VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

40 YEARS OF TRANSFORMING LIVES

SCHOOL OF ELECTRONICS ENGINEERING

ELECTROVERSE

Showcasing the Excellence of SENSE

E-NEWSLETTER

Volume 6 Issue 3 | JUL - SEP 2025

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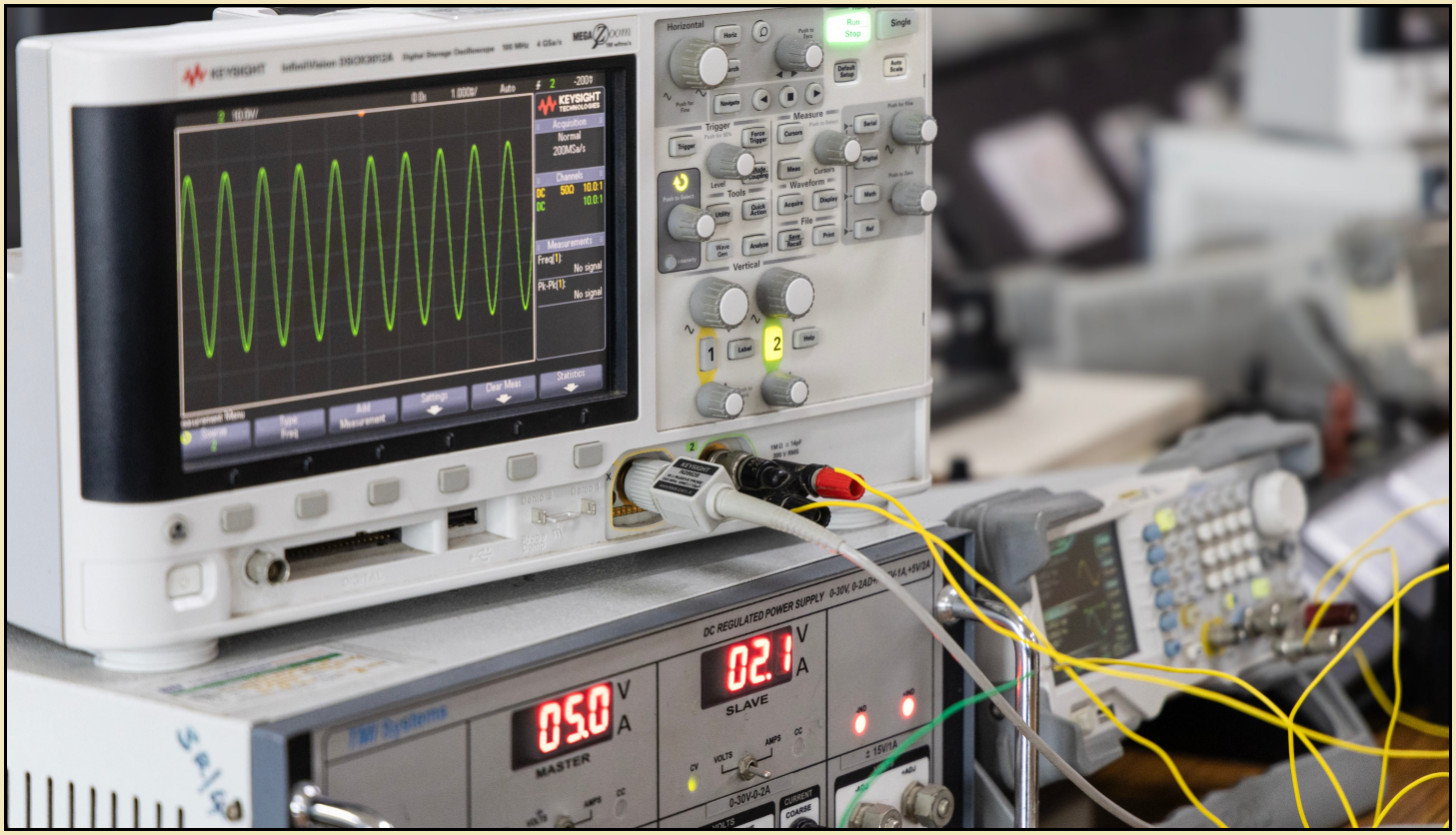
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Editorial Team

ABOUT 01



Vision

To be a leader in imparting in-depth and futuristic knowledge of electronics engineering and allied domains that cater to the needs of industry, research, and society.

Mission

- To create and maintain an environment of excellence in teaching, learning, and applied research in electronics engineering and associated disciplines to pioneer sustainable growth.
- To collaborate with industries and universities in associated disciplines to pioneer in innovations and technology transfer.
- To equip students with the necessary knowledge and skills enabling them to be lifelong learners in solving real-life problems, thereby improving the quality of human life and values.

02 DEAN'S MESSAGE

Dear VITians,

I hope this message finds you well and energized.

It is with great enthusiasm that I reach out to you as the newly appointed Dean of the School of Electronics Engineering (SENSE). Stepping into this role, I am filled with optimism for the future we will build together.

Recognizing the rapid advancements shaping the field of electronics engineering, SENSE is undergoing an exciting phase of transformation. We are currently revisiting our curriculum to ensure that our academic programs are not only aligned with industry trends but also future-ready. Students can look forward to refreshed course structures, upgraded laboratories with state-of-the-art equipment, and enhanced project-based learning modules that nurture creativity and technical excellence.

