



NEWSLETTER

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JUN 2023 - AUG 2023

Department of
Electronics and Communication Engineering

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

Puducherry-605 107



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

An Autonomous Institution

Sri Manakula Vinayagar Engineering College (SMVEC) established in the year 1999. SMVEC is an autonomous institution affiliated to Pondicherry University. It offers 14 undergraduate, 8 postgraduate, and 11 research programs in Engineering, Architecture, Management Studies and Computer Applications. SMVEC has been accredited by NAAC with "A" grade and NBA. The institution is also accredited by TATA consultancy services. The college has a good placement record with students getting job offers from top MNC companies in India and abroad. SMVEC students have won many awards and accolades for their academic achievements.

INSIDE

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Vision

To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society

Mission

M1: Quality Education : To provide a comprehensive academic system that amalgamates the cutting edge technologies with best practices.

M2: Research and Innovation : To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

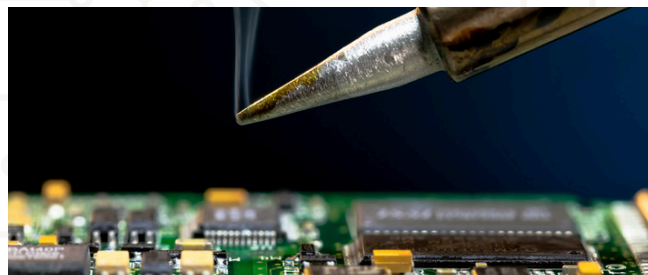
M3: Employability and Entrepreneurship : To inculcate the employability and entrepreneurial skills through value and skill based training.

M4: Ethical Values : To instill a deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Department of Electronics and Communication Engineering is a top-notch department that offers high-quality UG, PG and Ph.D. programs. The UG program B.Tech - Electronics and Communication Engineering is accredited by the National Accreditation Board, AICTE-New Delhi, and has a placement record of over 89%. The department's graduates are highly sought-after by employers in the Electronics and Communication sector.

Our department contributes significantly to achieve the national objective of envisioning the world with a clear and deep commitment and a sincere desire to meet the expectations of a rising, fast-developing technology.



PROGRAMMES OFFERED

- B.Tech - Electronics and Communication Engineering
- M.Tech - Electronics and Communication Engineering
- M.Tech - VLSI & Embedded Systems
- Ph.D - Electronics and Communication Engineering

Vision



Facilitate academic excellence and research among Electronics and Communication Engineers to meet the global needs with high competence and ethical professionalism.

Mission



M1: Academic Excellence: To impart learning skills to meet the global challenges in the field of Electronics and Communication Engineering.

M2: Research and Innovation: To provide excellence in research and innovation through multidisciplinary specialization.

M3: Employability and Entrepreneurship: To enhance inter and intra personal skills among students to make them employable and entrepreneurs.

M4: Ethics: To inculcate the significance of human values and professional skills to serve the society.

GUEST LECTURE

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
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Department of Electronics and Communication Engineering

Organizes Guest Lecture on
Java Programming: Empowering the Future of ECE Applications

ATTENDEES
II YEAR B SECTION STUDENTS

RESOURCE PERSON
MR. R. ANANDHAKRISHNAN
SENIOR SOFTWARE PROGRAMMER
VKR SOLUTIONS
PUDUCHERRY

DATE: 24th June 2023 TIME: 10:00 AM
VENUE: II YEAR B Classroom

A guest lecture was conducted for the second-year students on the title "Java Programming: Empowering the Power of ECE Applications" on June 26, 2023, featuring the resource person Mr. R. Anandha Krishnan, a Senior Software Programmer at VKR Solutions. The lecture provided valuable insights into programming in Java by navigating through the language's key features, versatility, and its applications in software development. Mr. Anandha emphasized the importance of clean code and efficient problem-solving techniques, empowering students to embark on their own coding journey with confidence. He also highlighted real-world applications of Java in embedded systems and electronic circuit design, showcasing how the language can be utilized to enhance ECE projects. Additionally, the session included interactive Q&A segments, allowing students to clarify doubts and gain further understanding of Java's role in the tech industry.



lecture on Java Programming



insights about Java by navigating through the language's k features

A Guest lecture was conducted for the Second year students on the title “Cyber Security in Networking ” on June – 24 ,2023 with the resource person Er.S.Murugan , Validation Engineer ,Digital Transformation Solutions ,Bengaluru. The lecture provided insights into the potential risks and threats associated with networking, and to offer strategies, best practices, and preventive measures to mitigate the risks in practical scenarios through real time examples. Practical examples illustrated the consequences of cyber attacks on network infrastructure and data integrity and also highlighted the emerging trends and technologies in Cyber Security stating the wide career opportunities in the field of Network Security.



