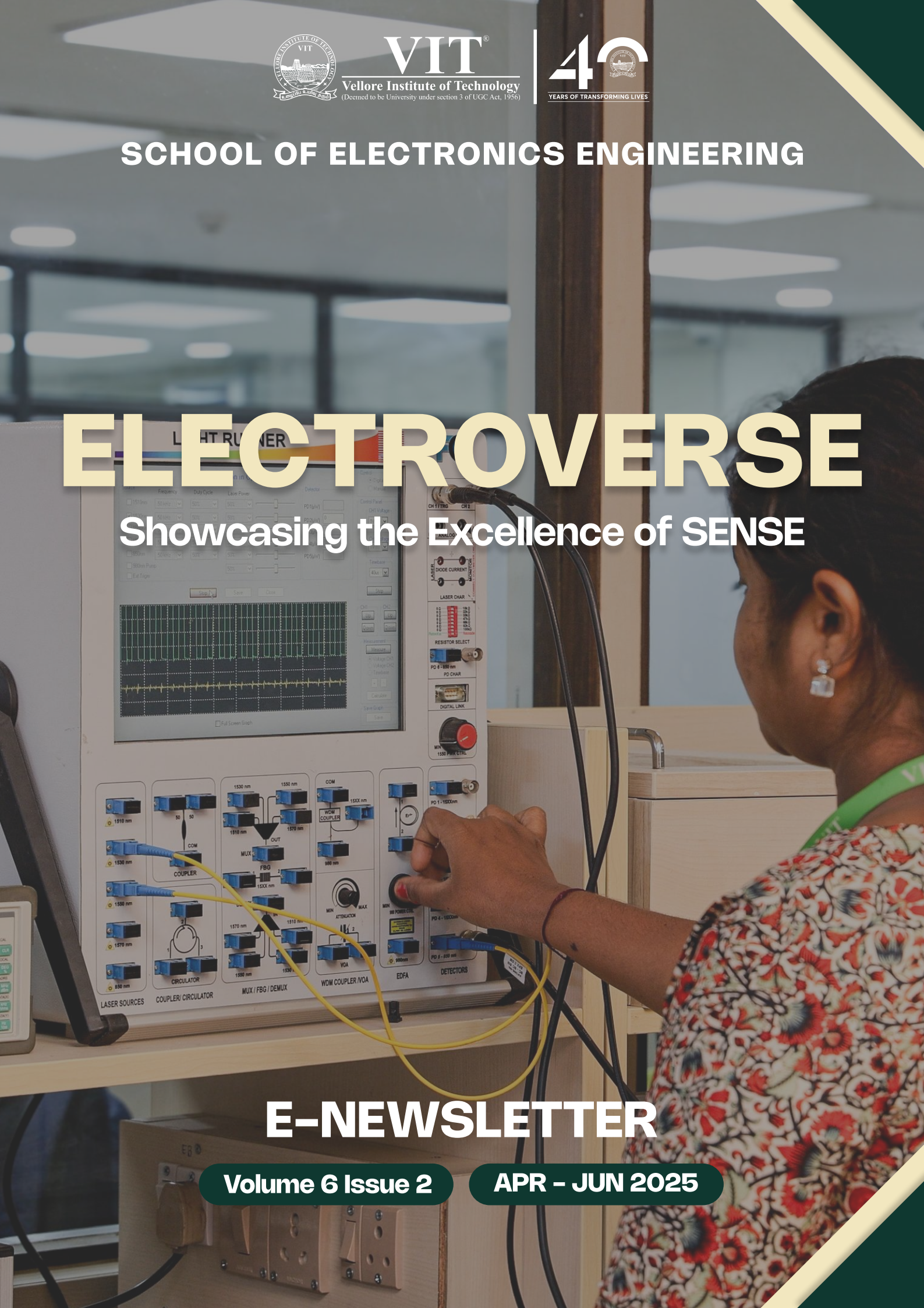
VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

