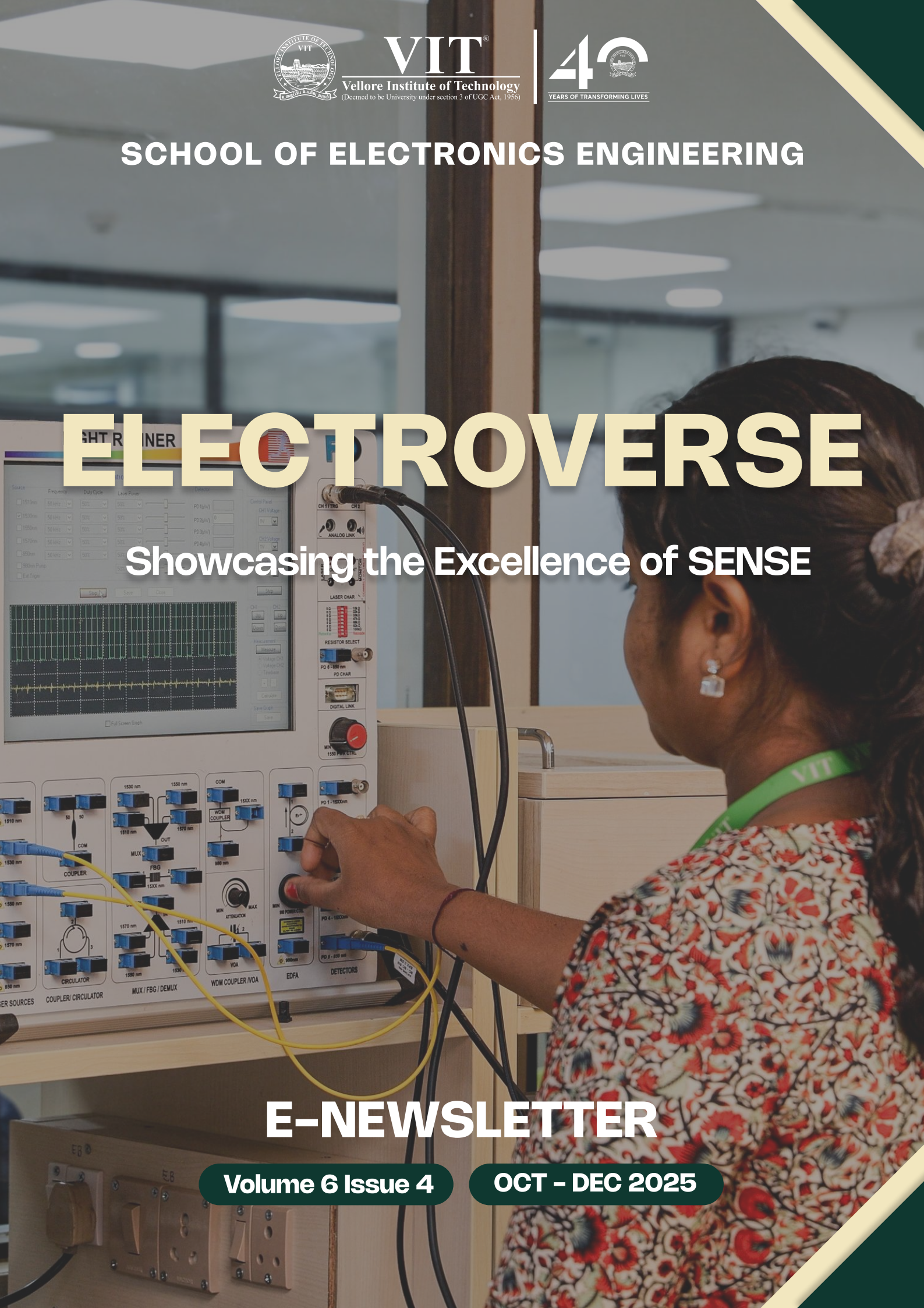
VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