Guest Lecture on Cyber Security in Networking



Lecture provides potential risks and threats associated with networking, and to offer strategies

A Guest lecture was conducted for the Second year students on the title “Basics of Communication Protocols ” on July – 10 , 2023 with the resource person Ms.Divya Jyothi , Senior Lead Hardware Design Engineer, Capgemini Engineering. The lecture covered a broad discussion on basics and common types of communication protocols , enlightening the principles and significance of protocols in modern networking by delving into the concept of protocol stacks and Communication Protocols model on IoT and Cloud computing. The lecture focused on importance of protocols in ensuring reliable and efficient communication across diverse systems and technologies.



Guest Lecture with Resource person “Ms.Divya Jothi”



Students Listening for Basics of Communication Protocols

RESEARCH ACTIVITIES

- The seminar "Advancement in Antenna Technology and Biological Effects of Electromagnetic Radiation," led by **Dr. P. Raja** and **Dr. N. Saranya**, will focus on innovations in antenna technology and its biological impacts. Funded by a Rs. 90,000 SERB grant, the two-day event will gather experts to discuss designs and safety measures.
- The project "Improving Solar Energy Harvesting Efficiency through Integration of Indium Tin Oxide Coating and Fresnel Lens Technology in Smart Solar Panel," led by **Dr. P. Raja** and **Dr. N. Saranya**, aims to enhance solar energy efficiency. Funded by a Rs. 10,24,000 DRDO research grant, it will span two years.
- The workshop "The Path from Pixels to Chips: Understanding Semiconductor Processes from Simulation to Fabrication," led by **Dr. P. Raja**, aims to educate participants on semiconductor technology. Funded by ATAL-FDP with a budget of Rs. 3.5 lakhs, it will run for six days.
- The "National Conference on Emerging Trends in Electronics, Circuits and Systems," led by **Dr. P. Raja**, focuses on the latest advancements in the field. Funded by IEI with a budget of Rs. 50,000, it will take place over two days.

Research Proposal Grant Received

- The seminar on "Advancement in Antenna Technology and Biological Effects of Electromagnetic Radiation," led by **Dr. P. Raja** and **Dr. N. Saranya**, is funded by the SERB Seminar Grant for Rs. 90,000 and will take place over two days starting on February 13, 2023.

Consultancy Works

- The seminar on "Advancement in Antenna Technology and Biological Effects of Electromagnetic Radiation," led by **Dr. P. Raja** and **Dr. N. Saranya**, is funded by the SERB Seminar Grant for Rs. 90,000 and will take place over two days starting on February 13, 2023.



Scopus Indexed Journals

- **Balaji M** and **Ashok Kumar Shanmugaraj's** 2023 paper in Journal of Nano- and Electronic Physics (Vol. 15, No. 04) examines charge plasma-based heterojunction nanowire transistors for sub-10 nm applications, focusing on improved scalability and performance.
- **N. Saranya, S. B. Lenin,** and **S. Mohanram's** 2023 paper in International Journal of Microwave and Optical Technology (Vol. 18, No. 6) proposes a semi-circular slotted microstrip antenna for RF energy harvesting from 2G/3G/4G bands.
- **S. Ashok Kumar, Anandkumar Arunkumar,** and **N. Karthik Charan's** accepted paper in Engineering Review (ISSN: 1330-9587, impact factor 0.144) presents a smart heart disease prediction and amalgamation tracking system.
- **S. Jayanthi, P. Raja, M. Elangovan,** and **T. S. Muruges's** 2024 paper in e-Prime – Advances in Electrical Engineering, Electronics and Energy (Vol. 7, pp. 100479, ISSN: 2772-6711, impact factor 1.5) discusses a single-ended 12T CNTFET SRAM cell designed for high stability and low power consumption in smart devices.
- **B. Shankarlal, S. Dhivya, K. Rajesh,** and **S. Ashok's** 2024 paper in the Journal of X-ray Science and Technology (pp. 1-25, ISSN: 1095-9114, impact factor 3) presents a hybrid thyroid tumor classification system using feature fusion multilayer perceptron and Bonobo optimization.

- **S. Mohanram**, Sathyamoorthy J, Sargunal A, Seran P, Yogiramkumar M.S, Elakshme Devi C, Dharshini M.R, Dharshan S, and Chandru G's accepted paper in the International Journal of Computational Vision and Robotics (ISSN: 1752-914X, impact factor 0.163) presents an image-based system for monitoring pregnant women's sleep posture.
- **Lenin S.B**, Priyadharshni R, Mohanram S, and Ashok Kumar S's accepted paper in the Journal of Engineering Science and Technology Review (ISSN: 1791-2377, impact factor 0.532) presents a wireless coal mine monitoring system based on the ESP-NOW protocol for real data acquisition and analysis.