40 YEARS OF TRANSFORMING LIVES

SCHOOL OF ELECTRONICS ENGINEERING

ELECTROVERSE

Showcasing the Excellence of SENSE



E-NEWSLETTER

Volume 6 Issue 2 | APR - JUN 2025

CONTENTS

1 ABOUT
Vision
Mission

2 DEAN'S MESSAGE

3 HIGHLIGHTS

4 STUDENT ACHIEVEMENTS

5 CONSULTANCY PROJECTS

6 FOREIGN VISITS

7 PATENTS

8 PUBLICATIONS

9 AWARDS & CERTIFICATIONS

10 EVENTS ORGANIZED

11 GUEST LECTURES

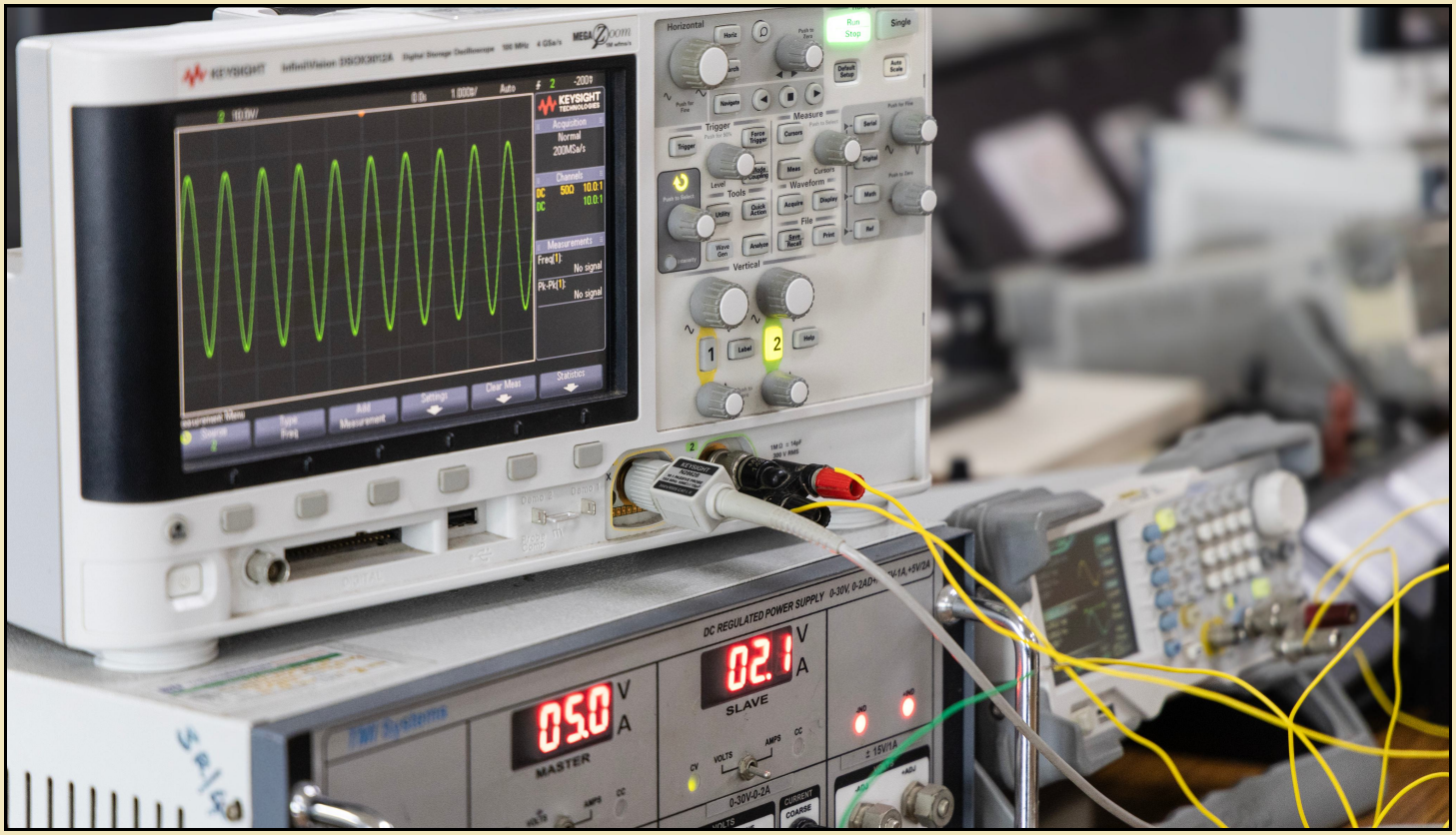
12 INDUSTRIAL VISITS

13 FACULTY INDUSTRIAL TRAINING

14 PhD COMPLETED

15 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.

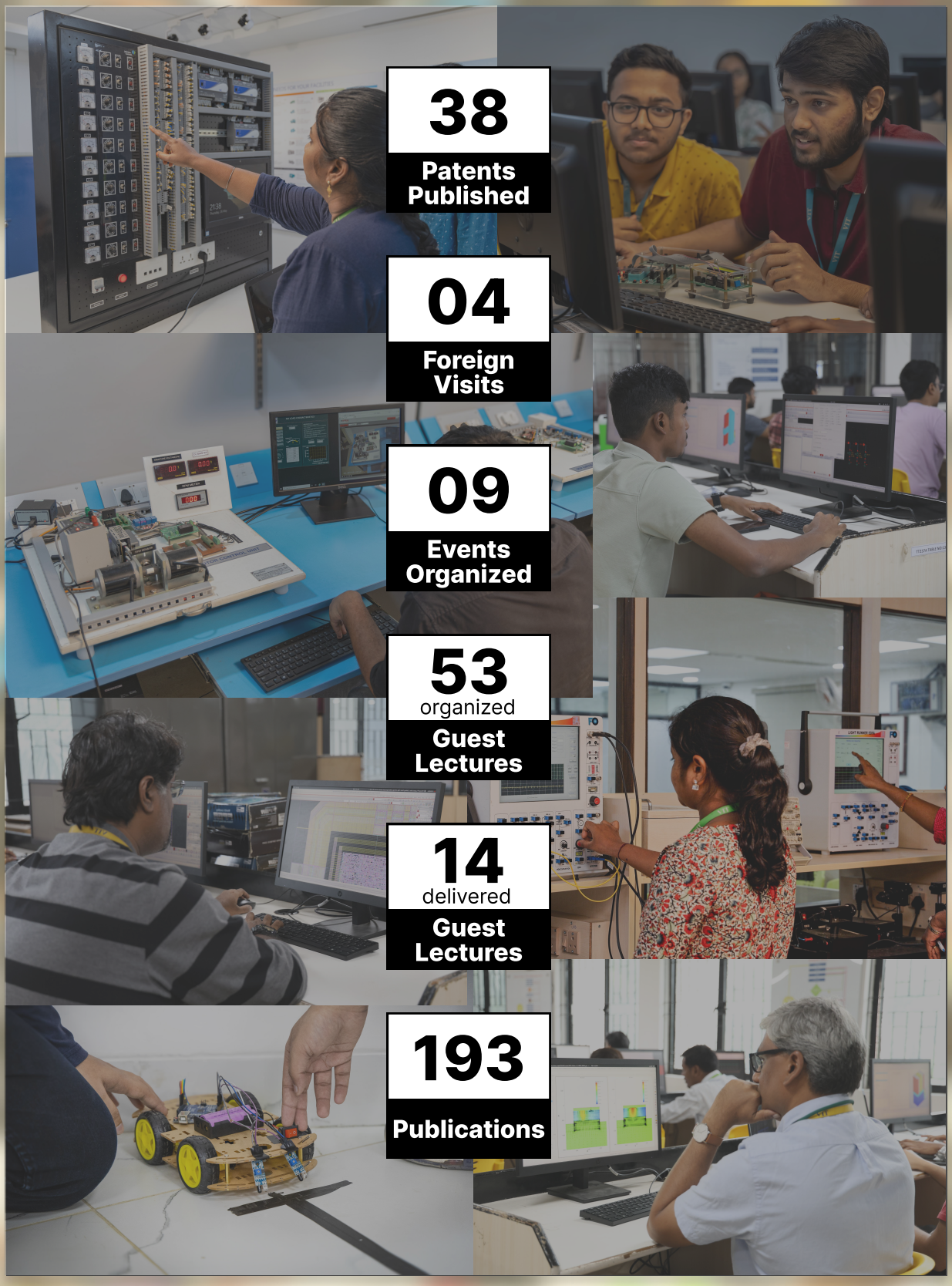
It is with great pride and enthusiasm that I present the 6th Volume, 2nd Issue of Electroverse: Showcasing the Excellence of SENSE—the official e-Newsletter for the second quarter of 2025. This edition highlights the extraordinary momentum of our department, capturing the innovative spirit and professional milestones achieved by our faculty and students from April to June 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



38
Patents Published

04
Foreign Visits

09
Events Organized

53
organized
Guest Lectures

14
delivered
Guest Lectures

193
Publications

04 STUDENT ACHIEVEMENTS

The months of **April to June 2025** marked a truly remarkable chapter for VIT, with students making waves across cultural, technical, and academic platforms, both nationally and internationally. While students from various schools of VIT showcased exceptional talents during this period, this newsletter spotlights the outstanding achievements of students from the School of Electronics and Communication Engineering (SENSE).