Our commitment to research and innovation remains stronger than ever. We have initiated new collaborations with industry leaders and secured additional funding to support breakthrough research. These efforts will empower both students and faculty to work on multidisciplinary projects that address real-world problems and contribute to technological progress.

To bridge the gap between the classroom and the corporate world, we are forging partnerships with top technology companies. Through internships, training programs, live projects, and expert guest sessions, students will have increased opportunities to engage directly with the industry and develop practical insights essential for their career journeys.

It is with great pride and enthusiasm that I present the 6th Volume, 3rd Issue of Electroverse: Showcasing the Excellence of SENSE—the official e-Newsletter of SENSE for the third quarter of 2025. This edition highlights the extraordinary momentum of our department, capturing the innovative spirit and professional milestones achieved by our faculty and students from July to September 2025.

I extend my sincere thanks to everyone in the SENSE community for your unwavering commitment, passion, and support. Together, we will continue to elevate SENSE's legacy and embrace new opportunities for learning, innovation, and impact.



Dr. Jasmin Pemeena Priyadarisini M
Professor & Dean
School of Electronics Engineering
Vellore Institute of Technology, Vellore
dean.sense@vit.ac.in

HIGHLIGHTS 03



24
Patents Published

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04 STUDENT ACHIEVEMENTS

The months of **July to September 2025** marked a truly remarkable chapter for VIT, with students making waves across cultural, technical, and academic platforms, both nationally and internationally. The momentum of excellence continues at the School of Electronics Engineering (SENSE) as our students dominate national platforms through innovation and technical grit.

In a stellar display of problem-solving, Abisek S (3rd Year ECE), Dhakshana Bala S (3rd Year ECE), and Kaarmukilan AG (3rd Year ECE) were crowned national champions at the ELCIA Sense2Scale National Hackathon 2025. Held at the International Institute of Information Technology, Bangalore (IIIT-B) as part of the ELCIA Tech Summit, the competition was fierce, featuring over 250 teams from across the country. Under the guidance of Dr. Sundar, the team, aptly named Senso Health, successfully navigated three grueling rounds to emerge as the 1st Place winners, securing a prestigious cash prize of ₹50,000 for their healthcare innovation.

Furthering the school's footprint in advanced research, Mr. Abhinav Kishore, a student of SCOPE and the DSD course, represented the institution at the Indian Young Inventors and Innovators Challenge (IYIIC) 2025–26. This high-profile national event, organized by the NOSTC in collaboration with ISRO, took place in Raipur, Chhattisgarh. Mentored by Dr. Mohiul Islam, Abhinav presented his project, "Modular Voice Assistance—A Custom NLU Framework for Offline, Low Latency Voice Interaction," showcasing a sophisticated approach to localized AI. From winning national hackathons to presenting at ISRO-backed challenges, the students of SENSE continue to push the boundaries of technology and engineering excellence.



INDIAN YOUNG INVENTERS AND INNOVATORS CHALLENGE - 2025-26

(A programme of NOSTC, Delhi)

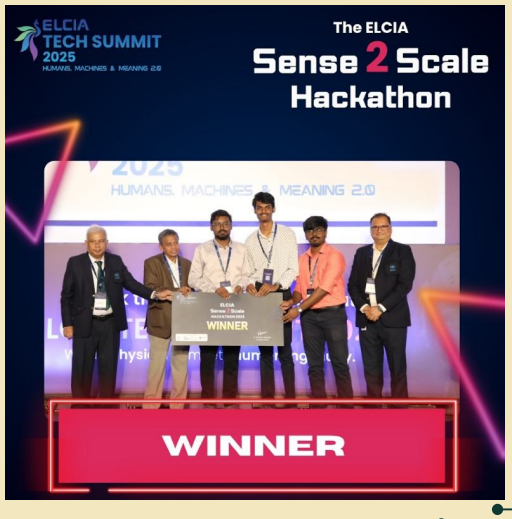
ORGANISED BY

Network of Organisation for Science and Technology Communication, Delhi in collaboration with Prasansa Foundation, Gujarat & N.H. Goel World School, Raipur, Chhattisgarh

Certificate

This is to certify that Abhinav Kishore, CSE Department of Vellore Institute of Technology, Vellore Participated and Presented a Project on the Title Modular Voice Assistance-A Custom NLU Framework for Offline, Low Latency Voice Interaction. during National Event of IYIIC on 05th to 07th Nov. 2025 at N.H. Goel World School, Raipur, Chhattisgarh

Dr. Anuj Sinha, Chairman, NOSTC, Delhi
Sanjib Kr Sinha, Organizing Secretary, IYIIC
Dr. Awinash Pandey, Principal, N.H. Goel World School, Raipur
Dr. Sujit banerjee, Chairman, Academic Committee



04 STUDENT ACHIEVEMENTS

STUDENT PUBLICATIONS

The months of July to September 2025 marked another remarkable period of academic and research excellence at VIT, with students and researchers making significant contributions across diverse technological domains. The momentum of innovation continued at the School of Electronics Engineering (SENSE), as research from the school gained recognition through publications spanning artificial intelligence, IoT, wireless communication, cybersecurity, antennas, signal processing, and biomedical applications. These publications reflect the students' and researchers' commitment to advancing emerging technologies and addressing real-world challenges through interdisciplinary research and technical innovation.