International Conference

- **Sivaram Kumar**, Ramya R, and Ashok Kumar Shanmugaraj's paper on dielectric oxide materials for electrostatic doping in nanowire multichannel FETs was presented at the IEEE ICCPCT 2023 in Kerala (ISBN: 979-8-3503-3324-4).
- **S. Ganesan** presented their paper on an APM 2.8 controller-based drone system for healthcare at IEEE ICCPCT 2023 (ISBN: 979-8-3503-3324-4).
- **S. Mohanram**, Balamurugan V, Goventhan M, and Rajeshvaran N presented their paper on glaucoma detection using a CNN ensemble classifier and OTSU thresholding at IEEE ICCPCT 2023 (ISBN: 979-8-3503-3324-4).
- **S. B. Lenin**, G. Azeess Basha, G. Srivatsan, and Z. Aswin presented their paper on privacy-preserving integration of face recognition and ESD testing using federated learning at IEEE ICCPCT 2023 (ISBN: 979-8-3503-3324-4).
- **Sandeep V**, Charles Pravin J, and Ashok Kumar S presented their paper on a charge plasma-based dopingless cylindrical NW SCFET for sub-10 nm applications at the IEEE International Semiconductor Conference CAS in Romania (ISBN: 979-8-3503-2395-5).
- **Vijayalakshmi** and Eswara Pandian presented their paper on a water consumption monitoring and control system using IoT at the IEEE International Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **P. Mahendra Peruman**, Sedhuraman S, Venkat Theeban V, Yogesh Krushna R, and Aswin S presented their paper on a smart device for vehicles to evade smog at the IEEE International Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **P. Srividhya**, Jeevan Sanjay S, Jeevabharathi T, and Manivannan P presented a Bayesian algorithm-based automation system for agricultural field control at the IEEE International Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **P. Mahendra Peruman**, Krishnan G, Gopinath M, and Dharanidar S presented a blockchain-based deep learning object detection system for enhanced security at the IEEE International Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **R. Vijayarani**, M. Induja, and M. Janani presented a machine learning-based system for low-cost blood grouping at the IEEE International Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **B. Ganesa Moorthy**, Suryakumar S, and Vijay B Sudhakar presented a paper on autonomous wheelchair navigation using monocular SLAM at the IEEE Conference on Systems, Computation, Automation, Networking (ISBN: 979-8-3503-1512-7).
- **B. Ganesamoorthy** presented a paper on drowning detection and security in swimming pools using IoT at the IEEE International Conference on Systems, Computation, Automation, and Networking (ISBN: 979-8-3503-1512-7).
- Jayapreethi.K, **R.Kurinjimalar**, Narmadha S, and Madhumitha M presented a lidar and thermal camera-based braking and life-saving system with actuator shield for wheels at the IEEE International Conference on System, Computation, Automation, and Networking 2023 (ISBN: 979-8-3503-1512-7).

STUDENT ACTIVITES

- Vishnu Priya .V and Srinidhi.V of our ECE students has Participated in Project Presentation and Presented work entitled HYGEIA MEDIC BOX in the LEO TECH FEST 2K23 in International Hybrid Mode Conference on Challenges and Trends in Hybrid Solar Cell Technology (ICSCT 23) at Sairam Engineering College, on 09.06.2023.
- Ashwathi Krishna and Viveka of our ECE students Has Participated in Project Presentation and Presented work entitled SMART DUSTBIN in the LEO TECH FEST 2K23 in International Hybrid Mode Conference on Challenges and Trends in Hybrid Solar Cell Technology (ICSCT 23) at Sairam Engineering College, on 09.06.2023.
- Srinidhi.V, Vishnu Priya V, Viveka C, Ashwathi Krishna has attended Workshop on Artificial Intelligence organized TOP ENGINEERS, Upgrading Engineering Version, A MIT – ANNA University Alumni Start Up on 25.06.2023.

EXTENSION ACTIVITES



On June 14, 2023, department volunteers donated blood to Government Hospital, Mundipakam.



On June 20, 2023, 75 students from III – ECE – B section took a yoga pledge for a healthy, stress-free life.



On June 21, 2023, ECE students participated in an essay writing competition during the college's Yoga Day events.



On June 26, 2023, III year ECE students spoke on the dangers of drug use and prevention for Drug Abuse Day.



On July 13, 2023, Mr. S. Ganesan demonstrated how to make paper bags for ECE students on National Paper Bag Day.