40 YEARS OF TRANSFORMING LIVES

SCHOOL OF ELECTRONICS ENGINEERING



ELECTROVERSE

Showcasing the Excellence of SENSE

E-NEWSLETTER

Volume 6 Issue 4 | OCT - DEC 2025

CONTENTS

1 ABOUT
Vision
Mission

2 DEAN'S MESSAGE

3 HIGHLIGHTS

4 STUDENT ACHIEVEMENTS

5 MoU SIGNED

6 CONSULTANCY PROJECTS

7 FOREIGN VISITS

8 PATENTS

9 PUBLICATIONS

10 AWARDS & CERTIFICATIONS

11 EVENTS ORGANIZED

12 GUEST LECTURES

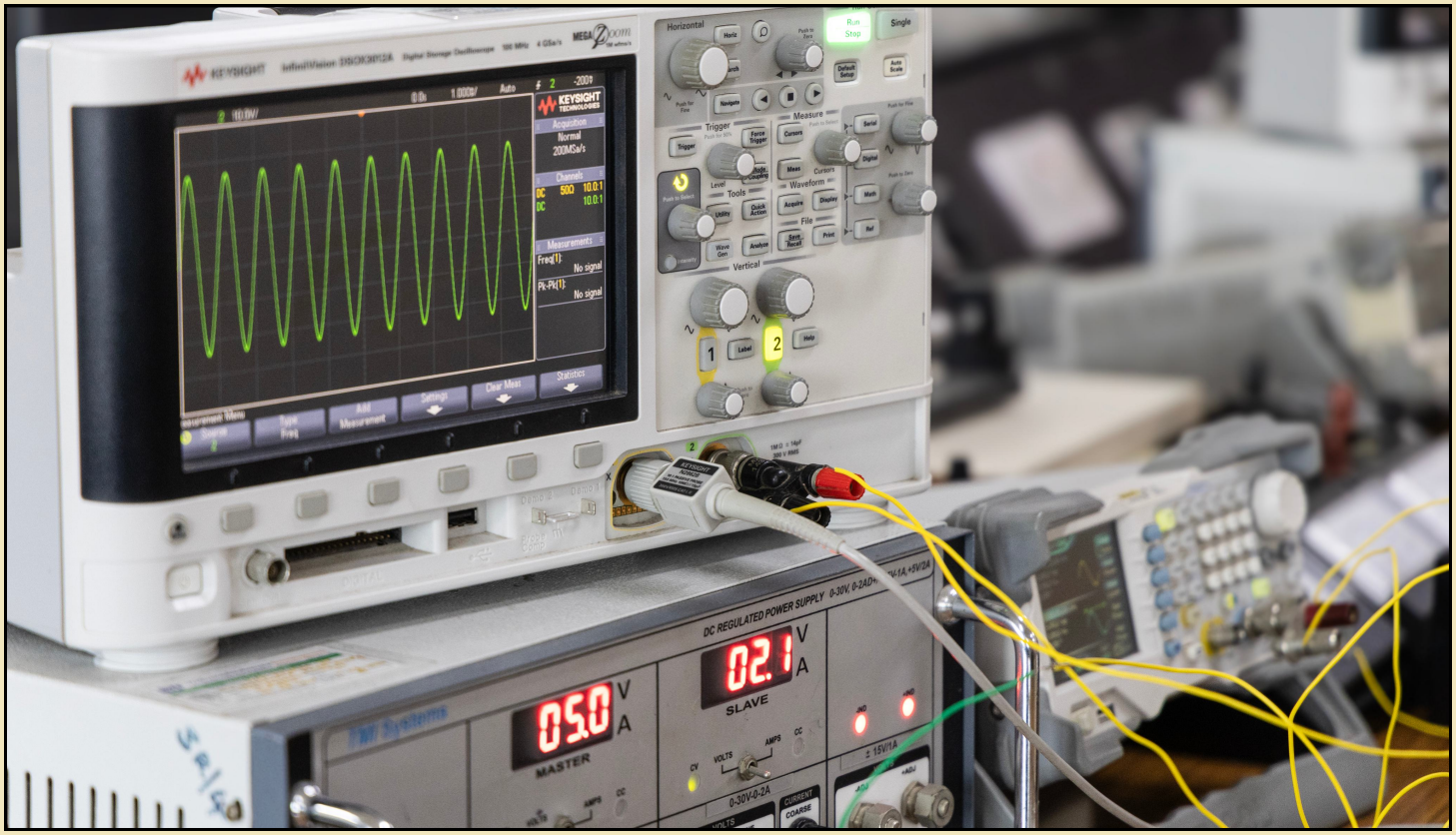
13 INDUSTRIAL VISITS

14 FACULTY INDUSTRIAL TRAINING

15 PhD COMPLETED

16 TEAM
Advisory Team
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 the fields of electronics, communication engineering and allied disciplines.
- 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.

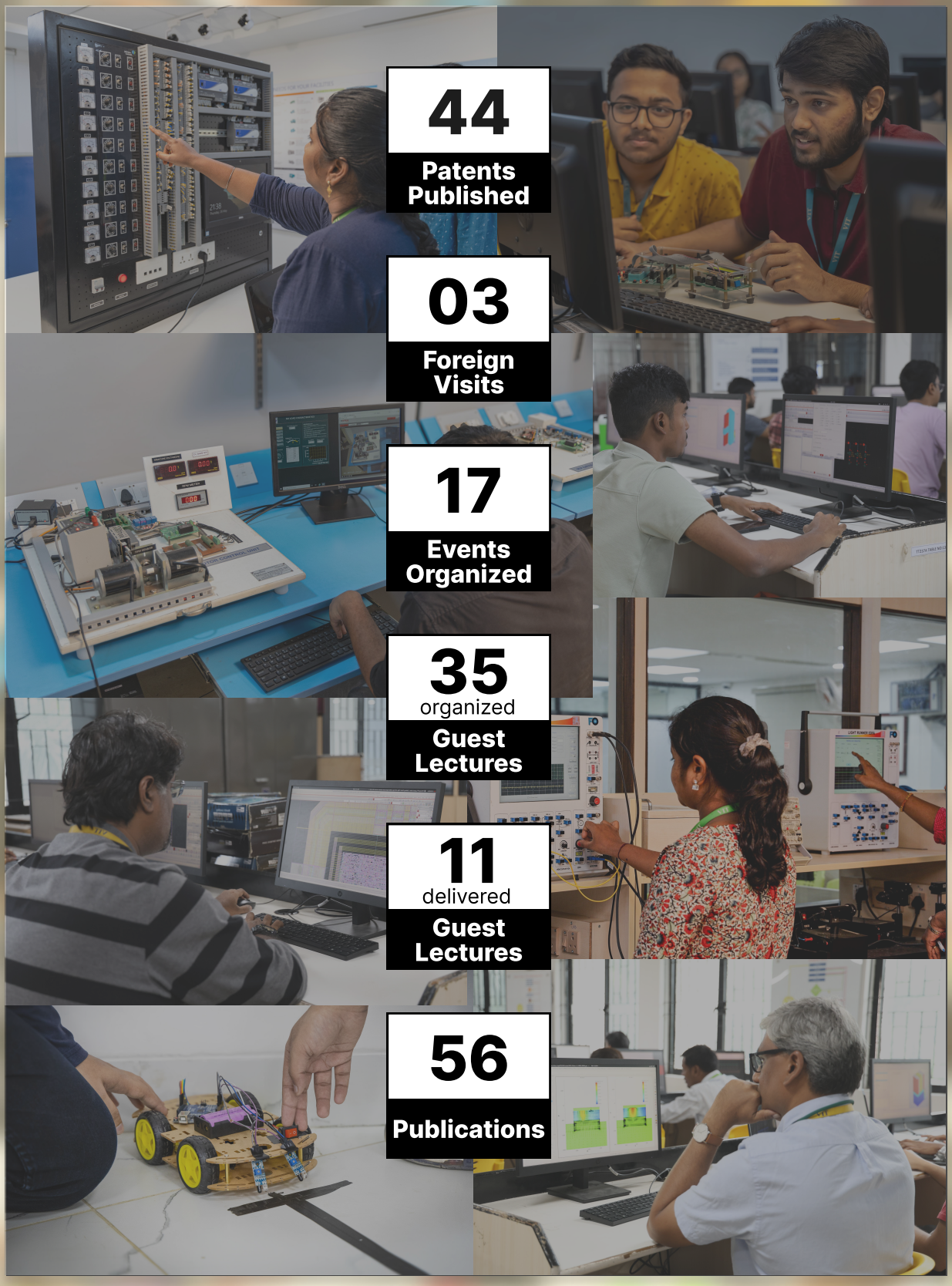
It also gives me immense pleasure to present the 6th Volume, 4th Issue of Electroverse: Showcasing the Excellence of SENSE — the official e-Newsletter of SENSE for the fourth quarter of 2025. This issue highlights and celebrates the remarkable achievements of our faculty and students during October to December 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



44
Patents Published

03
Foreign Visits

17
Events Organized

35
organized
Guest Lectures

11
delivered
Guest Lectures

56
Publications

04 STUDENT ACHIEVEMENTS

From October to December 2025, VIT witnessed a strong phase of achievement, with students excelling across national and international platforms. The School of Electronics and Communication Engineering (SENSE) continued to demonstrate excellence through innovation, research, and technical expertise.