During this period, several noteworthy research works were published, including studies on hardware-efficient sigmoid activation functions, deep-learning-based IoT networks, UAV-assisted emergency communication, sustainable 5G networks, smart agriculture, image-security systems, cognitive radio, underwater wireless sensor networks, cryptography, and biomedical antennas. Together, these publications highlight the breadth of research being pursued at SENSE and showcase the continued academic momentum and technical expertise of its students and research community

1. S. Venkatesh, R. Sindhu, and V. Arunachalam, "Hardware efficient approximate sigmoid activation function for classifying features around zero," Integration, vol. 103, Art. no. 102421, 2025.
2. T. Anujaa, A. F. Thajudeen Ali Ahamed, V. Baranwal, V. Thanikaiselvan, S. Subashanthini, C. Sivaranjani Devi, and A. Rengarajan, "A lightweight multi round confusion-diffusion cryptosystem for securing images using a modified 5D chaotic system," Scientific Reports, vol. 15, no. 1, Art. no. 31986, 2025.
3. A. Srivastava, D. Pandurangan, and N. Mishra, "Triple-Band Quad-Port Highly Isolated MIMO Antenna for THz Applications with Frequency-Agile Characteristics," Arabian Journal for Science and Engineering, vol. 51, no. 6, pp. 7673–7683, 2026.

04 STUDENT ACHIEVEMENTS

4. R. Tejaswini, P. Abinaya, S. S. Anuprabha, S. K. Chidambaram, S. Arya, Y. K. Choukiker, and A. Bhowmick, "Anomaly detection in IoT networks: A deep learning approach using autoencoders," IEEE Access, vol. 13, pp. 132739–132749, 2025.
5. D. R. Sona et al., "Optimized UAV-Based Relay Algorithm for Enhanced Emergency Wireless Coverage in Disaster Areas," Engineering Reports, vol. 7, no. 8, Art. no. e70295, 2025.
6. A. K. Jha, A. Tewari, M. Garg, S. B. Thomas, R. R. Das, and D. R. Sona, "Optimizing 5G Sustainable Networks Performance in Urban Areas Using Machine Learning Techniques," International Journal of Communication Systems, vol. 38, no. 14, Art. no. e70226, 2025.
7. A. Saxena, A. Agarwal, B. Nagrath, C. S. Jayavanth, S. Thulasidoss, S. Maheswari, and P. Sasikumar, "Deep learning-driven IoT solution for smart tomato farming," Scientific Reports, vol. 15, no. 1, Art. no. 31092, 2025.
8. S. S. Reddy and G. R. Reddy, "Processing of MST Radar Data using the Covariance Fitting Algorithm," IEEE Access, 2025.
9. P. Bhaiya, A. Karampurwala, A. Tiwari, O. R. Manohar, P. Sagar, and A. Shah, "Flexible Neoprene Rubber-Based Patch Antenna for 5.9 GHz V2X Applications," IEEE Access, 2025.
10. V. Katyal, V. Bajaj, A. Parihar, and I. Singh, "AI-driven security evaluation of the ZUC stream cipher in 5G networks," IEEE Access, 2025.
11. S. Raghu and T. Shankar, "HDLCA: hunger driven lion clustering algorithm, a novel energy efficient and scalable clustering approach for underwater wireless sensor nodes," Scientific Reports, vol. 15, no. 1, Art. no. 33292, 2025.
12. N. Himavanth, M. Arshad, S. Kumaravel, R. Natarajan, A. Chandra, and M. Karthikeyan, "Compact circle-shaped circularly polarized implantable antenna with combined e and hexagonal shaped patch for wireless biotelemetry," Results in Engineering, vol. 27, Art. no. 105758, 2025.
13. V. P. Nishith, A. Saha, and A. Patwari, "A novel modification and hardware implementation of the simplified AES algorithm for IoT applications," Results in Engineering, Art. no. 106567, 2025.

05 MoU SIGNED

Institute: Foley Designs Pvt Ltd, Bangalorei
Date Signed: 11-07-2025
Duration: 5 Years



06 CONSULTANCY PROJECTS

Advanced AI System for Efficient Aluminium Scrap Sorting: Computer Vision, Deep Learning Ensemble, and Robotics for Sorting by Colour, Texture, and Shape



Faculty: Prof. Kathirvelan J, Prof. Sharmila A
Funding Agency: RES0170
Sanctioned Amount: INR 5,205,597
Date: 25-08-2025

Performance Evaluation and Subsystem Integration of Ku-Band Radar System



Faculty: c
Funding Agency: Edgeforce Solutions Pvt Ltd, India
Sanctioned Amount: INR 1,18,000
Sanctioned Date: 01-09-2025 to 28-02-2026

RISC-V 64-bit Accelerator with Firmware, AI/ML, MIPI CSI/ DSI, and Wireless Connectivity