Setting the stage ablaze at **Milan 2025**, SRM University's cultural extravaganza, the **VIT Dance Club** shone brightly in the Folk Fiesta category. **Team Chargers** clinched **1st Place**, mesmerizing the audience with a vibrant blend of rhythm and tradition. Congratulations to **Somasskandan M S (22BEC0886)**, **Rishwandth C S (24BEC0687)**, and **Niranjan Kumar S (24MVD0081)**.

Crossing international borders, **Team Assailing Falcons** from the **SAE VIT Chapter** demonstrated engineering excellence at **SAE Aero Design West 2025** in Van Nuys, California. Competing in the Advanced Class category, the team secured **1st Place in Design Report**, **3rd in Overall Presentation**, and **3rd Overall**, achieving a stellar flight score of 97.7361 and a Mission Performance Rank of 4th. The team featured **Adheesh Mathur (23BEC0334)**, **Adhvaith Shivkumar (22BECO0200)**, **Dhruv Bobby Johnson (21BEC0984)**, **Diljith Ragesh (21BEC2028)**, **Jaywant Nitin Nikam (21BECO127)**, **Praneel Nimbalker (22BML0071)**, and **Sisir Lakkaraju (23BEC0248)**.

Innovation met imagination as the **AI & ML Club (TAM)** made its mark at **Kuruksastra 2025**, hosted by Sastra University. In the Logo Wars design challenge, **Team Design Dynamo**, represented by **Nandagopal Ravi (23BML0010)**, emerged as **Runners-Up**, under the guidance of **Dr. Sivakumar R**.

Diplomacy and intellect took center stage as **VITMUNSOC** secured the prestigious **Best Delegation Award** at **SRMR MUN 2025**, held at SRM Ramapuram, Chennai. The team earned 10 individual recognitions, with **Kasturi Saketh Manikrishna (24BVD0053)** receiving High Commendation in the AIPPM committee.

In the thrilling world of motorsports, **Team Kshatriya** roared to glory at the **Mega ATV Championship 2025** in Coimbatore, clinching the title of **2nd Runner-Up** in the Drag Race event. Their high-octane performance came from **Jovan Lloyd (23BEC0315)**, **Nawfal Khan (23BEC0286)**, and **Tia Rachel Fernandez (23BEC0202)**.

From dazzling performances and airborne innovations to high-speed engineering and strategic diplomacy, the students of SENSE continue to raise the bar of excellence. These achievements reflect their unwavering dedication, creative brilliance, and the school's commitment to nurturing talent across every domain.

05 CONSULTANCY PROJECTS

Development of Human Resource Management Software



Faculty: Dr. Mythili N, **Dr. Sangeetha A**
Funding Agency: Viralli Enterprises, India
Sanctioned Amount: INR 590000
Date: 01-04-2025 to 09-10-2025

Development of a Computer vision based motion tracking feature for gamified Rehabilitation



Faculty: Dr. N Sharmila
Funding Agency: Cathoren Pvt Ltd, India
Sanctioned Amount: INR 118000
Date: 11-06-2025 to 10-09-2025

AI Software Development under Project Biryani



Faculty: Dr. Sasikumar P, Dr. Karthikeyan S, Dr. Samuel Rajkumar V, Dr. Sathis Kumar B
Funding Agency: TECDIA CO LTD, Japan
Sanctioned Amount: INR 2024137
Date: 16-06-2025 to 31-12-2025

Development of Configurable Audio Chain (CAC)





Faculty: Dr. Zachariah Alex, Dr. Prakash R, Dr. Rajeshkumar M
Funding Agency: RF2DIGITAL INC, South Korea
Sanctioned Amount: INR 354000
Date: 01-04-2025 to 31-03-2026

CONSULTANCY PROJECTS 05

Smart Supply Chain Management for Agricultural and Marigold Production using IoT Sensors and TXC Analysis



Faculty: Dr. Karthikeyan S, Dr. Jayaraman G, Dr. Arabi Mohammed Saleh, **Dr. Sasikumar P,** Dr. Balakrishnan P, Dr. Anny Leema A

Funding Agency: OmniActive Health Technologies, India

Sanctioned Amount: INR 663750

Date: 15-06-2025 to 31-12-2025

Autonomous navigation and mapping of underwater environments with ROS based UAVs





Faculty: Dr. Zachariah Alex, Dr. Abraham Sampson

Funding Agency: IIT Tirupati Navavishkar I-Hub Foundation

Sanctioned Amount: INR 2148000

Date: 15-06-2025 to 31-12-2025

06 FOREIGN VISITS

Faculty: Dr. Sakthivel R
Institute: University of Tor Vergata, Rome, Italy
Date: 01-04-2025 to 30-04-2025
Proposal: Dual Degree on M.Tech (VLSI), Summer Internship programme



Faculty: Dr. Zachariah C Alex
Institute: Mid Sweden University, Sweden
Date: 28-05-2025 to 30-06-2025
Proposal: Dual Degree on B.Tech (ECE ,VLSI, Bio and Embedded), Summer Internship programme



Faculty: Dr. Arunkumar Chandrasekhar
Institute: National University of Taiwan, Taiwan
Date: 28-05-2025 to 30-06-2025
Proposal: Dual Degree on M.Tech(VLSI), Summer Internship program



Faculty: Dr. Revathi
Institute: University of Bristol, University of Bath, and City, University of London
Date: 09-06-2025 to 15-06-2025
Proposal: Collaborative Activities



07 PATENTS

Patent Title	Inventors	Status
A MEDICATION MANAGEMENT SYSTEM FOR VISUALLY IMPAIRED USERS	Joshva Devadas T, Naveenkumar J, **Hemalatha K**, Vasu Somani, Shailesh Mishra, Siddharth Sanjeev, Ayush Kumar	Published
INTEGRATED SMART CHARGING SYSTEM	Rashmi Ranjan Das, **Sumit Kumar Jindal, Deepika Rani Sona, Bhaargav Rathor, Om Patel, Shreyashi**	Published
METHOD FOR SECURED COMMUNICATION BETWEEN RESOURCE CONSTRAINED DEVICES	Naveenkumar J, Joshva Devadas T, **Hemalatha K**, John Linus Miracle, Niraj Namjoshi	Published
TERRAIN AWARE SMART SENSOR SYSTEM FOR ROAD SAFETY IN HILLY REGIONS USING AI, GIS AND AUTONOMOUS NAVIGATION	**Sumit Kumar Jindal, Dhoriyani Urva Rajnikant, Souvik Mukherjee**	Published
GESTURE-BASED WEARABLE WHEELCHAIR CONTROL SYSTEM	**Naushad Manzoor Laskar, Vikas Vijayvargiya, Rakshith Parthipan, Raajaprasanna M, Vigneshwaran V, Lakshmanan R**	Published
METHOD FOR BEAMFORMING OPTIMIZATION IN A WIRELESS COMMUNICATION SYSTEM	**Sudhanshu Arya, Saranya K.C, Yogesh Kumar Choukiker, Abhijit Bhowmick**	Published
WEARABLE ANTENNA APPARATUS	**Rajkishor Kumar, Sarthak Varshney, Samridhi Bajpai**	Published