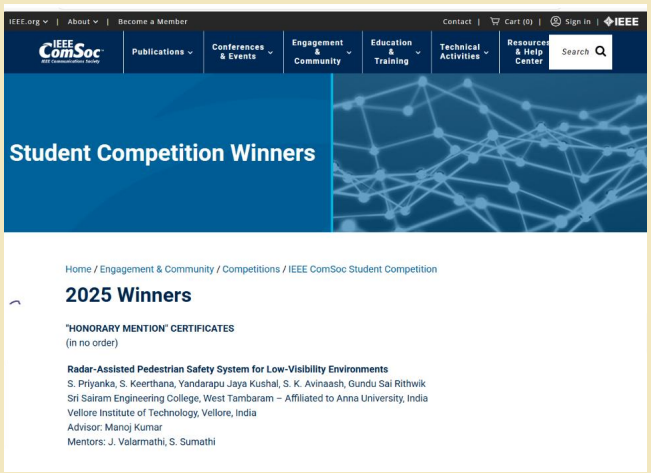
Team SIGMA STARS, comprising Shivaranjini, Jayavarshini, Aneruthaan, and Kumaravel Sengottaiyan, delivered an impressive performance at ZENITH'25, hosted by MLR Institute of Technology, Hyderabad. Their project TerraPulse, an offline agricultural intelligence system integrating NFC-based identification and ESP32-CAM imaging, advanced to the Super Jury Round and was shortlisted for AWS Community Day, highlighting its practical relevance and innovation.

S. Priyanka S, Keerthana, Yandrapu Jaya Kushal, S. K. Avinaash, and Gundu Sai Rithwik earned international recognition at the 2025 IEEE Communications Society Student Competition. Their project, Radar Assisted Pedestrian Safety System for Low Visibility Environments, received an Honorary Certificate of Appreciation, reflecting strong technical depth and societal impact.

Further adding to these accomplishments, Sarvesh and Pradeep were selected to present their work at Innovation Bazar 2025 under Stream B and have been invited to present in person at the Hallmark Campus, Bangalore. Their selection reflects the originality and quality of their research and strengthens SENSE's presence on competitive national platforms.

From impactful innovations to international recognition, these achievements reflect the dedication, creativity, and competitive spirit of SENSE students. The School continues to foster a culture of excellence, empowering students to innovate, compete, and contribute meaningfully to society.







04 STUDENT ACHIEVEMENTS

STUDENT PUBLICATIONS

The months of October to December 2025 brought another wave of academic excellence and research accomplishments to VIT, marking a strong conclusion to the year. Continuing its tradition of innovation and impactful research, the School of Electronics Engineering (SENSE) witnessed notable contributions from its students and researchers across several emerging technological domains.

During this period, research from SENSE explored advanced cybersecurity techniques, next-generation communication networks, photonic structures, and intelligent signal-processing systems. The publications addressed contemporary challenges ranging from strengthening the security of IoT and 5G/B5G networks to developing innovative approaches in topological photonics and biomedical signal analysis.

Together, these publications reflect the breadth, relevance, and interdisciplinary nature of research at SENSE, showcasing the continued efforts of its students and researchers to address real-world challenges through innovation. As the year drew to a close, these achievements reinforced VIT's commitment to fostering a strong research ecosystem and empowering its academic community to contribute meaningfully to the advancement of technology.

1. A. Kumar, P. Singh, D. P. Kamble, and I. Singh, "Hybrid cryptographic approach for strengthening IoT and 5G/B5G network security," Scientific Reports, vol. 15, no. 1, Art. no. 37971, 2025.
2. A. Basu, A. Nath, S. Das, A. Pandey, A. Agrawal, P. Hooda, and C. Nayak, "Modified topological photonic crystal," The European Physical Journal D, vol. 79, no. 11, Art. no. 141, 2025.
3. R. Krishna, G. Palanisamy, G. Veerapu, and N. Js, "An Adaptive Hybrid Framework for Detection of Hidden Periodicity in Synthetic and Biomedical Signals," IEEE Access, vol. 13, pp. 196727–196746, 2025.

05 MoU SIGNED

Institute: Visteon
Date Signed: 03-12-2025
Coordinator: Dr. Jayakrishnan P



CONSULTANCY PROJECTS 06

Designing and Fabrication of Deep UV Photon Detectors Using Wide Band Gap Low-Dimensional Material

Faculty: Dr. Ramesh M. Thamankar, Dr. Rajan Kumar Pandey

Funding Agency: ISRO

Sanctioned Amount: INR 25,00,000

Sanctioned Date: 14-10-2025

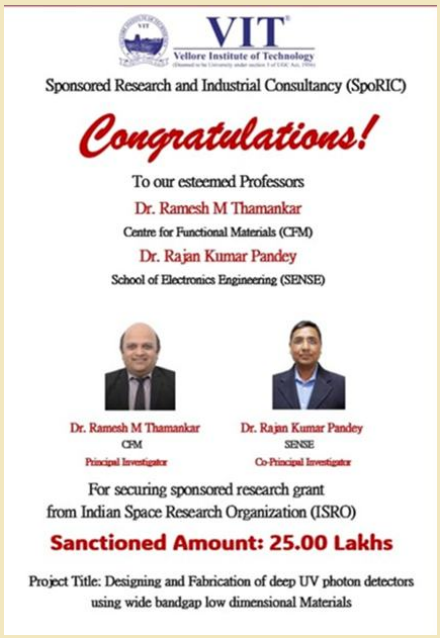


RFCMOS based Wideband Voltage Controlled Oscillators @ L, S, C, X and Ku-band

Faculty: Dr. Abdul Majeed K. K. (PI)

Funding Agency: ISRO
Sanctioned Amount: INR 28,91,838
Sanctioned Date: 14-10-2025

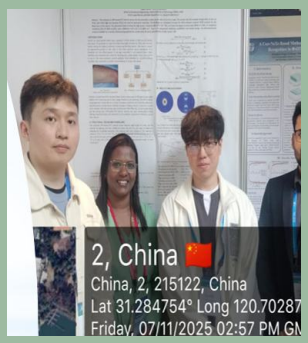






07 FOREIGN VISITS

Faculty: Dr. Sangeetha N
Institute: International Conference, China
Date: 07-11-2025
Proposal: Poster presentation and international research collaboration



Faculty: Dr. Thanigai Selvan V
Institute: International Conference on Green Energy, Computing and Intelligent Technologies (GEn-CITY), Bali, Indonesia
Date: December 2025
Proposal: Presentation on Image Encryption and international research collaboration



Faculty: Dr. Jeeva J B
Institute: Asian Institute of Technology, Thailand
Date: 13 December 2025
Proposal: Visit for Joint Ph.D. supervision and development of industry-oriented research solutions and international research collaboration



Faculty: Dr. Vijendra Babu D
Institute: Asian Institute of Technology, Thailand
Date: 26-28 November 2025
Proposal: 1st International Conference on Data Science and Geoinformatics, ICDSG2025, Bali, Indonesia.