Faculty: Dr. Sakthivel R, Dr. Jagannadha Naidu K
Funding Agency: M/s MSPAND Technologies Private Limited, Theni
Sanctioned Amount: INR 1,47,000/-
Sanctioned Date: 28-08-2025

07 FOREIGN VISITS

Faculty: Dr. Jasmin M, Dr. Sakthivel R, Dr. Jayakrishna,Dr. Sujatha R, Dr. Karthikeyan M
Institute: University Airlangga, Surabaya, Indonesia
Date: 25-09-2025 to 26-09-2025
Proposal: Conference participation, international collaboration, and academic partnership discussions



Faculty: Dr. Sivanandham S and Dr. Kumaravel S
Institute: Asian Institute of Technology, Thailand
Date: 27-09-2025
Proposal: MOU exchange, student and faculty exchange, joint research, Centre of Excellence setup



Faculty: Dr. Aparna Mohanty
Institute: University of Leicester, England, United Kingdom
Date: September 2025
Proposal: MoU signing and academic collaboration



Faculty: Dr. Sivacoumar R
Institute: UOW Malaysia KDU Penang University College, Malaysia
Date: 9th September 2025
Purpose: Visit to UOW Malaysia and Poster Presentation



08 PATENTS

Patent Title	Inventors	Status
A system for removing rain streaks from nighttime images	**Hemanta Kumar Sahu, Bijaylaxmi Das**	Published
System and method for quantum key reconciliation using adaptive privacy amplification and tuned randomness extraction	**Mugelan R K**, Swetha N G	Published
Cognitive behavioral multimodal continuous authentication system using human computable passwords and wearable keystroke dynamics	John Singh K**, Prayline Rajabai C**, Ayeswarya S	Published
A unique inverted l and t shaped resonator circularly polarized dual band implantable antenna	**Madurakavi Karthikeyan, Dilip Kumar Choudhary, Kumaravel S**	Published
Non invasive smart helmet system with integrated biometric fatigue detection	**Naushad Manzoor Laskar, Abhishek Narayan Tripathi,** Bhaargav Rathor, Arya Pandey, Shreyashi, Savar Mago	Published
Automated system for barcode-based expiry validation and product sorting	**Sumit Kumar Jindal, Suraj Prakash Sahoo,** Lakshmi Aneesha Ambati, Mihika Manish, Swaathi B Iyer	Published
A modular iot home security system with serial microcontroller redundancy and parallel multi-sensor integration	**Naveen Mishra,** Krishna Jawandhiya, Sai Mallika Evuri	Published

PATENTS 08

Patent Title	Inventors	Status
A multiple input multiple output (mimo) diplexing antenna system for c band and x band applications	**Shankar T, Rajesh N, R Shyamsundar**	Published
A method and a system for integrating stochastic rram with multiplexers for random numbers generation	**Saurabh Nagar**, Raju Vemuri, Dhina Rajmohan	Published
Healthcare assistance robot with patient verification symptom analysis and precision medicine dispensing	**Sumit Kumar Jindal, Suraj Prakash Sahoo**, Gurpreet Singh, Nishita Sanjeev	Published
Implementation of memristor-driven biasing for a hardware security puf	**Vishal Gupta,** Madeshvaradhan V	Published
Energy-efficient reinforcement learning v2x 5g communication for ambulance-hospital networks	**Subhra Sankha Sarma, Sagar Pareshkumar Ramanbhai,** Brindha S, Shehila Nasreen PP	Published
Electronically reconfigurable multiband and circularly polarized monopole antenna using pin diodes	**Rajesh N, Madurakavi Karthikeyan, Vinayagam K**	Published
Microfluidic device mimicking glomerular filtration using nano-slit channels for size-separation	**Naushad Manzoor Laskar, Vikas Vijayvargiya**, A S Rassel	Published
Biodegradable octagonal microstrip antenna using chitosan substrate	**Christina Josephine Malathi A,** Rishabh Gupta, Saurabh Gupta, Anupam Mishra	Published

08 PATENTS

Patent Title	Inventors	Status
System and method for adaptive dual-hop communication with energy-aware signal routing	**Hementa Kumar Sahu,** Kandi Veera Venkata Ramana	Published
A dual-band microstrip patch array antenna and method for its fabrication	**Vijay Kumar, Rajkishor Kumar, Avinash Chandra**	Published
Hydroxyapatite-based supercapacitor electrode material with ultrahigh stability	**Govardhan K,** Ruban Kumar A, Abin Philip, Georlin George	Published
Starch biopolymer based highly sensitive glucose biosensor	**Debashis Maji, Lingadharini P**	Published
Circularly polarized spiral spline line dual-band capsule implantable array antenna	**Madurakavi Karthikeyan, Rajesh N, Kumaravel S**	Published
A patterned frequency selective surface for electromagnetic shielding in wifi and 5g bands	**Rahul Mahohar, Aswathi V, Sagar Pareshkumar Ramanbhai, Shah Arpan Hasmukh Mayuri**	Published
Real-time river monitoring and flood detection with sensor buoys	**Mugelan R K,** Krishna Ghatol	Published

