



THE PULSE

ELECTRICAL AND ELECTRONICS ENGINEERING

2025 ISSUE 1

ELEKTRA

ELEKTRA

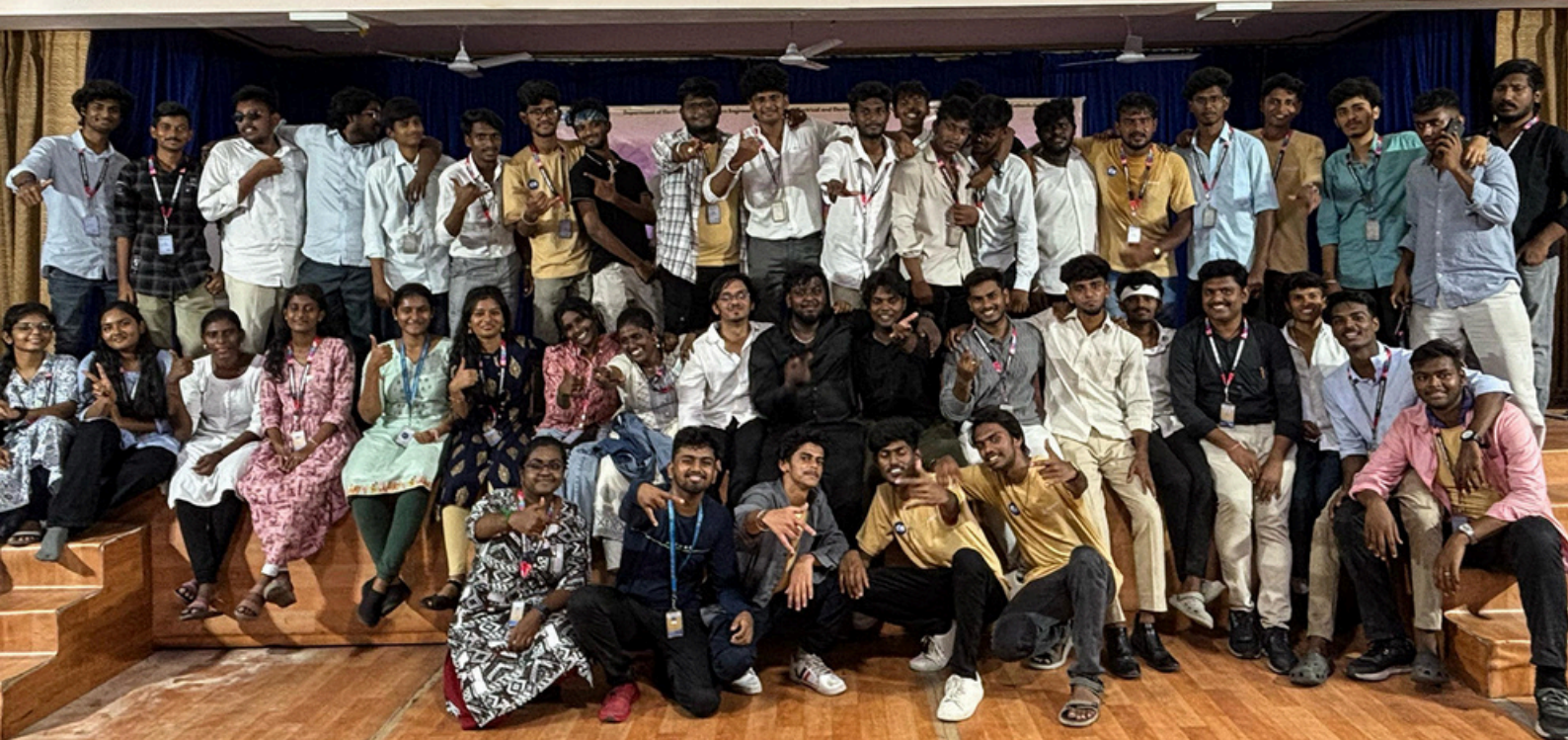


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About the DEPARTMENT



The Department of Electrical and Electronics Engineering at SRM was established in the academic year 1992-1993 as a core branch under SRM Engineering College, affiliated with the University of Madras. It transitioned to Anna University in 2001-2002 and later to SRM Institute of Science and Technology (Deemed University) in 2003-2004.