08 PATENTS

Patent Title	Inventors	Status
A real-time air-quality assessment and respiratory-risk prediction system	**Sivakumar R, Kaushik R Haran, Khare Soham Amit, Priyomedha Ghosh,** Kishoreraja P C	Published
An autonomous hospital assistance robotic system and a method to perform the same	**Kathirvelan J, Shrish Makwana, Hamza Ahamed Siddiqui, Aniket Paul**	Published
A smart helmet based rider safety system and method for preventing unsafe motorcycle operation using a smart helmet	**Kathirvelan J, Awais Badsha M, Parth Aror, Abhinandh As**	Published
An intelligent multi-layered emergency vehicle traffic signal management system	**Jaffino, M Saisharan, Vineeth P**	Published
A high-speed automated toll collection system for real-time vehicle identification	**Sumit Kumar Jindal, Arunkumar M,** Adrivid Mishra, Shagnik Paul	Published
A hetero-dielectric double-gate (hddg) tunnel field-effect transistor (tfet) biosensor and a method for fabricating the same	**Shanidul Hoque, Anirudh Koteshwar**	Published
A hybrid ai-enabled legal analysis apparatus and a method of performing the same	**Hementa Kumar Sahu, Shanidul Hoque, Jeriel Philly Koshy**	Published
Composite bio signal monitoring system for heart attack detection	**Kavitha K.V.N, C.Sathiyavel**	Published
An integrated system for automated classroom content capture and ai-driven educational resource generation	**Sumit Kumar Jindal, Arunkumar M,** Sasmit Bagherwal, Abhishek Kritin S R, R Raghunesh	Published

PATENTS 08

Patent Title	Inventors	Status
Single-axis ldr arduino-based sun-tracking solar panel control system	**Kathirvelan J, Chaitanyaprasad, Anugu Hithen Chandra Harsha, Shathavish Guptha R V**	Published
Multi-servo legged robotic system with ultrasonic distancesensing control	**Kathirvelan J, Bhuvana Kruthi Koli, Dharshan Y**	Published
ESP32-integrated smart irrigation system with soil moisture, flow, and environmental regulation	**Kathirvelan J, Ankit Agarwal, Sanat Vasisht, Garv Khullar**	Published
An intelligent, web-oriented legal document assistant system configured to automate and enhance the processes of reviewing, summarizing, editing, and interacting with legal documents	**Shilpi Ruchi Kerketta, Mohammad Suheb Abbas, Shaik Muhammed Faizaan Ali**	Published
A smart wearable health-monitoring band for cattle	**Sangeetha A, Mythili N, Koduru Aravind Sai Reddy, Mandavilli Venkata Siva Srikar, Villa Sri Naga Sai Gopal**	Published
A smart flood-level monitoring and alert system and a method for detecting, classifying, and broadcasting real-time flood-level information	**Sundar S,** Leema Rose Viannie, **Pugalarasu M, Sanjay Ms, Kavin K**	Published
A device and method for localized work-function modulation in a stacked nanosheet field-effect transistor	**Rajan Kumar Pandey, Kannam Sai Lakshmi Prasanth**	Published
A biomass-derived adsorbent system for removal of heavy metal ions from aqueous streams	Gopi R**, Sumathi Gokulanathan,** Amey Anant Joshi	Published
Bandwidth enhanced circular siw cavity mimo antenna with al2o3 dielectric resonators	**Rajkishor Kumar, Avinash Chandra, Vijay Kumar**	Published

08 PATENTS

Patent Title	Inventors	Status
Electronic textile-based wearable antenna device with enhanced radiation performance in l-band spectrum for wireless communication	**Shah Arpan Hasmukh Mayuri, Sagar Pareshkumar Ramanbhai, Kalyanbrata Ghosh, Rahul Mahohar, Subhra Sankha Sarma**	Published
A system and method for coordinated indoor position determination using multi-stage signal processing	Anindita Kundu, Arpan Garai, A Ramesh Kumaran, Taran Singh, Shashi Bhushan Vijay, **Budhaditya Bhattacharyya**	Published
Vanadium dioxide (vo_2) based metamaterial absorber with integrated sensing capabilities in the terahertz regime	**Shankar T, Rajesh N, R Shyamsundar**	Published
A soft thermal sensor system and a method for utilizing machine learning algorithms for accurate temperature measurement	**Vaegae Naveen Kumar,** Venkata Lakshmi Narayana K	Published
A lora-based (long range) iot smart switch system and a method for controlling of household appliances	**Sumathi Gokulanathan, Satvik Jain, Vighnesh Viswajith, Chaitanya Kandpa, Aniruddh Chowdhury**	Published
An obstacle detection and alert system for railway applications, configured to detect and report obstructions on railway tracks	**Sumit Kumar Jindal,** Aaryan Gupta	Published
A digital twin system and a method for active thermal management of a power converter	Raja Singh R, Dheeba J, **V. H. Pranaav Arjun**	Published
Design of a novel dual-metal cylindrical well fet (cywell fet) for low-power sensing	**Rajan Kumar Pandey, Shubham**	Published
A method for synthesizing higher manganese silicide using molten-salt encapsulation in ambient atmosphere	**Arunkumar Chandrasekhar,** Rajasekar P, Nishath Begum. J	Published

PATENTS 08

Patent Title	Inventors	Status
A low specific absorption rate (sar) circular microstrip patch antenna for wearable ism band applications	**Christina Josephine Malathi A, Padmasravya Konchada, Moitreyee Esh Choudhury**	Published
A gray-to-binary converter system and method for converting a gray code sequence into a binary code sequence	Aarthy S.L, Nancy Victor, **Konguvel Elango, Sivakumar R,** Viswanathan A	Published
System and method for dynamic, multi-tier language model selection on resource-constrained edge devices	Naveenkumar J, **Hemalatha K,** Joshva Devadas T, Pradheep P, **Yuvanesh S, Harish Kb,** Keerthan Saai Reddy S	Published
An intelligent framework for ai-powered drug discovery and development	Aarthy S.L, Akila Victor, Nancy Victor, Gopinath M.P, **Mohanasundaram R, Sharmila N**	Published
A non-linear phase frequency detector (nl-pfd) system for phase-locked loops (plls)	**Abdul Majeed K, Rahul R. S, Sathwik Mohan M. V, Athul K. Alias, N R Sivaraaj**	Published
A solar-powered free-floating buoy system and a method for ai-based tsunami early warning	Prasanth S, **Vineet Tiwari**	Published
A multi-source uav-integrated intelligent people counting and crowd monitoring system	Jothish Kumar M, Ramesh Kumar C, Leema Rose Viannie, Sanjay Kanna V, **Vishal Ram K N,** Ashissh S	Published
Semiconductor device contact with engineered schottky barrier using topological insulator sandwich layer	**Rajan Kumar Pandey, Kannam Sai Lakshmi Prasanth**	Published
Intelligent predictive maintenance system for a transportation asset	**Prakash R, Kushagra Narang, Jhanvi Chaturvedi**	Published