PATENTS 08

Patent Title	Inventors	Status
Ai-based detection of recoverable materials from waste printed circuit boards	**Gerardine Immaculate Mary, Venugopal P**, Siddhant Bhushan, Aditi Verma, Raj Vardhan	Published
Tri-band terahertz antenna with biomimetic mxene patch for 6g wireless systems	**Christina Josephine Malathi A,** Sakthi Praveen Kumar Reddy	Published

PUBLICATIONS 09

High Impact Factor Publications

Details	IF
Varughese, Dinah Ann, Sriadibhatla Sridevi, "Optimization Strategies and Algorithms for Accelerating CNN on FPGA: A Comprehensive Review," Archives of Computational Methods in Engineering, 2025, DOI: 10.1007/s11831-025-10348-y.	12.1
Jayasri A., Madurakavi Karthikeyan, "Reduced mutual coupling in MIMO vivaldi antenna using orthogonal placement," Results in Engineering, vol. 27, 2025, DOI: 10.1016/j.rineng.2025.106864	7.9
Koyalil Anjana, Rajalingam Sivacoumar, "Enhanced multi-level K-means clustering and cluster head selection using a modernized pufferfish optimization algorithm for lifetime maximization in wireless sensor networks," Results in Engineering, vol. 27, 2025, DOI: 10.1016/j.rineng.2025.105836.	7.9
Vangara Saiprudhvi, Hariharan Subramaniyam, "Outage analysis of OTFS system over time-varying and block time-varying Rician fading channels," Results in Engineering, vol. 27, 2025, DOI: 10.1016/j.rineng.2025.106102.	7.9
Mudipalli Elavarasu Santhosh, Sasikumar K., "Rational design of an epitope-centric vaccine against Pseudomonas aeruginosa using pangenomic insights and immunoinformatics approach," Frontiers in Immunology, vol. 16, 2025, DOI: 10.3389/fimmu.2025.1617251.	5.9
Shanmugam Kowsalya, Revathi S., Das Tanmaya Kumar, "SPR-based PCF sensors for next generation research: A review," Results in Physics, vol. 76, 2025, DOI: 10.1016/j.rinp.2025.108409.	4.6
Gokila K., Sakthivel P., Amutha M., Muthuraja S., Fathima M.I., Ayeshamariam A., Asaithambi P., "Enhanced CO_2 sensing with In_2O_3–ZnO and SnO_2–ZnO composite nanostructures," Results in Physics, vol. 76, 2025, DOI: 10.1016/j.rinp.2025.108394.	4.6
Sarker M.A.L., Selvaprabhu P., Kumaravelu V.B., Chinnadurai S., Senouci B., Han D.S., "Hybrid beamforming with branchwise phase shifters for RIS-assisted 6G wireless communications," ICT Express, 2025, DOI: 10.1016/j.icte.2025.06.014.	4.2