PATENTS 07

Patent Title	Inventors	Status
ENHANCED AUTONOMOUS POWER SUPPORT FOR SYSTEM FOR PORTABLE ELECTRONIC DEVICES	**Sumit Kumar Jindal, V.S. Prithiviraj, Sannidanam Srivani,** R. Sushmitha	Published
REAL-TIME GESTURE RECOGNITION GLOVE FOR SIGN-TO-SPEECH TRANSLATION	**Naushad Manzoor Laskar, Vikas Vijayvargiya, Sanjay Elavarasan Karthikeyan, Tejas Ghatte, Kalpaj Kashyap**	Published
FREQUENCY SELECTIVE SURFACE BASED FLEXIBLE ELECTROMAGNETIC SHIELDING CLOTH FOR MOBILE BAND SAR REDUCTION	**Suresh Kumar T R, Zachariah C Alex**	Published
A HYBRID SENSOR AND VISION-BASED SIGN LANGUAGE INTERPRETATION SYSTEM FOR REAL-TIME GESTURE RECOGNITION AND TRANSLATION	**Hementa Kumar Sahu, Bijaylaxmi Das, Shanidul Hoque**	Published
AUTOMATED DAIRY FARM MANAGEMENT POWERED BY IOT AND ML	**Vidhyapathi C.M, Posam Suriiya, G Likhith Kumar Reddy**	Published
FAST LOOP IN LOOP COMPRESSIVE SENSING FOR ELECTROCARDIOGRAM USING DWT SENSING FOLLOWED BY DISCRETE H	**Prakash R, Shashi Kumar S**	Published
SYSTEM AND METHOD FOR CONTROLLING SPEED OF MIXER GRINDER MOTOR USING FIELD PROGRAMMABLE GATE ARRAY	**Ragunath G, Yash Sinha, Jigyasu Shekhar, Kanak Rai Choudhary**	Published
DRA AND FSS INSPIRED HIGH GAIN WAVEGUIDE APERTURE ANTENNA WITH ENHANCED	**Avinash Chandra, Rajkishor Kumar, Vijay Kumar**	Published

07 PATENTS

Patent Title	Inventors	Status
CARBON NANOTUBE FIELD-EFFECT TRANSISTOR BASED VOLTAGE-CONTROLLED OSCILLATOR	**Abdul Majeed K, Antony Xavier Glittas Xavier Chelliah, Ganesamoorthy B**	Published
REDUCED INSTRUCTION SET COMPUTING-FIVE (RISC-V) PROCESSOR ARCHITECTURE	**Sumit Kumar Jindal, Beeram Yuvaraj Reddy, V V K Karthikeya Surampudi, Muthke Vivek**	Published
DETECTION OF HUMAN BLOOD PERMITTIVITY THROUGH A NON-INVASIVE APPROACH USING SENSING TECHNIQUE	**Christina Josephine Malathi A, P Pavan Kumar, Suhas RP Eedala**	Published
DUAL-BAND CIRCULARLY POLARIZED DIELECTRIC RESONATOR ANTENNA	**Rajkishor Kumar, Avinash Chandra, Priyanka Das**	Published
SMART ELECTRONIC LOCK FOR TWO-WHEELER VEHICLES AND REMOTE MONITORING SYSTEM	**Sujatha R**, Vijay Sathappan M	Published
NON-INVASIVE CBC	**Christina Josephine Malathi A, P Pavan Kumar, Suhas RP Eedala**	Published
INJECTION GATE-BASED N-STACKED NANOSHEET FET DEVICE FOR LOW-POWER APPLICATIONS	**Rajan Kumar Pandey, Shubham, Bala Seshanth R**	Published

PATENTS 07

Patent Title	Inventors	Status
AI-DRIVEN MULTIMODAL COGNITIVE BIOMARKER ANALYSIS FOR EARLY ALZHEIMERS DETECTION	Shynu P.G, **Subhathirai S P**	Published
SUSTAINABLE SYNTHESIS OF NOVEL COMPOUNDS	**Prakash R, Kushagra Narang, Jhanvi Chaturvedi**	Published
MAXIMUM POWER POINT TRACKING FOR PHOTOVOLTAIC SYSTEM	**Kathirvelan J, Nethaji G**	Published
NIGHT VISION COMBAT HELMET WITH MULTI-DIRECTIONAL ENEMY DETECTION AND REAL-TIME AUDIO ALERTS	**Sujatha R, Arunbalaji M, Muhil S R**	Published
A SMART JUICE AND WATER VENDING MACHINE	**Ragunath G**, Arunkumar G, **Karuppusamy S, Kannabiran T, Jelin Praisy**	Published
CUSTOM-BUILT POTENTIOSTAT SYSTEM AND METHOD TO OPERATE THE SAME	**Kathirvelan J**, Vijayaraghavan R	Published
ADAPTIVE NIGHTTIME IMAGE DEHAZING USING DUAL-CHANNEL AND GUIDED IMAGE FILTERING	**Bijaylaxmi Das, Hementa Kumar Sahu**	Published
SMART HELMET WITH CLOUD-BASED SAFETY ALERTS	**Naushad Manzoor Laskar, Abhishek Narayan Tripathi, Vikas Vijayvargiya**, Suhani Singh, **A S Rassel**	Published