08 PATENTS

Patent Title	Inventors	Status
Substrate-engineered complementary fet device with pin doping for parasitic channel suppression and method therof	**Rajan Kumar Pandey, Shubham**	Published
Hexagonal boron nitride integrated cfet architecture for reduced lattice temperature and enhanced thermal performance	**Rajan Kumar Pandey, Shubham**	Published
A functional link expansion-based non-linear adaptive filter for non-invasive fetal electrocardiogram	**Malaya Kumar Hota, Bipin Samuel**	Published
Adaptive terrain-responsive footwear system with dynamic sole reconfiguration for safety and multi-surface mobility	**Sumit Kumar Jindal,** Chris Martin Mattam**,** Ujjwal Gogoi	Published
A wearable alertness monitoring device for detecting user fatigue in real time	**Sumit Kumar Jindal, Arunkumar M,** Ayman Mohammed**,** Noel Kallingal**,** Ahamed Zaki	Published
Ai-enabled system and method for predictive and quantitative evaluation of dental tissue	Kishoreraja P C, **Sivakumar R**	Published
A method for hierarchical energy-aware clustering in underwater wireless sensor networks	**Shankar T, R Shyamsundar**	Published

09 PUBLICATIONS

High Impact Factor Publications

Details	IF
Chittibabu, S.K.; Chandrasekhar, A.; Krishnamoorthi, K., "Smart Nb2C MXene/Ecoflex triboelectric nanogenerator for energy harvesting and IoT-assisted visualization of color-induced behavioral responses in autism," Chemical Engineering Journal, Vol:524, DOI: 10.1016/j.cej.2025.169292	13.2
Sindhu, R.; Arunachalam, V., "Energy-efficient scalable memory LSTM cell with approximate feature processing units, " Results in Engineering, Vol:29, DOI: 10.1016/j.rineng.2025.108517	7.9
Prasanna Kumar, M.; Rajak, S.; Summaq, A.; Elumalai, K.; Selvaprabhu, P.; Chinnadurai, S., "Optimizing IRS placement and element configuration in B5G: A novel cooperative hybrid communication system," Results in Engineering, Vol:29, DOI: 10.1016/j.rineng.2025.108457	7.9
Viswanathan, P.; Chandrasekhar, A., "Stretch-responsive triboelectric nanogenerator based on conductive PVA/AC hydrogel for human activity monitoring," Results in Engineering, Vol:28, DOI: 10.1016/j.rineng.2025.107734	7.9
Velmurugan, P.G.S.; Ramkumar, S.S.; Thiruvengadam, S.J.; Kumaravelu, V.B., "Deep learning and diffusion models for uplink channel estimation in MU-MIMO systems," Results in Engineering, Vol:28, DOI: 10.1016/j.rineng.2025.107930	7.9
Posam, S.; Reddy G, L.K.; Vidhyapathi, V., "Automated dairy farm management system powered by IoT and ML," Results in Engineering, Vol:28, DOI: 10.1016/j.rineng.2025.107508	7.9
Jayakrishna, S.S.; Ganesh, S.S.; Das, U.; Subramanian, S.; Jayaker, P.A., "Slowing down the ripening process of frozen strawberries activates Botrytis Cinerea and Rhizopus mycelium fungus: Inspect through AI-based SSFI model," Postharvest Biology and Technology, Vol:232, DOI: 10.1016/j.postharvbio.2025.113984	6.8

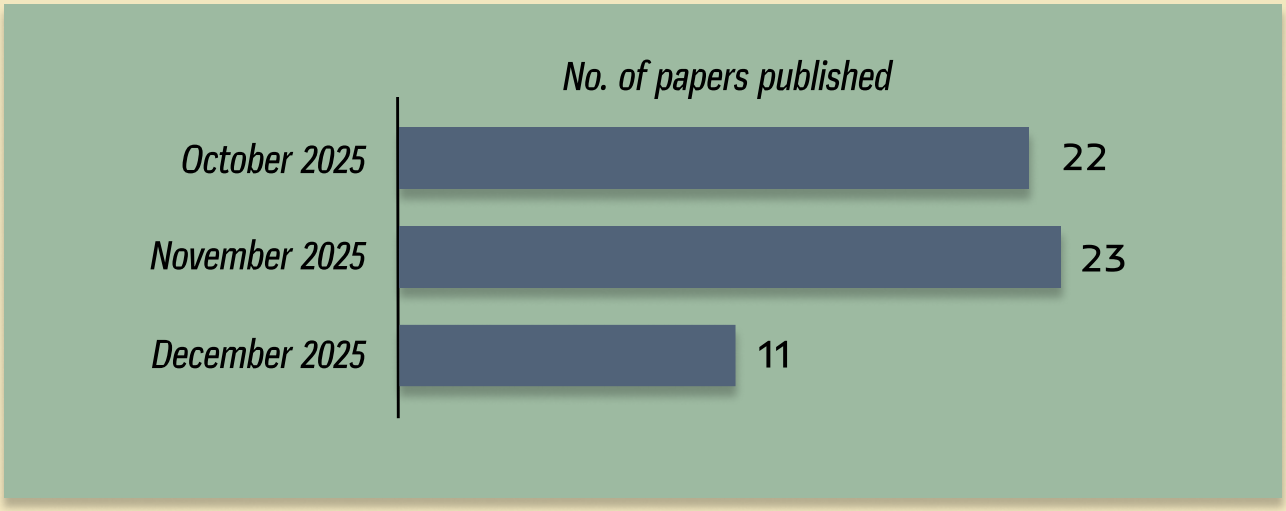
PUBLICATIONS 09

Details	IF
Basith, S.A.; Chandrasekhar, A.; Faruque Ali, S.F.; Arunachalakasi, A., "Lead-Free Perovskites for Piezoelectric?Triboelectric Energy Harvesting and Sensing Applications: A Comprehensive Review," Advanced Sustainable Systems, DOI: 10.1002/adsu.202501128	6.1
Goutham, V.; Harigovindan, V.P.; Mahesh, M.; Jayakody, D.N.K., "Optimized Resource Allocation for Delay-Tolerant ALOHA-NOMA for Enhancing the Performance of Underwater Acoustic Sensor Networks," IEEE Open Journal of the Communications Society, Vol:6, Pg.No: (8296-8310), DOI: 10.1109/OJCOMS.2025.3612749	6.1
Zhang, J.; Cai, C.; Hai, H.; Al-Dulaimi, A.; Selvaprabhu, P.; Chinnadurai, S.; Mumtaz, S., "Optimization Design of Beamforming, Phase Shifts, and Power Allocation for RIS-Assisted AF Relay Network," IEEE Wireless Communications Letters, DOI: 10.1109/LWC.2025.3623192	5.5
Lingadharini, P.; Maji, D., Microchimica Acta, "Colorimetric and electrochemical assessment of starch based highly sensitive Origami glucose biosensor over fabric: A potentially sensitive substitute of Chitosan," Vol:193, Issue: 1, DOI: 10.1007/s00604-025-07757-y	5.3
Das, S.; Shaw, A.; Sumaiya, M.R.; Jeeva, J.B.; Mukherjee, A., "Release study of microplastic fibres and heavy metals from disposable surgical face masks in aqueous medium: the effect of physio-chemical factors and shear forces," RSC Advances, Vol:15, Issue: 46, Pg.No: (38811-38821), DOI: 10.1039/d5ra06197k	4.6
Prasanth, A.; Narasimman, S.; Velumani, M.; Alex, Z.C., "SnO2/GO coated SPR optical fiber sensor for acetone detection in diabetes management: Experimental and theoretical studies," Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, Vol:348, DOI: 10.1016/j.saa.2025.127209	4.6
Praison Jebas, E.; Palla, P., "Progress and prospects of 2-D material-based self-powered UV photodetectors: Mechanisms and device architectures," Materials Science in Semiconductor Processing, Vol:203, DOI: 10.1016/j.mssp.2025.110175	4.6
Palakkattiri Krishnan, N.; Khandelwal, G.; Chandrasekhar, A., "Metal-organic framework impregnated sponge-based TENG as a binary input device for logic gate simulation and power plant control," Discover Nano, Vol:20, Issue: 1, DOI: 10.1186/s11671-025-04369-6	4.5