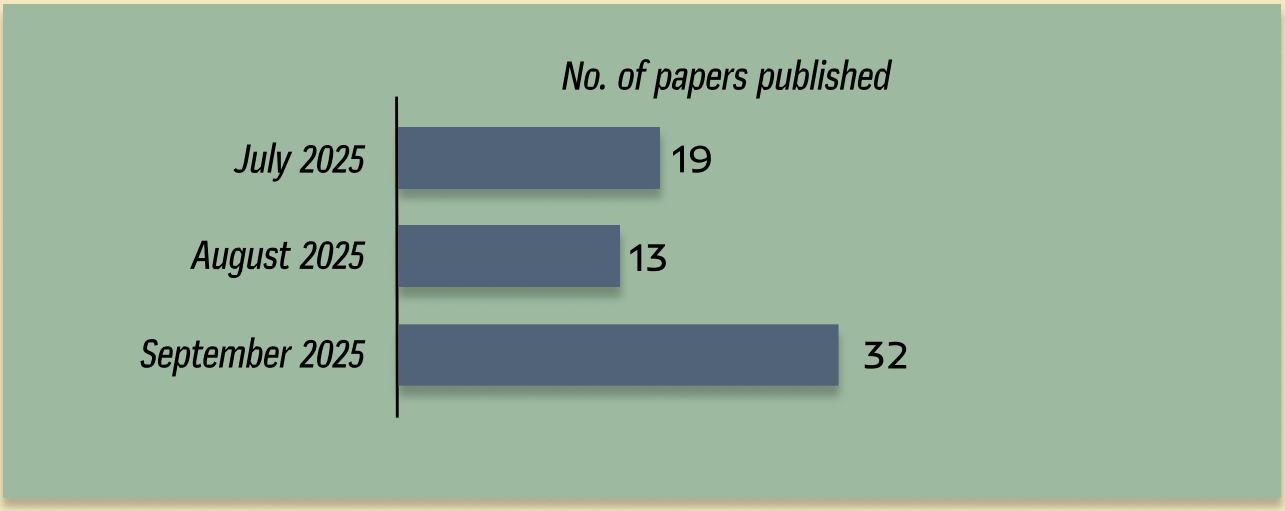
09 PUBLICATIONS

Details	IF
Neelavathy M., Choukiker Yogesh Kumar, “Dual-band second-order frequency selective surface with sharp roll-off using aperture-coupled techniques,” IEEE Access, vol. 13, 2025, DOI: 10.1109/ACCESS.2025.3606634.	3.6
Sandhya R., Chandra Avinash, “A compact tree-shaped dual-band wearable antenna with enhanced far-field performance for WBAN applications,” IEEE Access, vol. 13, 2025, DOI: 10.1109/ACCESS.2025.3604551.	3.6
Dekate Nirant, Anubhab Aklesh, Menon Siddarth, Arya Sudhanshu, Bhowmick Abhijit, Choukiker Yogesh Kumar, Chidambaram Saranya Karattupalayam, “Intelligent handover management in ultra-dense 5G networks: A deep Q-learning based prediction model,” IEEE Access, 2025, DOI: 10.1109/ACCESS.2025.3600330.	3.6
Silpa Bommala, Hota Malaya Kumar, “African vultures optimization algorithm based enhanced VMD with CWT and k-medoids for removal of ocular artifacts from EEG signals,” Applied Acoustics, vol. 240, 2025, DOI: 10.1016/j.apacoust.2025.110970.	3.6
Neelavathy M., Choukiker Yogesh Kumar, “Design of a fourth-order bandpass frequency selective surface via aperture-coupled approach,” AEU – International Journal of Electronics and Communications, vol. 201, 2025, DOI: 10.1016/j.aeue.2025.155989.	3.2
Shanmugam Ashok, Radhabai Prianka Ramachandran, Kavitha K., Imoize Agbotiname Lucky, “A dual self-attentive transformer U-Net model for precise pancreatic segmentation and fat fraction estimation,” BMC Medical Imaging, vol. 25, issue 1, 2025, DOI: 10.1186/s12880-025-01852-5.	3.2
Srivastava Aditya, Pandurangan Durai, Mishra Naveen, “Triple-band quad-port highly isolated MIMO antenna for THz applications with frequency-agile characteristics,” Arabian Journal for Science and Engineering, 2025, DOI: 10.1007/s13369-025-10505-2.	2.9
Lakshmanan A., Alex Zachariah C., Straník Vítězslav, Meher Samir Ranjan, “Band offset investigation of $Cu_2O/ZnO_{1-x}S_x$ heterojunctions using ultraviolet photoelectron spectroscopy,” Materials Letters, vol. 399, 2025, DOI: 10.1016/j.matlet.2025.138966.	2.7

PUBLICATIONS 09

Paper Title	IF
Ittepadan Anas, Behera Jitendra Kumar, Nayak Chittaranjan, "Angle-independent equidistant multimode topological interface states in a one-dimensional photonic crystal heterostructure containing hyperbolic metamaterials," Physics Letters A, vol. 555, 2025, DOI: 10.1016/j.physleta.2025.130798.	2.6
Sumaiya M.R., Jeeva J.B., "Dual wavelength handheld optical imager for human tissue imaging," Optics Communications, vol. 596, 2025, DOI: 10.1016/j.optcom.2025.132404.	2.5
Mahesh P., Kamalanaban E., Nayak Chittaranjan, Panigrahy Damodar, "A comprehensive study on photonic bandgap broadening: hybridized and cascaded photonic structures," Journal of Optics (India), 2025, DOI: 10.1007/s12596-025-02803-7.	2.5
Balasubbareddy M., Sivasankaran K., Atamuratov Atabek E., Khalilloev M.M., "Self-heating-induced junctionless stacked nanosheet FET RF stability performance degradation analysis and optimization," Journal of Computational Electronics, vol. 24, issue 5, 2025, DOI: 10.1007/s10825-025-02384-5.	2.5

Overall Summary

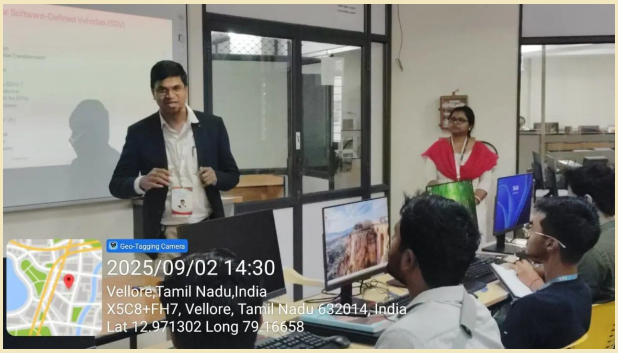


10 AWARDS & CERTIFICATIONS



Dr. Vijendra Babu received the Emerging ISF Award, Best ISF Coordinator, and Exceptional contribution Award from IETE Chennai Centre on 19-09-2025.

EVENTS ORGANIZED 11



Workshop on **Leverage AI in Software Defined Vehicles (SDVs)** was organized by Prof. Bijaylaxmi Das, Prof. Sujatha R, and Prof. Vijendra Babu D on 02-Sep-2025.



Industry-Academia Conclave 2025 was organized by Prof. Jasmin Pemeena Priyadarsini M, Prof. Vinoth Babu K, and team on 01-Sep-2025.