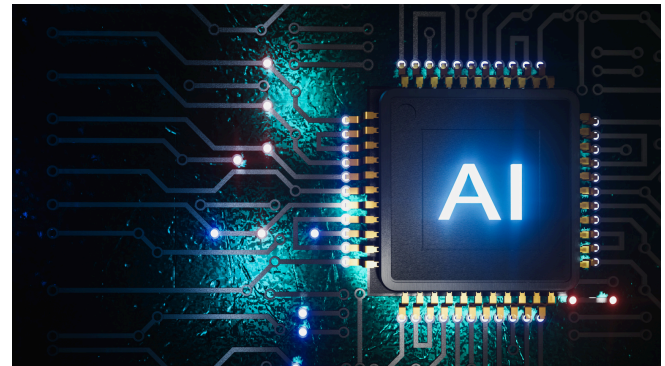


On June 27, 2023, ECE students won first prize in competitions celebrating National Yoga Day.

CLUB ACTIVITIES

IETE STUDENT FORUM

Li-Fi (Light Fidelity) technology is a wireless communication technology that utilizes light to transmit data. The term was first introduced by Harald Haas during a 2011 TEDGlobal talk in Edinburgh. Li-Fi is a light communication system that is capable of transmitting data at high speeds over the visible light, ultraviolet, and infrared spectrums. In its present state, only LED lamps can be used for the transmission of data in visible light. Light as a Medium: Li-Fi uses visible light or infrared light for data transmission instead of traditional radio frequencies used in Wi-Fi.



Li-Fi can be used to provide high-speed internet access in indoor environments such as offices, homes, hospitals, and schools. It can complement existing Wi-Fi networks by offloading data traffic or providing connectivity in areas where radio frequency interference is a concern.

Applications: Li-Fi can be used in environments where radio frequency interference is an issue, such as in hospitals, aircraft cabins, and nuclear power plants. It can also complement existing Wi-Fi networks to offload data traffic.

In recent years, home automation has emerged as a revolutionary trend in modern living, transforming traditional houses into smart homes equipped with cutting-edge technology. This shift not only enhances convenience and security but also promotes energy efficiency, making it an attractive option for homeowners worldwide. Home automation refers to the use of technology to control various household functions and devices automatically. This can include lighting, heating, air conditioning, security systems, appliances, and entertainment systems.



Through a centralized system, often accessible via a smartphone app or voice command, users can manage and monitor their home environment with ease. While home automation offers numerous advantages, there are challenges to consider. Privacy and security concerns arise as more devices are connected to the internet, potentially exposing homes to cyber threats. Additionally, the initial cost of setting up a smart home can be high, although the long-term savings and benefits often outweigh these costs.

CLUB ACTIVITIES

Robotics and Automation Club



Members delivering about the Bot Components

In the "Modern Designing of Bot" activity, participants dive into the exciting realm of chatbot development, where they learn to create intelligent systems that can interact naturally with users. This hands-on experience combines cutting-edge technologies like AI, natural language processing, and design thinking, empowering teams to craft bots that are both effective and user-friendly. By focusing on real-world applications, attendees will explore various scenarios, from customer service to personal assistance, while honing their skills in designing conversational flows and ensuring an engaging user experience.



Members explaining about Construction



Members explaining about Gameplay



Interaction between the members and students

INDUSTRIAL VISIT

- Our first year students visited codebind technologies ,Coimbatore on 09.06.23 .Explanation about the importance of embedded system and their designs. They gave us idea about simple projects using various microchips.
- Our first year visited versa drives industry on 10.06.23 .The students were split into two teams . While one team was having interaction with Mr. Manikandan and the other team was engaged in the industry. In conference hall Mr. Manikandan gave us a brief about their company. Then he took us to the industry and showed us the process of making lift sensor. Then he showed us the IC board of SUPER FAN.



First-year students visited Versa Drives on 10.06.23, learning about lift sensor manufacturing and the SUPER FAN IC board from Mr. Manikandan.

PLACEMENT RECORD

2 offers

Company-wise Placements

S.No.	Company	Package (Lakhs per Annum)	Number of Students placed in ECE
1	embed UR	8	1
2	ZOHO	7	1

OUR RECRUITERS



Congratulations to All Placed Students

HIGHER STUDIES

S.No.	Name of the Alumni	Name of the Courses Undergoing & University/College
1	INDHUJA.M	MS Machine Intelligence University of Greenwich, London
2	HARSHAVARDHNI .A	M.E Medical electronics SSN college of engineering
3	RAGNAL KEVIN JEROME. A	M.B.A Pondicherry University
4	NAVEEN.M	M.Tech-VLSI &ES Sri Manakula Vinayagar Engineering College
5	SUVETHA S	M.B.A Pondicherry University

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