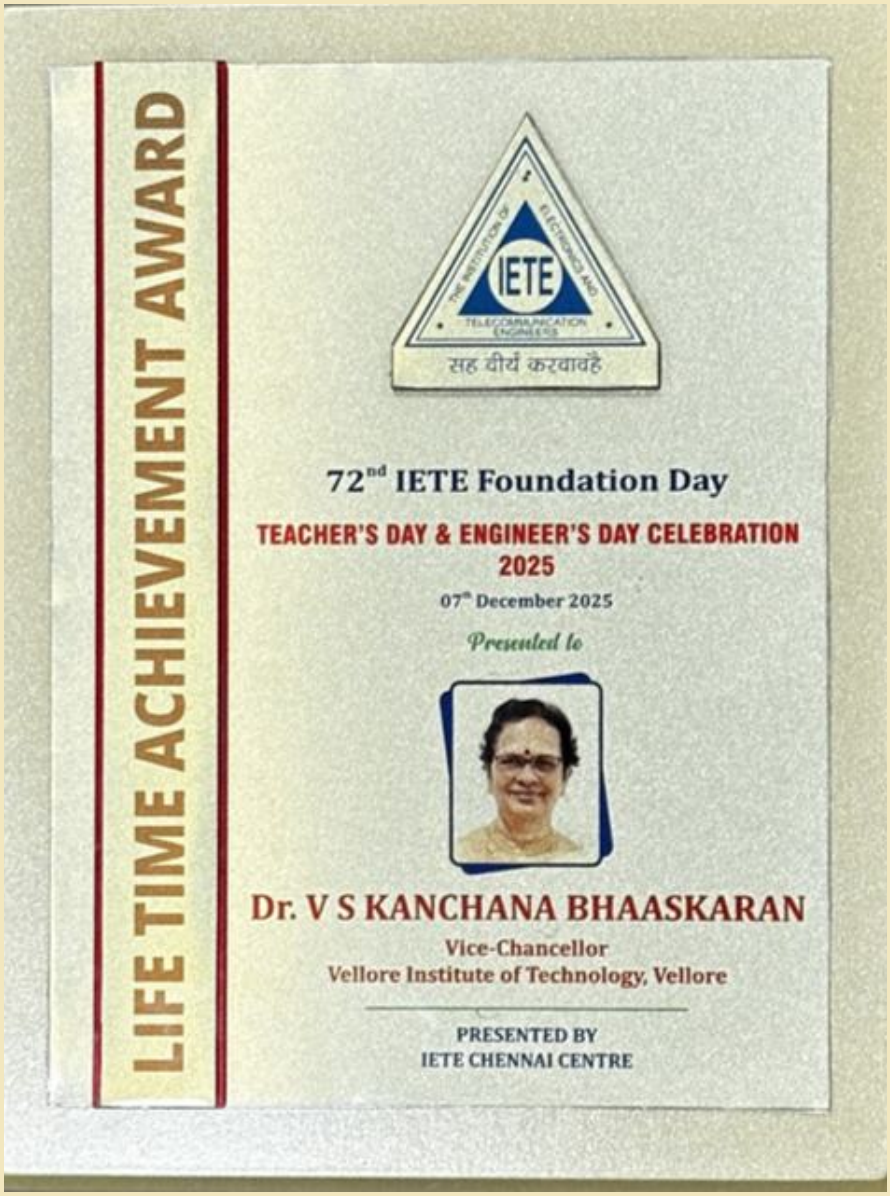
09 PUBLICATIONS

Paper Title	IF
George, G.; Karunanidhi, G., "The role of various composites on pristine hydroxyapatite for the enhanced adsorption of heavy metal ions: A review," Results in Surfaces and Interfaces, Vol:21, DOI: 10.1016/j.rsurfi.2025.100663	4.4
Pragalathan, S.; Velmurugan, V., "Brief Review on Nanofiber-Based Triboelectric Material: A Promising Candidate for a Triboelectric Nanogenerator," ACS Omega, Vol:10, Issue: 41, Pg.No: (47732-47747), DOI: 10.1021/acsomega.5c06844	4.3
Harikrishnan, N.; Sangeetha, A., "Design and analysis of a GaN-based 2D photonic crystal biosensor integrated with machine learning techniques for detection of skin diseases," Scientific Reports, Vol:15, Issue: 1, DOI: 10.1038/s41598-025-25893-6	4.3
Rayaroth, R.; Kumaravelu, V.B., "Spectral efficiency enhancement in multiuser NOMA over Nakagami-m fading channels through power allocation and pairing strategies under hardware and SIC imperfections," Scientific Reports, Vol:15, Issue: 1, DOI: 10.1038/s41598-025-22024-z	4.3

Overall Summary



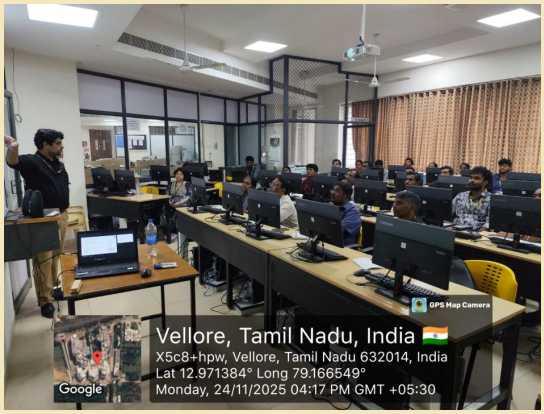
10 AWARDS & CERTIFICATIONS



Dr. V S Kanchana Bhaaskaran received the Life Time Achievement Award from IETE Chennai Centre on 07-12-2025.