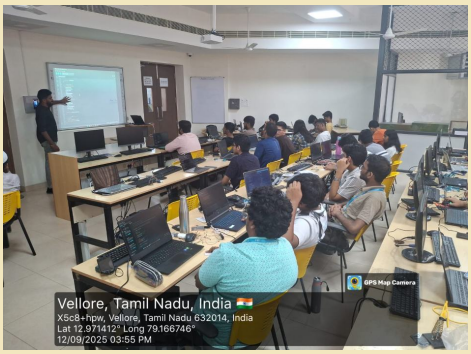
FDP on **Building Sustainable and Cognitive Systems through AI & IoT** was organized by Prof. Selvakumar K and Prof. Christopher Clement J from 18-Aug-2025 to 22-08-2025.



.Workshop on **Innovative Applications of Industry 4.0** was organized by Prof. Konguvel Elango and Prof. Vidhya S on 12-Sep-2025

11 EVENTS ORGANIZED

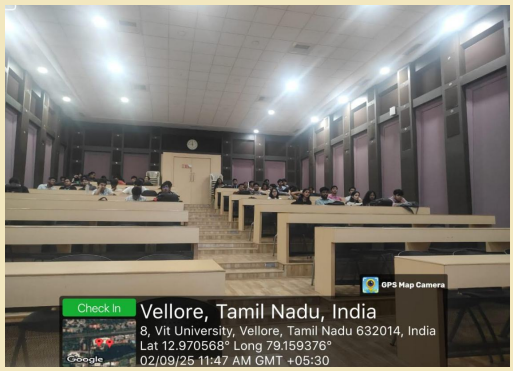
Workshop on **Designing Real Time Prototypes with Free RTOS using ESP32** was organized by Prof. Konguvel Elango and Prof. Jothish Kumar M from 12-Sep-2025 to 13-Sep-2025.





Workshop on **Hands on FPGA - From Basic Logic to Real World Applications** was organized by Prof. Prachi Sharma and Prof. Sri Adibhatla Sridevi on 28-Aug-2025.

Seminar on **Tsunami Warning System** was organized by Prof. Vijendra Babu D, Prof. Sujatha R, and Prof. Bijaylaxmi Das on 02-Sep-2025



Workshop on **Test Automation Framework and Application in Wi-Fi** was organized by Prof. Vinoth Babu K, Prof. Rajeshkumar V, and Prof. Poongundran on 01-Sep-2025.

Workshop on **Python as a Tool for AI Industry** was organized by Prof. Vinoth Babu K, Prof. Rajeshkumar V, and Prof. Poongundran on 01-Sep-2025.

Workshop on **AI on the Edge: Exploring Hardware Accelerators for Machine Learning** was organized by Prof. Vinoth Babu K, Prof. Sivakumar R, and Prof. Poongundran on 01-Sep-2025.

Workshop on **I-ANTENNA 2025: Intelligent Antenna Design Contest & Workshop** was organized by Prof. Rajesh Kumar V, Prof. Rajesh N, and Prof. Boopalan C on 24-Aug-2025.

Workshop on **Industrial IoT Applications** was organized by Prof. Vinoth Babu K, Prof. Rajeshkumar V, and Prof. Poongundran on 01-Sep-2025.

Seminar on Transforming Weather Forecasting with AI and HPC Capability was organized by Prof. Vijendra Babu D, Prof. Sujatha R, and Prof. Laxmi Devi on 03-Sep-2025.

GUEST LECTURES 12

The School of Electronics Engineering organized a diverse range of guest lectures featuring renowned professionals from leading industries and research institutions. These sessions spanned key domains such as data analytics, VLSI design, quantum computing, cybersecurity, IoT, embedded systems, and advanced wireless communications, reflecting the dynamic and interdisciplinary nature of modern engineering.

The lectures covered diverse and emerging domains including 5G/6G communication systems, IoT, underwater acoustic communication, wireless sensor networks, sustainable nanomaterials, energy harvesting, digital twin technology, AI in space applications, biomedical systems, antenna design, cloud computing, VLSI design, signal processing, robotics, digital health, and semiconductor technologies.

These lectures bridged theoretical foundations with real-world applications, offering valuable insights into industry trends, research advancements, and interdisciplinary innovations. By sharing expertise across institutions, SENSE faculty continue to strengthen academic collaborations, promote knowledge dissemination, and reinforce the School's growing national and global presence

In this third quarter of the year 2025, we have organized 15 guest lectures over various departments.

Guest Lecture Delivered

Synthesis, Characterisation and Applications of Sustainable Nanomaterials	Dr.Govardhan K	Yokohama National University, Yokohama, Japan

INDUSTRIAL VISITS 13

Faculty: Dr. Rahul Manohar, Dr. Govarthan, Dr. Preetha K S, Dr. Inderesingh

Industry: Nokia R&D Center, Chennai

Date: 11-07-2025





Faculty: Dr. Avinash Chandra

Industry: National Aerospace Laboratories (NAL), Bengaluru

Date: 25-09-2025

Faculty: Prof. Aarthi G, Dr. N. Sangeetha, Dr. Deepika Rani, Dr. Sumathi

Industry: Bachi Shoes Pvt. Ltd., Ranipet

Date: 26-09-2025





Faculty: Dr. J Valarmathi, Dr. Harish kittur Mallikarjun, Dr. Sathya P, Dr. Boopalan G, Dr. Shanmuga Sundaram and Dr. Arunkumar Chandrasekar