The department offers B.Tech. (Electrical and Electronics Engineering), B.Tech. (Electric Vehicle Technology), M.Tech. (Power Electronics and Drives), M.Tech. (Power Systems), and PhD programs. The B.Tech. EEE program at Kattankulathur Campus is accredited by ABET and NBA. With 57 faculty members, the department received the AICTE-CII Award for Best Industry Linked Institute (2019-2020) and is ranked 12th in India, 3rd among private institutions, and 301-350 in QS World University Rankings 2025.

Vision



To impart quality education in the field of Electrical & Electronics Engineering and to produce globally competent engineers to serve the society.

Mission



- **To educate the student to become better practicing engineers to meet global excellence.**
- **To provide better environment through latest developments in electrical engineering involving problem solving, design, practice and training.**
- **To motivate the graduates to become a good leader, designer and researcher through industry-oriented trainings with social and ethical responsibilities.**

Chairperson's Desk



Dr.K.VIJAYAKUMAR
Chairperson, SoEEE

Dear Students, Faculty, and Esteemed

As the academic year advances, I congratulate our final-year students on securing placements — your dedication has paid off. For those still searching, stay focused, keep upskilling, and trust the right opportunity will come.

Our department is progressing through initiatives like Extended Academic Hours and growing student participation. I appreciate our faculty's efforts in balancing teaching and research — essential for shaping future-ready professionals.

Let's continue fostering a learner-centric environment, promoting innovation, and pursuing academic excellence.

Dear All,

As we enter the vibrant month of April, a time for reflection and transition, I extend my warm wishes to the EEE family. For our final-year B.Tech and M.Tech students, this is a defining moment. As you step into a world of opportunities and challenges, carry forward the values, skills, and spirit you've gained here. I wish you success and strength on your journey.

To our faculty, thank you for your unwavering commitment to student growth and academic excellence. As we align with global standards, I encourage you to embrace transformative teaching practices — project-based learning, flipped classrooms, digital tools, and skill-integrated approaches. Let innovation start in our classrooms.

HoD'S Desk



Dr.R.SRIDHAR
Professor and Head
Department of EEE

Editor's Desk

Dear Readers,

Welcome to the first edition of The Pulse for 2025! We're excited to bring you the latest highlights, innovations, and achievements from the Department of Electrical and Electronics Engineering.

The start of this year has been filled with remarkable research, forward-thinking projects, and noteworthy accomplishments by both students and faculty. In this edition, we spotlight developments from January to March — covering advancements in renewable energy, AI, and machine learning.

We hope you find this issue both inspiring and informative. Your feedback is always appreciated as we continue to refine and grow.

Warm regards,
Team Newsletter



Dr. PRADEEP V
Assistant Professor
Faculty Mentor



Dr. THAMIZH THENTRAL T M
Associate Professor
Faculty Mentor

Team Member's



KAVYA N
III Year, EEE
Content Writer



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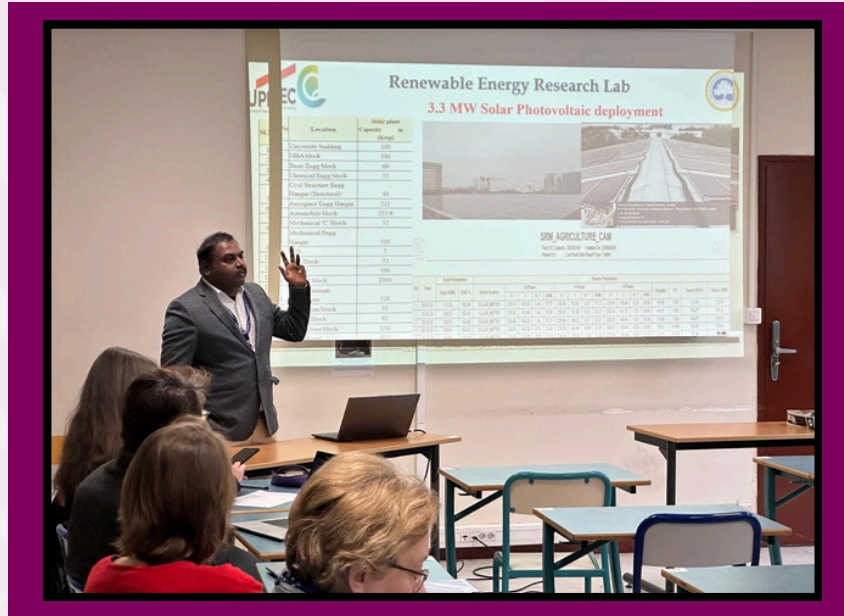
HARI PRASATH M
II Year, EEE
Event Coverage Lead