EVENTS ORGANIZED 11

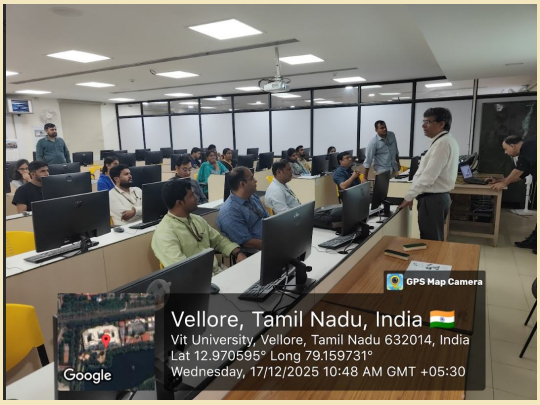
5 Days FDP on **Frontiers of Quantum Computing and Agentic AI in Next-Generation Healthcare Systems** was organized by Prof Nisha J S from 24-Nov-2025 to 28-Nov-2025.





FDP on System on **Chip Design: From Basics to Applications** was organized by Prof. Ravi S and Prof. Sakthivel R from 01-Dec-2025 to 05-12-2025.

A One-Day National Workshop (Hands-on) on **PCB Fabrication Using MIPEC Machines** was organized by Mr. Vijay Kumar, Mr. Avinash Chandra, and Mr. Rajkishor Kumar on 17-12-2025.





One Day Workshop on **ASIC Design using Cadence Tools** was organized by Prof. Ravi S and Prof. Kittur Harish Mallikarjun on 01-11-2025.

11 EVENTS ORGANIZED

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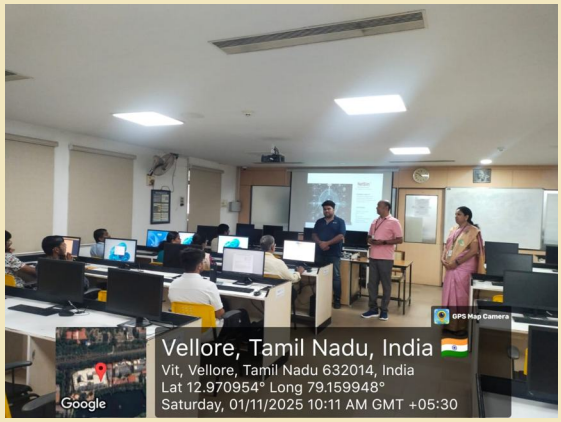
One Day FDP on **Network Simulator (NetSim)** was organized by Prof. Arthi G and Prof. Rammohan A on 01-11-2025.

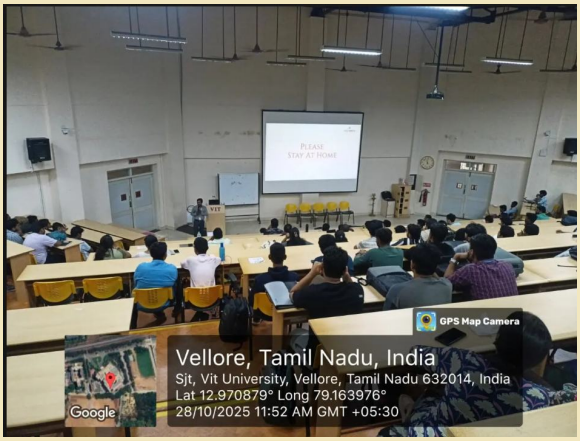




One Day Workshop on **Antenna & Metasurface Design for 6G and Radar Applications** was organized by Prof. Christina Josephine Malathi A and Prof. Revathi S on 08-11-2025

24 Hours Hackathon was organized by Prof. Vijendra Babu D, Prof. Sujatha R, and Prof. Laxmi Devi on 08-11-2025.





Two Day Workshop on Drone Technologies was organized by Prof. Mohidul Islam, Prof. Siddharth Gautam, and Prof. Manoj from 28-10-2025 to 29-10-2025.

11 EVENTS ORGANIZED

Innovation Session: From Problem–Solution Fit to Product–Market Fit (IIC Event) was organized by Prof. Vidhya S and Prof. Konguvel Elango on 16-Oct-2025.





FDP on **Strategic Preparation & Awareness for Research- Knowledge (SPARK)** was organized by Prof. Konguvel Elango and Prof. Vidhya S from 03-Dec-2025 to 03-12-2025.

Solvathon 2025 was organized by Prof. Elizabeth Rufus and Prof. Sathya P on 01-11-2025.



National Level Workshop on **AI, Machine Learning and Deep Learning** was organized by Prof. Venugopal P and Prof. Gerardine Immaculate Mary on 13-12-2025.

Workshop on **Building the Future with Advanced Design System (ADS)** was organized by Prof. Boopalan C, Prof. Poongundran K, and Prof. Shanmugasundaram from 15-10-2025.

Workshop on **Hands on Workshop on Simulate the Future: A Netsim Workshop on 5g, Iot & Ml Security** was organized by Prof. Sangheethaa S and Prof. Shanmugasundaram M on 14-12-2025

Training Programme on **Self-Paced Hands-on Activity on Circuit Theory using MATLAB** was organized by Prof. Vaigai Naveen Kumar and Prof. Kavitha K.V.N. on 28-10-2025.

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.

With focused discussions on emerging technologies like AI-empowered 5G, UVM-based verification, real-time edge vision, and low-power processor design, the lectures provided students with in-depth exposure to current industry practices and innovations. Topics also included domain-specific applications in automotive, healthcare, aviation, and renewable energy.

By connecting theoretical concepts with practical challenges, the lecture series offered a robust learning platform that fostered critical thinking, technical proficiency, and research-oriented mindsets among students, empowering them to contribute meaningfully to tomorrow's technological ecosystem.

In this fourth quarter of the year 2025, we have organized 11 guest lectures over various departments.

Guest Lecture Delivered

The faculty of the School of Electronics and Communication Engineering (SENSE) actively contributed to academic and industry platforms through numerous invited lectures and expert sessions delivered across reputed institutions in India and abroad. These engagements reflect the School's strong research culture, domain expertise, and sustained academic outreach

Among the many distinguished lectures delivered during this period, two remarkable highlights include **Dr. Vinoth Babu K**'s invited talk on **"Technologies for 5G and Future Networks"** at **IEEE, Bangalore, India** on 12th November 2025, and his international lecture on **"Intelligent Systems"** at the **University of Canberra, Australia** on 7th November 2025. These sessions showcased advancements in next-generation communication systems and intelligent AI-driven frameworks, further strengthening SENSE's global academic presence.

Such recognitions underscore the growing national and international footprint of SENSE faculty and reaffirm the School's commitment to knowledge dissemination, research excellence, and meaningful global collaboration.