07 PATENTS

Patent Title	Inventors	Status
A METHOD OF MITIGATING PHASE ERROR IN RIS-ASSISTED WIRELESS COMMUNICATION NETWORK AND SYSTEM THEREOF	**Sudhanshu Arya, Saranya K.C, Yogesh Kumar Choukiker, Abhijit Bhowmick**	Published
SYSTEM AND METHOD FOR ALLOCATING RIS ELEMENTS USING DRL-BASED SPARSE ALLOCATION TECHNIQUE TO ENHANCE SINR	**Sudhanshu Arya, Saranya K.C, Yogesh Kumar Choukiker, Abhijit Bhowmick**	Published
BAND TUNABLE FILTERING POWER DIVIDER	**Rohit Mathur, Dilip Kumar Choudhary**	Published
RECYCLED MOSQUITO REPELLENT GRAPHITE COMPOSITE FILMS FOR SPRING ASSISTED TRIBOELECTRIC NANOGENERATORS IN ENERGY HARVESTING APPLICATIONS	**Arunkumar Chandrasekhar, Karthick N, Rajasekar P, Nimmi Sharma, Diya Maria Sanjay, Rishab Pillai, Sayyid Abdul Basith V, Pramila V**	Published
AN ENGINEERED 4H-SIC ENHANCED N-STACKED FORKSHEET FET FOR SELF-HEATING REDUCTION IN SEMICONDUCTOR DEVICES	**Rajan Kumar Pandey, Shubham, Kannam Sai Lakshmi Prasanth**	Published
SYSTEM AND METHOD FOR MEASURING PRESSURE FOR BELLOW USING A HYBRID MACHINE LEARNING MODEL	Venkata Lakshmi Narayana K, **Vaegae Naveen Kumar**	Published
METAL-INSULATOR TRANSITION (MIT) ENHANCED CONTACT INTERFACE FOR SEMICONDUCTOR DEVICES	**Rajan Kumar Pandey, Kannam Sai Lakshmi Prasanth, Shubham**	Published
CONVOLUTIONAL NEURAL NETWORK (CNN)-BASED FRAUD DETECTION SYSTEM FOR E-COMMERCE TRANSACTIONS	**Mythili N, Sangeetha A**	Published

PUBLICATIONS 08

High Impact Factor Publications

Details	IF
Ramesh K., Venkidusamy S., Ramasamy M., Murugesan R., Chandrasekhar A., and Mayandi J., "Strategic on-demand combat against preformed mature bacterial biofilms using a sustainable and flexible chia mucilage-based triboelectric nanogenerator," Chem. Eng. J., vol. 519, 2025, doi: 10.1016/j.cej.2025.164810	13.3
Chittibabu S.K., Chandrasekhar A., and Chintagumpala K., "From energy to intelligence: MXenes transforming triboelectric nanogenerators," J. Mater. Chem. A, 2025, doi: 10.1039/d5ta02391b.	10.7
Jeba Prasanna Idas S., Hemalatha K., Naveenkumar J., and Joshva Devadas T., "Recent trends on mammogram breast density analysis using deep learning models: neoteric review," Artif. Intell. Rev., vol. 58, no. 8, 2025, doi: 10.1007/s10462-025-11232-8.	10.7
Mohamed Ali M.S., Hasan M.N., and Laskar N.M., "Flexible and stretchable out-of-plane thermoelectric generator with PEDOT:PSS/SWCNT films and serpentine electrodes," J. Power Sources, vol. 653, 2025, doi: 10.1016/j.jpowsour.2025.237737.	8.1
Kewate O.J., Lin J.-Y., and Punniyakoti S., "Unleashing the potential of vanadium based MXenes for supercapacitors," J. Power Sources, vol. 650, 2025, doi: 10.1016/j.jpowsour.2025.237518.	8.1
Jayakrishna S.S. and Ganesh S.S., "Unveiling the effects of electric field treatments on crop cultivation: a game-changing sustainable energy strategy for plant pathogen eradication and boosting yield growth in agriculture, validated with an artificial intelligence approach," Energy Nexus, vol. 18, 2025, doi: 10.1016/j.nexus.2025.100438.	8
Thottempudi P., Jambek A.B.B., Kumar V., Acharya B., and Moreira F., "Resilient object detection for autonomous vehicles: Integrating deep learning and sensor fusion in adverse conditions," Eng. Appl. Artif. Intell., vol. 151, 2025, doi: 10.1016/j.engappai.2025.110563.	7.5

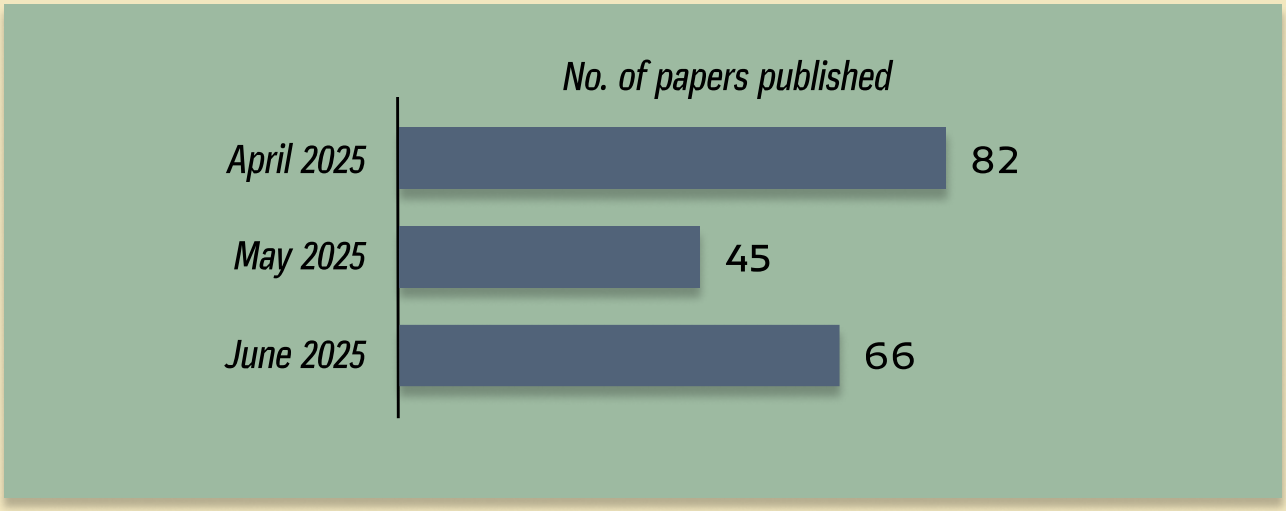
08 PUBLICATIONS

Details	IF
Noel M.M., L. A., Trivedi A., and Dutta P., "Oscillating activation functions can improve the performance of convolutional neural networks," Appl. Soft Comput., vol. 175, 2025, doi: 10.1016/j.asoc.2025.113077.	7.2
Benarjee S. and Vaegae N.K., "Hadamard code based numerical mapping approach for the identification of protein coding regions in genomic sequences using digital filters," Comput. Biol. Med., vol. 195, 2025, doi: 10.1016/j.compbiomed.2025.110565.	7
Mani A., Chandrasekaran S.K., and Goutham V., "Enhancing NOMA-MEC Based Intelligent Farming: Performance Analysis and HSBOO Optimization," IEEE Open J. Commun. Soc., 2025, doi: 10.1109/OJCOMS.2025.3576776.	6.3
Mallick B., Parida P., Nayak C., Ali N., Panda M.K., Prasad B., Sahu G., and Palai G., "Secure real-time transmission of multi-spectral satellite images inducing a 6D hyper-chaotic system and BB84 QKD protocol," Alexandria Eng. J., vol. 122, pp. 364–384, 2025, doi: 10.1016/j.aej.2025.02.113.	6.2
Himavanth N., Arshad M., Kumaravel S., Natarajan R., Chandra A., and Karthikeyan M., "Compact circle-shaped circularly polarized implantable antenna with combined e and hexagonal shaped patch for wireless biotelemetry," Results Eng., vol. 27, 2025, doi: 10.1016/j.rineng.2025.105758.	6
Yogeshwar J.B., Laskar N.M., Samuel A., Solomon A., and Vijayvargiya V., "Design and analysis of low noise, low power OTA considering design trade-offs for biomedical applications," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.105103.	6
Pandurangan D. and Mishra N., "Circularly polarized four-element wideband MIMO antenna for C-band applications using sinusoidal decoupling structure for isolation and axial ratio enhancement," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.105301.	6
Anusha K. and Dwivedi A.D.D., "Numerical simulation and performance analysis of amorphous zinc oxynitride thin film transistor (a-ZnON TFT) for large area display applications," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.105294.	6