VEDANT JAIN
I Year, EEE
Digital Content Manager

GLOBAL TIES

Prof. Sridhar R, Head of the Department of Electrical and Electronics Engineering, has been appointed as a Visiting Professor at CERTES, Université Paris-Est Créteil, France. He visited the university from January 21 to February 17, 2025. He is playing a pivotal role in fostering Indo-French academic collaboration, contributing to enhanced knowledge exchange and strengthening research ties between the two institutions.



As a prelude to the upcoming International Conference on "AI for the Oceans 2025," a guest talk was delivered on the topic "The Ocean Techwave: An Introduction to Marine Technologies" by Ms. Donna Kocak, L3Harris Principal Fellow, Past President and Fellow of the Marine Technology Society, United States. The session offered valuable insights into emerging marine technologies and their growing synergy with artificial intelligence, setting the stage for deeper discussions during the conference.



Collaborative course (Jan 2025-May 2025) offered by Department of EEE

The course Clean and Green Energy course was enriched through academic collaboration with Dr. Nikita Hari (B.E., M.Tech., PhD, Cantab), Faculty for Future Fellow (Oxon) and Head of the Teaching and Research Design Support Group (TDSG) at the University of Oxford, and Dr. Abel Nyamapfene (PhD, EdD, PFHEA), Professor (Teaching) at the Faculty of Engineering Sciences and IOE, UCL's Faculty of Education and Society, University College London. Their valuable contributions included suggestions for the course delivery structure, integration of case studies and project-based learning. They were also actively involved in course modules related to European renewable energy policy and sustainable design practices. This collaboration provided students with a global outlook and fostered interdisciplinary learning by blending technical content with international academic perspectives.



Team Head
Dr.R.Sridhar
Professor & Head
Dept. of EEE
SRMIST, Kattankulathur



Collaborator 1
Dr Nikita Hari
Head of Teaching and Research
Design Support Group,
University of Oxford



Collaborator 2
Dr. Abel Nyamapfene
Professor (Teaching)
IOE - Education, Practice & Society
University College London



Course Coordinator
Dr.J.Divya Navamani
Associate Professor
Dept. of EEE
SRMIST, Kattankulathur



Course Instructor
Dr.A.Lavanya
Associate Professor
Dept. of EEE
SRMIST, Kattankulathur

PONGAL CELEBRATION



The EEE Association at SRM Institute of Science & Technology recently hosted a vibrant and culturally rich Pongal celebration on January 09, 2025, in Electrical Science Block. From 8:30 am to 10:00 am, faculty members and students came together to mark the auspicious occasion, fostering a sense of unity and celebration. The event commenced with energetic faculty members showcasing their culinary skills by preparing the traditional dish of Pongal, filling the air with its aromatic fragrance.



Participants actively engaged in performing Pongal rituals, symbolizing gratitude and prosperity, and connecting with the festival's rich traditions. One of the highlights was the sharing of freshly prepared Pongal, which transcended cultural boundaries, symbolizing unity in diversity.

The event concluded with a heartwarming greet and photos session, capturing the joyous moments and camaraderie shared among attendees. As we reflect on this festive gathering, let it serve as a reminder of the strength found in embracing our differences and coming together as one EEE family.