INDUSTRIAL VISITS 13

Faculty: Dr. Sivakumar R and Dr. Sharmila N
Industry: Narayan Seva Sansthan, Udaipur
Date: 11.10.2025





Faculty: Dr. Gerardine Immaculate Mary, Dr. Venugopal P. and Dr. Ravi Kumar C.V.
Industry: Gabriel India Ltd, Hosur
Date: 19.11.2025

Faculty: Dr. J Valarmathi, Dr. Rohit Mattur
Industry: Maideen Leathers, Ranipet
Date: 26/11/2025





Faculty: Dr. Ashwathi V, Dr. Rahul Manohar, and Dr. Abdul Majeed K K
Industry: Keltron, Kuttippuram
Date: 24.10.2025

INDUSTRIAL VISITS 13



Faculty: Dr. Kathirvelan J and Dr. Budhaditya Bhattacharya
Industry: Unifirst Robotics, Bangalore
Date: 28.11.2025



Faculty: Dr. D. Kannadassan
Industry: Centre for development of Advanced Computing, Hyderabad
Date: 04.12.2025



Faculty: Dr. Sakthivel R and Dr. Rajeev Pankaj
Industry: TESSOLVE, Bangalore
Date: 13.11.2025



Faculty: Dr. Kumaravel S and Dr. Jagannadha Naidu K
Industry: Global Foundries
Date: 12.11.2025

INDUSTRIAL VISITS 13



Faculty: Dr. Kittur Harish Mallikarjun,
Dr. Penchalaiah Palla
Industry: Centre for Nano Electronic Research Centre IISc, Bangalore
Date: 11.12.2025



Faculty: Dr. Jayakrishnan
Industry: Sandisk, Bangalore
Date: 26.11.2025



Faculty: Dr. Kittur Harish Mallikarjun
Industry: CDAC, Bangalore
Date: 26.11.2025



Faculty: Dr. Kittur Harish Mallikarjun
Industry: QpiAI, BANGALORE
Date: 24.11.2025

INDUSTRIAL VISITS 13



Faculty: Dr V S Kanchana Bhaskaran, Dr Sivanantham S and Dr Sakthivel R
Industry: Enthu Technology Solutions India Pvt. Ltd., Coimbatore
Date: 24.11.2025



Faculty: Dr. Vikas Vijayvargiya and Dr. Abhishek Narayan
Industry: Lattice Semiconductors, Pune
Date: 03.10.2025

Faculty: Dr V S Kanchana Bhaaskaran, Dr. Sivanantham S and Dr. Sakthivel R
Industry: Caliber Interconnects, Coimbatore
Date: 24.11.2025





Faculty: Dr. Sivanantham S, Dr. Sakthivel R, Dr. Rajeev Pankaj N, Dr. Vetriveeran Rajamani and Dr. Nawaz Shaffi
Industry: Caliber Interconnects, Coimbatore
Date: 05.11.2025

INDUSTRIAL VISITS 13



Faculty: Dr. Sundar S, Dr. Shanmugasundaram M, and Dr. Vidhyapathi C M

Industry: ReTech Laser Solutions Pvt Ltd, Chennai

Date: 28.11.2025



Faculty: Dr. Kanchana Bhaskaran V S, Dr. Jasmin M, and Dr. Sivanantham S

Industry: SPEL Semiconductor - Chennai, Life Line Circuits Private Ltd., Apertronics and Tata Electronics - Bangalore

Date: 27.11.2025



Faculty: Dr. Valarmathi J, Dr. Sivanantham S and Dr. Vijendra Babu D

Industry: NXP India Innovation World Tour 2025, Bengaluru

Date: 29.10.2025

14 FACULTY INDUSTRIAL TRAINING



Faculty: Dr. Gerardine Immaculate Mary, Dr. Arun M., Dr. Venugopal P., Dr. C.V. Ravi Kumar
Industry: ARAI, Pune
Date: 15-12-2025 to 16-12-2025



Faculty: Dr. M. Arun, Dr. B. Karthikeyan, Dr. N. Sangeetha, Dr. Indrasen Singh, Dr. Jagana Bihari Padhy and Dr. Manish Kumar
Industry: Vector Informatik, Bangalore
Date: 13-10-2025 to 15-10-2025



Faculty: Dr. Chittaranjan Nayak
Industry: CGCRI (Central Glass and Ceramic Research Institute), Kolkata
Date: 17-11-2025 to 29-11-2025

PhD COMPLETED 15

Name	Guide name	Title
Mr. SHANKARAGOUDA MALLANAGOUDA PATIL	Dr. Rajeshkumar V	INVESTIGATION ON GAIN AND BANDWIDTH ENHANCEMENT OF COMPACT SIW ANTENNA FOR WIRELESS APPLICATIONS
MR. MALLI RAJESWARA RAO	Dr. S. Sundar	PERFORMANCE ENHANCEMENT STUDY OF LoRa LPWAN USING HYBRID OPTIMIZATION TECHNIQUES
Mr. VINOTH K	Dr. Sasikumar P	AI-DRIVEN OBJECT DETECTION USING EDGE COMPUTING FOR AUTONOMOUS VEHICLES
Mr. SIVANANTHAM A	Dr. Srinivasa Rao Inabathini	SYNERGIZING SYMMETRIC RESONATING STRUCTURES WITH AIR-GAP IN NON-MAGNETIC METAMATERIAL ABSORBERS FOR ENHANCED BANDWIDTH AND POLARIZATION INSENSITIVITY
Mr. KANAGAVEL M	Dr. Thanikaiselvan V	INVESTIGATIONS ON VARIOUS METHODS FOR ENHANCEMENT OF UNDERWATER IMAGES
MR. PARDHASARADHI MITTAPALLI	Dr. Thanikaiselvan V	CHEST RADIOGRAPHY IMAGE ANALYSIS USING CONVOLUTIONAL NEURAL NETWORKS FOR THE COMPREHENSIVE ASSESSMENT OF PULMONARY ABNORMALITIES
Ms. EVELYN EZHILARASI I	Dr. Christopher Clement J	UNIFIED DEEPCHAINQUANTUM FRAMEWORK FOR MALICIOUS USER DETECTION IN COGNITIVE RADIO NETWORKS
Mr. MOHAN K N	Dr. Yogesh Kumar Choukiker	INVESTIGATION ON BANDPASS FREQUENCY SELECTIVE SURFACE FOR WIRELESS APPLICATIONS
Mr. NANAVATH KIRAN SINGH NAYAK	Dr. Budhaditya Bhattacharyya	DESIGN AND IMPLEMENTATION OF EFFECTIVE INTRUSION DETECTION SYSTEM FOR IoT AND 5G SDN NETWORKS USING DEEP LEARNING TECHNIQUES
MS. PREETHA R	Dr. Jasmin Pemeena Priyadarsini	DEEP LEARNING BASED DETECTION AND CLASSIFICATION OF BRAIN TUMOR USING MAGNETIC RESONANCE IMAGES
Mr. D.S.AKBAR BASHA	Dr. Palla Penchalaiah	DESIGN AND OPTIMIZATION OF QUANTUM EMITTERS USING LOW-DIMENSIONAL MATERIALS FOR QUANTUM COMMUNICATION APPLICATIONS

16 TEAM

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16 TEAM

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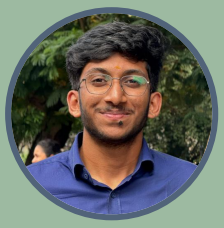

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