PUBLICATIONS 08

Paper Title	IF
Harshdeep K., Sumalatha K., and Mathur R., "DeepTransIDS: Transformer-Based Deep learning Model for Detecting DDoS Attacks on 5G NIDD," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.104826.	6
S. A. and Kathirvelan J., "Computer vision-based detection and classification of chemically ripened bananas and papayas at vendor site through deep learning AI models using real-time dataset," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.104730.	6
Madheswaran S. and Venkatesan R., "Design of wide band SIW based Reflective Mode FSS with Angular Stability for X-band application," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.104970.	6
C. V.K. and Selvaprabhu P., "Utilizing ethereum blockchain and smart contracts to transform cord blood procurement in health care supply chains," Results Eng., vol. 26, 2025, doi: 10.1016/j.rineng.2025.104867.	6

Overall Summary



09 AWARDS & CERTIFICATIONS



Faculty Coordinator		
Dr. Thanikaiselvan V	10888	Professor, SENSE Asst. Director, DQAA
Dr Renuga Devi S	10291	Professor, SENSE Dy. Director, DQAA
Executive Board 2024-25		
Aditya Mani	21BEC0468	Chairperson
Arish P	21BEC2348	Secretary
Aditya Menon	22BEC0584	Vice-Chairperson
Kavi Rohith M	22BEC0147	Co-Secretary
Srishti Shukla	21BCE3977	Technical Head
Akash Manikantan N	22BEC0056	Editorial Head
Gurpreet Singh	22BEC0416	Design Head
Shoumik Adhikary	22BEC0437	Projects Head
Jiya Sugla	22BEC0114	Finance Head
Aniruddh Russiya	22BEC0441	Publicity Head

IEEE Communications Society (IEEE ComSoc) VIT has been awarded the **Best Chapter Award** for the year 2024–25 under the IEEE category by the Office of Students' Welfare at University Day 2025 held on 05-04-2025.



Dr. Konguvel Elango received the **Anveshan Fellowship Program 2024–2025** award from Analog Devices on 07-04-2025.

AWARDS & CERTIFICATIONS 09



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
KATTANKULATHUR

4th INTERNATIONAL CONFERENCE

RAEEUCCI-2025

Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence

"Platform for Foundation of Technologies for Tomorrow"

CERTIFICATE OF APPRECIATION

This is to certify that **Dr. Vetriveeran Rajamani** from **School of Electronics Engineering (SENSE), Vellore Institute of technology, Vellore** has presented the paper titled **"Local Activity Principle in Memristor based Simple Oscillator"**, co-authored by **Rupesh Dahi Shrestha, Ram Kaji Budhathoki, Poongundran Selvaprabhu, Maheshwar Sah**, and won the **BEST PAPER** award in **RAEEUCCI-2025**, technically co-sponsored by the **IEEE**, held during **23rd - 25th April 2025**, organized by the Department of ECE, SRMIST, Kattankulathur – 603203, Tamil Nadu, India.

HOD/ECE
(Dr. M. Sangeetha)

Chairperson/SOEE
(Dr. K. Vijayakumar)

Dr. Vetriveeran Rajamani received the **Best Paper Award** at RAEEUCCI-2025 International Conference held at SRMIST, Kattankulathur from 23-25 April, 2025.



THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS
No: 37, Conran Smith Road, Gopalapuram, Chennai – 600086

EXEMPLARY CONTRIBUTION AWARD 2024-2025

IETE CHENNAI CENTRE APPRECIATES

Dr. D. VIJENDRA BABU

Coopted Executive Committee Member, IETE Chennai Centre
Dept. of Embedded Technology, School of Electronics Engineering, Vellore Institute of Technology, Vellore

*for his proactive support, service & volunteering for the activities conducted in IETE Chennai Centre during 2024-2025. We appreciate his service and wish him for bright future. This award is given by the Institution of Electronics and Telecommunication Engineers in the **57th World Telecommunication and Information Society Day 2025** at **IETE Chennai Centre** on **17.05.2025**.*

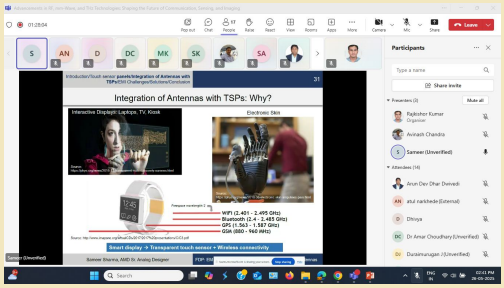
Shri. N. SRIDHARAN
Chairman, IETE Chennai Centre

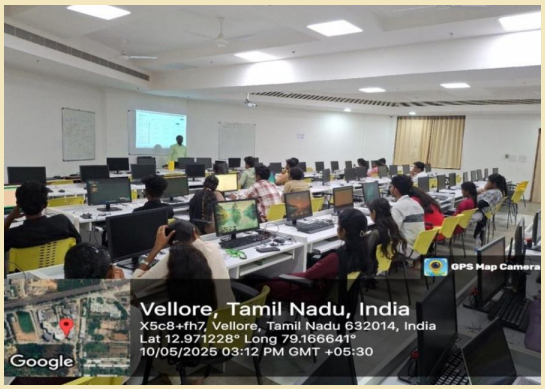
IETECC/24-25/114

Dr. Vijendra Babu D received the **Exemplary Contribution Award** from IETE Chennai Centre on 17 May, 2025

EVENTS ORGANIZED 10

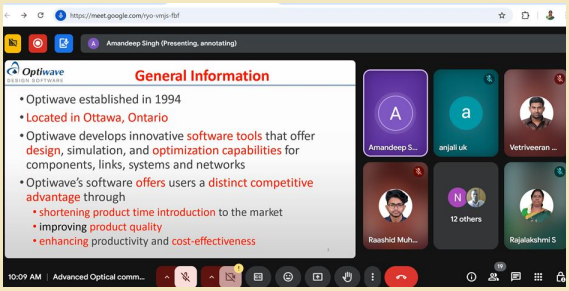
FDP on **Advancements in RF, mm-Wave, and THz Technologies: Shaping the Future of Communication, Sensing, and Imaging** was organized by Dr. Rajkishor Kumar and Dr. Avinash Chandra from 26-05-2025 to 30-05-2025.