ELEKTRA'25



The EEE Association of SRMIST is excited to present ELEKTRA 2025, a dynamic and vibrant fest that blends technical excellence, cultural creativity, and sporting spirit into one electrifying celebration. This year's edition offers students a unique platform to explore, engage, and excel through a wide variety of events. From hands-on workshops on cutting-edge topics like Electric Vehicles and the Internet of Things, to intellectually stimulating competitions such as Circuit Debugging, Smart Grid demonstrations, Reverse Engineering, and the ever-popular Tech Quiz, ELEKTRA 2025 promises something for every tech enthusiast.



Beyond the circuit boards and code, the fest bursts into color with cultural highlights including Solo Dance, Solo Singing, Battle of Bands, Drawing, Group Dance, an elegant Fashion Show, and a thrilling Cooking Competition that showcase student talent and creativity.

For gaming enthusiasts, the event features both virtual and indoor challenges such as Chess, Carrom, BGMI, Free Fire, E-Football, and Valorant, offering participants the chance to test their reflexes and strategies.





Student's

CORNER

STUDENT TESTIMONIAL



Mr. Ajay Aksanth
IV year

"ONCE A LEARNER, ALWAYS A LEARNER"

Yes, looking back on my journey to this level of success feels like a learning phase that passed by like flipping through a photo album—full of memories, experiences, knowledge, laughter, cultural moments, and so much more.

I feel lucky to be part of a department that allowed me to develop versatile skills across various fields. While managing my academics, I also joined SRM's dance club 'GANG DNA' in my first year, where I learned the art of popular choreography. We used to practice every day after 5 PM until 7 PM to prepare for various competitions and to be part of the biggest cultural fest at SRM. That's why my favorite place on campus is "MBA MIRRORS."

I began grabbing every opportunity—participating in workshops, hands-on training sessions, dance, sports, industry visits, expos, and more. By the time I reached my second year, I became part of the E-Mobility Club (now called the "Center for Electric Mobility"), where I started gaining technical knowledge under project associates and began writing research papers. That's also where I got the chance to organize and coordinate events. Later, I became part of the organizing team for major EEE events like Farewell, Freshers' Day, Alumni Day, Teachers' Day, and more. Eventually, I was appointed as the Cultural Head of the EEE Association, which truly boosted my confidence.

After the pandemic, the EEE Association came back stronger, and our Techno-cultural fest ELEKTRA'24 sparked back to life after a long gap—all thanks to the efforts of our dedicated team. Starting from scratch was tough, but incredibly rewarding. I had to make a big decision later—quitting dance classes when placements began, so I could focus on my final project. That was a huge sacrifice, but definitely not in vain. Yes! I went through the placement process and finally got placed in an MNC company in my hometown—especially in the core domain. College has been a place where I got inspired by many individuals every single day, and I'm truly thankful to the faculty members who were a key part of my success. This is a short version of my journey over the past few years.

To my juniors: This is the time where lots of opportunities will be in the line. There are many opportunities waiting for you. Be responsible to seek that and step out of your comfort zone. Stay curious and never hesitate to ask questions. And of course, there will be lots of ups and downs that you'll need to face. Like we studied, "For every action, there is an equal and opposite reaction"—the steps you take today will not go in vain.

PLACEMENT RECORDS

January to March 2025



VISHWAS NIGAM
Magna Automotive India



TRINANJAN DAS
Glow Logics



CHANDAN THAKUR
Glow Logics



DHANISKA GAIKWAD S
Schneider Electric



RAGUL R
Polycab India Limited



SHRISHA KABDWAL
Isuzu Motors India Private Limited



SANGEETHA E
Hitachi Energy



DHIKSHANYA S
Hitachi Energy



A ADITHYA VARDAN
Movidu Technologies



JATIN PRASAD
Movidu Technologies



MURALI MADHAV
Gensol Group



SAYON RAY
TATA Consulting Engineers Limited

AWARDS AND ACHIEVEMENTS

- **Pinaki mandal**, first-year student, won the first prize in **ECHOES** held on 07-02-2025 at IIM kozhikode.
- **Ajay Aksanth, Sowmiya Lakshmi, Mohanasuntharam, Vinotha Varsha Gajendran** fourth-year students, **Sree Sowmi A**, second year student received the **Chancellor's Award for Excellence in Undergraduate Research** – 2025 on 28-02-2025, at SRMIST