Industry: Foley Designs Company, Bangalore

Date: 17.09.2025

INDUSTRIAL VISITS 13

Faculty: Dr. Hemanta Kumar Sahu, Dr. Shanidul Hoque, Dr. Sudhanshu Arya, Dr. Vijaya Durga Chintala, and Dr. Sandhana Mahalingam

Industry: Nokia R&D Center, Chennai

Date: 11-07-2025





Faculty: Dr. Vijendra Babu D

Industry: L & T EduTech Future Mobility Conclave 2025, Chennai

Date: 25.09.2025

Faculty: Prof. B. Karthikeyan, Prof. S. Sundar, and Prof. P. Jayakrishnan

Industry: AMI (American Megatrends International), Chennai

Date: 17-07-2025



PhD COMPLETED

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Name	Guide name	Title
Ms. Nivetha B	Ms. Nivetha B	A COMPREHENSIVE STUDY OF INTERFERENCE MANAGEMENT TECHNIQUES IN MULTI-USER MIMO SYSTEMS FOR 5G CELLULAR COMMUNICATIONS
MR. KRANTHI KUMAR PULLURI	Dr. Vaegae Naveen Kumar	DEVELOPMENT OF FOOD QUALITY ASSESSMENT AND DETECTION METHODS USING SOFT ELECTRONIC NOSE
Ms. Indhumathi S	Dr. Christopher Clement J	EFFICIENT DESIGN OF LIGHTWEIGHT FEATURE DESCRIPTOR FOR A ROBUST SCENE CHARACTERISTIC IN AUGMENTED REALITY
Ms. Premalatha B	Dr. Prakasam P	AN INVESTIGATION ON OPTIMAL RESOURCE ALLOCATION, FAULT TOLERANCE AND TRUST MANAGEMENT SCHEMES IN IOT–FOG NETWORKS
Mr. Malle Gopal	Dr. Velmurugan T	INVESTIGATIONS ON EFFICIENT RESOURCE ALLOCATION FOR DEVICE-TO-DEVICE UNDERLAY COMMUNICATION IN WIRELESS NETWORKS
MS. PRABAVATHI M	Dr. Arunkumar Chandrasekhar	DESIGN AND IMPLEMENTATION OF WEARABLE TRIBOELECTRIC NANOGENERATOR AS ENERGY HARVESTER AND SELF-POWERED SENSOR FOR REAL-TIME APPLICATIONS
Ms. Nitha P K	Dr. Arunkumar Chandrasekhar	INVESTIGATING THE POTENTIAL OF METAL ORGANIC FRAMEWORK BASED TRIBOELECTRIC NANOGENERATOR FOR SELF-POWERED AND REAL-TIME APPLICATIONS
Mr. Vijayanandam N	Dr. S. Vidhya	DESIGN AND PERFORMANCE MEASUREMENT OF ISM AND WMTS BAND IMPLANTABLE ANTENNAS FOR WIRELESS POWER TRANSFER AND BIOTELEMETRIC APPLICATIONS
Ms. Prathiba M	Dr. Sivanantham S	OPTIMIZING TESTING STRATEGIES FOR SMALL DELAY DEFECTS TO IMPROVE YIELD IN DIGITAL LOGIC CIRCUITS
Mr. Velappan S	Dr. Raja Sellappan	ENHANCEMENT OF SILICON CARBIDE REFRACTORIES THROUGH NANO ADDITIVES FOR HIGH-TEMPERATURE APPLICATIONS

15 TEAM

ADVISORY TEAM



Dr. Jasmin Pemeena Priyadarisini M
Professor & Dean
SENSE, VIT Vellore



Dr. Sakthivel R
Professor & Associate Dean
SENSE, VIT Vellore



Dr. Kannadassan D
Professor & HoD
Dept. of Communication Engineering, SENSE



Dr. Sathya P
Associate Professor & HoD
Dept. of Sensors & Biomedical Technology, SENSE



Dr. Sri Adibhatla Sridevi
Professor & HoD
Dept. of Micro & Nano Electronics, SENSE



Dr. Sundar S
Associate Professor & HoD
Dept. of Embedded Technology, SENSE

FACULTY MENTORS



Dr. Prayline Rajabai C
Associate Professor Gr 1
Dept. of Micro & Nano Electronics, SENSE



Dr. Nisha J S
Assistant Professor Sr Gr 1
Dept. of Sensors & Biomedical Technology, SENSE



Dr. Sudhanshu Arya
Assistant Professor Sr Gr 1
Dept. of Communication Engineering, SENSE



Dr. Bijaylaxmi Das
Assistant Professor Sr Gr 1
Dept. of Embedded Technology, SENSE

15 TEAM

EDITORIAL TEAM



PALLAWI KUMARI
23BML0021



SARAVANA VIKAS D
23BVD0053



HRDYA VR
24BVD0076



AADHARSHINI S
24BEC0200

DESIGN TEAM



NICOLE T
24BEC0387



AXA ANNA KURIAN
24BML0079



JD ABISHEK SINGH
25BEC0141



PRAVEEN KUMAR
25BEC0327

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Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Electronics Engineering
Vellore Institute of Technology,
Vellore - 632 014
Tamil Nadu, India
Phone: 0416-220 2410 / 2411
Email: dean.sense@vit.ac.in