10 Days Summer Internship on **IoT-Cloud and AI Driven Sustainable Solutions** was organized by Dr. Sujatha R and Dr. Rajalakshmi S from 05-05-2025 to 14-05-2025.

Workshop on **Advanced Optical Communication and Photonics (OptiSystem Software)** was organized by Dr. Poongundran Selvaprabhu and Dr. Rajalakshmi S on 18-05-2025.



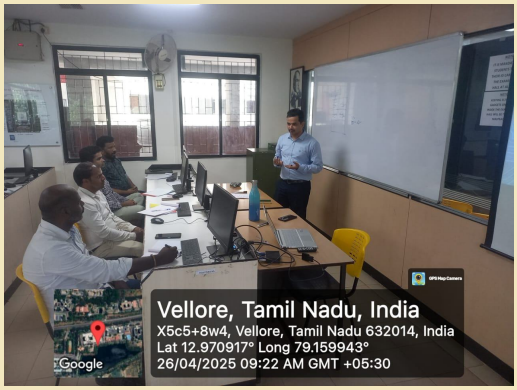


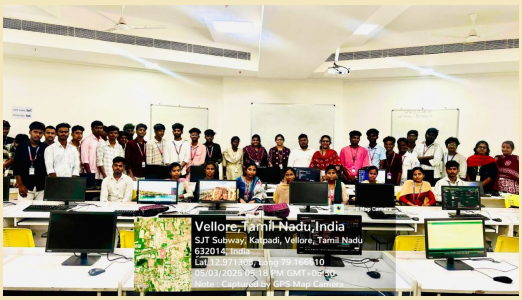
10 Days Summer Internship on **Digital Hardware Architecture Design: Verilog, Pipeline Processors & FPGA Exposure** was organized by Dr. Naushad Manzoor Laskar and Dr. Vikas Vijayvargiya from 16-06-2025 to 26-06-2025.

FDP on **Topological Structures for Next Generation Devices** was organized by Dr. Chittaranjan Nayak and Dr. Rajesh N from 12-05-2025 to 23-05-2025.

10 EVENTS ORGANIZED

3-Day National Workshop on **ASIC Design using Synopsys EDA Tools** was organized by Dr. Jagannadha Naidu K and Dr. Sivanantham S from 25-04-2025 to 27-04-2025.

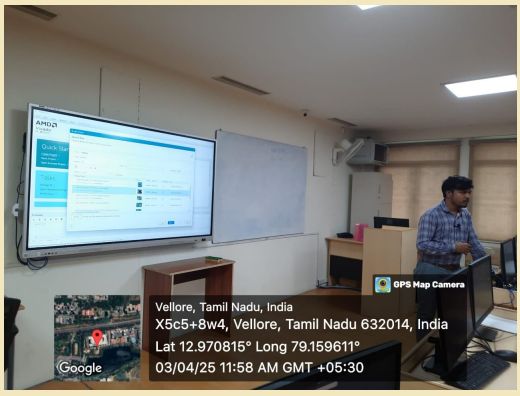




Workshop on **Harnessing IoT and Cloud for Scalable and Sustainable Intelligent Systems** was organized by Dr. Sriharipriya K C and Dr. Aparna Mohanty on 03-05-2025.

Project Expo on **Wireless Communications** was organized by Dr. Tangudu Ramji and Dr. Vijaya Durga Chintala on 09-04-2025.





One-Day Workshop on **Custom Overlay Development for ZCU104** was organized by Dr. Prayline Rajabai C and Dr. Antony Xavier Glittas Xavier Chelliah on 03-04-2025.

GUEST LECTURES 11

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.

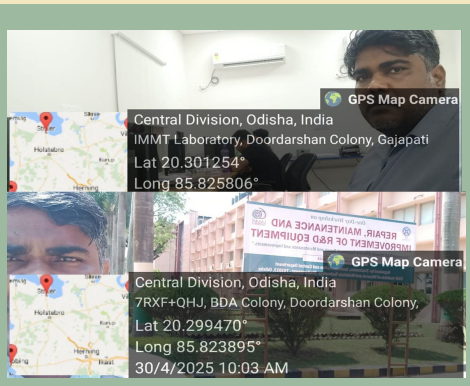
In this second quarter of the year 2025, we have organized 53 guest lectures over various departments.

Guest Lecture Delivered

Recent Innovations and Trends in Electrical & Electronics Engineering and Computing (RITEEC)	Dr. Arun Dev Dhar Dwivedi	NIT Patna

INDUSTRIAL VISITS 12

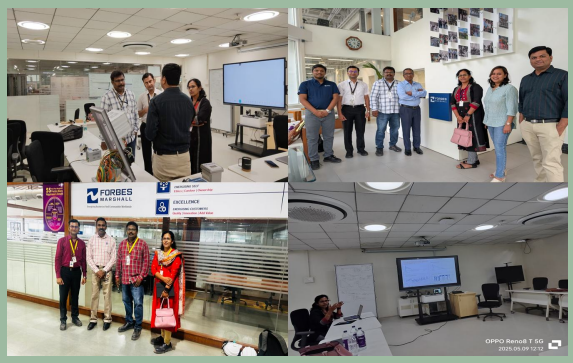
Faculty: Dr. Chitharanjan Nayak
Industry: IMMT Labs, Odisha
Date: 28-04-2025



Faculty: Dr. Sivanantham S, Dr. Sridevi S , Dr. Arunachalam V, Dr. Kumaravel S, Dr. Jagannatha Naidu K, Dr. Jayakrishnan P, Dr. Rajeev Pankaj N, Dr. Nitish Kumar V, Dr. Ragunath G ,Dr. Abdul Mazeed K K
Industry: Marvell Technologies, Bangalore
Date: 06-05-2025 to 09-05-2025



Faculty: Dr. Karthikeyan B, Dr. Sujatha R, Dr. Sumit Jindal
Industry: Forbes Marshall Pvt. Limited, Pune
Date: 07-05-2025 to 08-05-2025



Faculty: Dr. K. C. Saranya, Dr. Yogesh Kumar C, Dr. Abhijith Bhowmick
Industry: Carborundum Universal Limited (CUMI)
Date: 26-05-2025 to 30-05-2025