PARTICIPATION

- **Atish Dinda and Souvik Maity**, third-year students, participated in the **Weekly Case Challenge** Organized By Unstop on 16-02-2025, representing SRMIST.
- **Dhana Prakash B**, third-year student, participated in **Conclave: Design, Implement, Operate** on 18-02-2025, at **SRMIST**.
- **Atish Dinda and Souvik Maity**, third-year student, participated in '**CREATECH 2024** by **Larsen & Toubro** on 21-02-2025.
- **Dhana Prakash B** third-year student undergone **Data Analytics Internship** from 09-01-2025 to 19-02-2025, at **Novitech R&D Private Limited, Coimbatore**.
- **Vishwajeet Bilonia**, a third-year student, participated in **NOVITECH** on 18-02-2025, at **SRMIST**.
- **Shivam Kumar Rai**, a third-year student, participated in National Level Symposium **Technovanza-25** on 15-02-2025 at **Jerusalem College of Engineering**.
- **Utsav Jain**, a third-year student, participated in **Deep Learning on IoT Based Application** from 13-02-2025 to 14-02-2025 at **SRMIST**.
- **Utsav Jain**, a third-year student, participated in **MTS TECHSSYM 2025** on 28-02-2025, at **IIT Madras**.
- **Atish Dinda, Souvik Maity, Rukkumani M. D, Aakash A**, third-year student, Thirupathi first year student participated in sustainable development goals - 12 responsible consumption on 05-03-2025, at **K.Ramakrishnan College of Engineering**.
- **Rohini S**, third-year student participated in **pragya 2025** on 12-02-2025, at **SRMIST**.
- **Sneha, Varshini, Rupak, Hari Prasath, Goldwin, Dharaneesh, Atgha Dutta, Harshith, Jagadeesh Sarvin Raj** from second-year students, participated in **coulomb 2025** on 01-03-2025, at **Rajalakshmi Engineering College, Chennai**.

- **Iniyan R, Arputha Jeffery , Jemini , Muddala Umesh Chandra**, second-year students, participated in paper pinnacle - **JUNO 2K25** from 06-03-2025 to 07-03-2025, at **Guru Nanak College (Autonomous), Chennai**.
- **Sakthivel K, Desigan.B , R.Kavinkishore , Pavithra L , Rohan S , Siddharth S M , Kavya N, Rohini S , Nithish J , Balaji V , Rukkumani M D , Aakash A , Divyasri.D , Atish Dinda ,Souvik Maity , Balasubramaniam M**, a third-year students, participated in the hands-on training workshop on **Altair Software** from 19-03-2025 to 21-03-2025, at **SRMIST**.
- **Souvik Maity, Rukkumani M D, Aakash A**, third-year student, participated in the **MATLAB workshop** on 22-03-2025, organized by the **Society of Electrical And Electronics Engineers**.
- **Balasubramaniam M, J. Nithish, Siddharth S. M, And Sakthivel K, Rethu Nandan, Rohan S** third-year students who participated in the workshop on **Electric Vehicles, Retrofitting Technology, And Advancements In Vehicle Systems** from 27-03-2025 to 28-03-2025, at **SRMIST**.
- **Aakash A and Rukkumani M. D**, third-year students, participated in the quiz programme on the **National Education Policy 2020** on 07-03-2025, at **SRMIST**.
- **Aakash A and Rukkumani M. D**, third-year students, participated in the **TCS Ion Career Edge Program** on 30-03-2025, organized by **TCS Ion**.
- **Pinaki Mandal**, first-year student, participated in **Riviera 2025 – Street Play** from 20-02-2025 to 23-02-2025, **SRMIST**.
- **Rajesh S, Sentamizh K**, first-year student, participated in the **Power Converter Workshop for Emerging Electrical Applications 2025** from 22-02-2025 to 23-02-2025, organized by the department of EEE, **SRMIST**.
- **Thirupathi V**, first-year student, participated in the **quiz programme on the national education policy 2020**, organized by the Directorate Of Learning & Development.
- **Thirupathi V**, first-year student, participated in the event on **Sustainable Development Goal 11: Sustainable Cities and Communities** on 08-01-2025, at **K.Ramakrishnan College of Engineering, Trichy**.
- **Mayank Umrey**, first-year student, participated in **Questandard 2k24** organized by the standards club on 27-02-2025, **SRMIST**.
- **Mayank Umrey, Rohan Philip**, first-year student, participated in the 24-hour **Hackathon** organized by **Techxcelerate – E-Cell Launchpad** from 22-03-2025 to 23-03-2025.
- **Rohan Philip**, first-year student, attended the **Altium Workshop** from 20-02-2025 to 22-02-2025, organized by **SRM team ROBOCON**.
- **Mir Ehtisham Pervaiz,Divit Sugumar, Hima Karthik Yanamadala, Madhunisha, Dhanya Sri M, Pranavraj V, Sharulatha B, and Thirupathi V**, first-year student, participated in the **Hands-On Training on Controller Programming For Renewable Energy Applications** on 22-01-2025, **organized by the department of EEE, SRMIST**.

