited by National Assessment and Accreditation Council (NAAC). Many programs are accredited by National Board of Accreditation (NBA). The college is also certified by ISO 9001:2015. The institution received the autonomous status in the year 2016. Our Vision is to be a leader in Higher Technical Education and Research by providing state-of-the-art facilities to transform the learners into global contributors and achievers.

ADMISSION INFORMATION

A pass in a recognized Bachelor's degree or equivalent in the relevant field and should have obtained atleast 50% in the qualifying degree examination. Admissions are through Tamil Nadu Common Entrance Test (TANCET) conducted by Anna University or GATE

RESEARCH GRANTS

Our faculty members have received major external research grants from prestigious organizations such as ISRO, AICTE, DRDO, and TNSCST, etc., to the tune of ₹56.26 Lakhs in the last three years for doing various funded projects.

SCHOLARSHIPS FOR PG STUDENTS

- Tution fee (Rs. 50,000/year) waiver for 30% of the students of sanctioned class strength on merit basis, as applicable.
- Management Scholarship for tution fees and assistance for books and instruments.
- GATE Scholarship of Rs. 12,400 per month for students having valid GATE Score. Sponsorships for students to attend conferences.
- Intramural M.E/M.Tech Student Research Grant to carry out innovative projects.

RESEARCH AREAS

Join the Revolution: Transform Communication Systems with SVCE

- Biomedical Instrumentation
- Computer Networks & Network Security
- Digital Signal Processing & Image Processing
- Embedded Systems
- Fiber Optic Communication
- IoT (Internet of Things)
- Nano Electronics
- RF & Microwave Engineering
- Robotics & Artificial Intelligence
- VLSI & Microelectronics
- Wireless Communication Networks

MAJOR RECRUITERS

ERICSSON, CSS CORP, TAFE, amazon, TATA COMMUNICATIONS, ZOHO Work. Online, Infosys, Cognizant, WIPRO, accenture High performance. Delivered., L&T Infotech, HCL