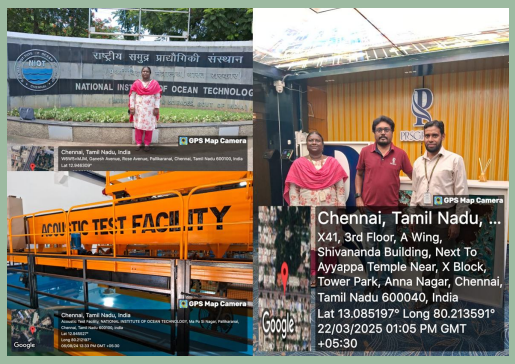


12 INDUSTRIAL VISITS

Faculty: Dr. Sangeetha A, Dr. Aarthi G
Industry: Deutz - Fahr Groups, Ranipet
Date: 02-06-2025



Faculty: Dr. Sangeetha A
Industry: Ocean Institute of Technology and PRS, Semicon Technologies, Chennai
Date: 08-06-2025



Faculty: Dr. Shankar T, Dr. Gautham Narayanan, Dr. Hariharan, Dr. Govardhan
Industry: Nokia Chennai
Date: 01-07-2025



Faculty: Dr. Kathirvelan, Dr. Sivacoumar, Dr. Sasikumar K
Industry: Syscon Instruments Private Limited, Bangalore
Date: 17-06-2025



INDUSTRIAL VISITS 12

Faculty: Dr. Kathirvelan, Dr. Sivacoumar, Dr. Sasikumar K
Industry: Visteon Technical Services Private Limited, Bangalore
Date: 18-06-2025



Faculty: Dr. Kathirvelan, Dr. Sivacoumar, Dr. Sasikumar K
Industry: Prolyx Microelectronics Private Limited, Bangalore
Date: 19-06-2025



Faculty: Dr. Kathirvelan, Dr. Sivacoumar, Dr. Sasikumar K
Industry: Janitri Innovations Private Limited, Bangalore
Date: 19-06-2025



13 FACULTY INDUSTRIAL TRAINING

Faculty: Dr. J. Christopher Clement, Dr. K.C. SrihariPriya, Dr. Manish Kumar, Dr. Aparna Mohanty, Dr. G. Sumathi

Industry: Enthu Technology Solutions India Pvt. Ltd. Coimbatore

Date: 17-06-2025 to 28-06-2025



Faculty: Dr. R.Prakash, Dr. S. Sundar

Industry: RF2DIGITAL Inc., Chennai

Date: 16-06-2025 to 26-06-2025



Faculty: Dr. Sivakumar R, Dr. Vidhya S, Dr. Mythili A, Dr. Sharmila N, Dr Konguvel

Industry: VYVOXEL India Private Limited, Chennai

Date: 10-06-2025 to 20-06-2025



Faculty: Dr. J. B. Jeeva

Industry: Christian Medical College, Vellore

Date: 24-06-2025 to 28-06-2025



PhD COMPLETED 14

Name	Guide name	Title
Ms. GEETHA K	Dr. Malaya Kumar Hota	ENHANCED DIGITAL SIGNAL PROCESSING TECHNIQUES UTILIZING METAHEURISTIC OPTIMIZATION FOR SEISMIC RANDOM NOISE ATTENUATION
PUJA SENGUPTA	Dr. Kishor Lakshmi Narayanan	NEUROPHYSIOLOGICAL ANALYSIS OF MOTOR AND TACTILE IMAGERY FOR BRAIN-COMPUTER INTERFACE AND REHABILITATION
Mr. MUNAVAR SHERIFF I	Dr. Sakthivel	DESIGN AND IMPLEMETNA TION OF GENERALIZED BIO-PLA USIBLE NEURON MODEL WITH REFRACTORINESS, FREQUENCY ADATAPTION AND DYNAMIC THRESHOLD
Mr. RIYAZ ALI SHAIK	Dr. Elizabeth Rufus	DESIGN AND DEVELOPMENT OF A LOW-COST 3D- SHAPE SENSOR USING FLEXIBLE PIEZORESISTIVE POLYMER NANOCOMPOSITES
Mr. VADIVELAN R	Dr. Kishor Lakshmi Narayanan	SENSORIMOTOR-BASED IMAGERY FOR IMPROVEMENT OF HAND FUNCTION
MUDIREDDY BALASUBBAREDDY	Dr. Sivasankaran K	STUDY OF SELF-HEATING AND DEVICE TO DEVICE THERMAL INTERFERENCE EFFECT ON THE PERFORMANCE OF STACKED NANOSHEET FIELD EFFECT TRANSISTOR
Ms. RANI KUMARI	Dr. Prakash R	EARLY DIAGNOSIS OF PARKINSON'S DISEASE USING SPEECH SIGNAL ANALYSIS AND MACHINE LEARNING
Ms. NIVETHA B	Dr. Poongundran Selvaprabhu	A COMPREHENSIVE STUDY OF INTERFERENCE MANAGEMENT TECHNIQUES IN MULTI-USER MIMO SYSTEMS FOR 5G CELLULAR COMMUNICATION
Ms. INDHUMATHI S	Dr. Christopher Clement J	EFFICIENT DESIGN OF LIGHTWEIGHT FEATURE DESCRIPTOR FOR A ROBUST SCENE CHARACTERISTIC IN AUGMENTED REALITY

14 PhD COMPLETED

Name	Guide name	Title
Mr. KRANTHI KUMAR PULLURI	Dr. Vaegae Naveen Kumar	DEVELOPMENT OF FOOD QUALITY ASSESSMENT AND DETECTION METHODS USING SOFT ELECTRONIC NOSE
Ms. PREMALATHA B	Dr. Prakasam P	AN INVESTIGATION ON OPTIMAL RESOURCE ALLOCATION, FAULT TOLERANCE AND TRUST MANAGEMENT SCHEMES IN IoT-FOG NETWORKS
Mr. VIJAYANANDAM N	Dr. S. Vidhya	DESIGN AND IMPLEMENTATION OF WEARABLE TRIBOELECTRIC NANOGENERATOR AS ENERGY HARVESTER AND SELF-POWERED SENSOR FOR REAL-TIME APPLICATIONS
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

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
Assistant Professor Sr Gr 2
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



KAVI ROHITH M
22BEC0147



BALAJI S
22BEC0145



PALLAWI KUMARI
23BML0021



SARAVANA VIKAS D
23BVD0053

DESIGN TEAM



HRDYA VR
24BVD0076



AADHARSHINI S
24BEC0200



NICOLE T
24BEC0387



AXA ANNA KURIAN
24BML0079

VIT®
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