INDUSTRIAL VISIT



TRACO Cable Company, Kerala



NIOT, Pallikaranai, Chennai



Sakthi Transformers - Thirumudivakkam

TRIP TO KERALA

The Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, Kattankulathur, organized an industrial tour to Kerala from March 11 to March 16, 2025, with the participation of 47 students and 3 faculty members. The tour aimed to provide students with valuable industry exposure while offering cultural and natural experiences across various destinations.



The journey began with an overnight bus ride from Chennai to Vagamon, where students explored the region's scenic landscapes through a jeep safari, visited the Vagamon Pine Forest and Thangalpara Viewpoint, and enjoyed a campfire night.



The journey began with an overnight bus ride from Chennai to Vagamon, where students explored the region's scenic landscapes through a jeep safari, visited the Vagamon Pine Forest and Thangalpara Viewpoint, and enjoyed a campfire night. The next day, the group traveled to Kochi for an industrial visit to TRACO Cable followed by a cultural tour covering Fort Kochi, Mattancherry Palace, and Jew Town.

On Day 3, the students cruised through the serene Alleppey backwaters on a houseboat, followed by a beach visit and a DJ party onboard before heading to Varkala. In Varkala, the group explored Papanasam Beach, Varkala Cliff, and Kappil Backwaters, ending the day with a farewell dinner and memory-sharing session.



The trip concluded with their return to Chennai on March 16, leaving students with cherished memories, strengthened friendships, and meaningful insights into industry practices. This tour served as a perfect blend of education, adventure, and cultural enrichment, contributing significantly to the holistic development of the students.



Faculty's

CORNER

AWARDS AND ACHIEVEMENTS

Dr.J.Divya Navamani, received **Outstanding Teacher Award** IAP, **IISc Bangalore**, 10.1.2025.



Dr.R.Narayanamoorthi received **Dr. Sarvepalli Radhakrishnan Gold Medal award** in **ANVESHAN 2024-25**.

Dr.K.Sarvanan and **Dr.V.Pradeep** received the **best paper** award at the **International Conference ERCICAM in March 2025**.

Dr.N.Kalaiarasai was recognized by Wiley Publications for authoring a **Top Cited Article in 2024** in the **International Transactions on Electrical Energy Systems**.

Dr.V.Pradeep was recognized by Wiley Publications for authoring a **Top Cited Article** in 2024 in the **International Transactions on Electrical Energy Systems**.

Dr.D.Suchitra and **Dr.R.Femi** received the **Award in International Woman's Day** in March 2025.

Dr.S.Shanmugapriya received first prize in **100m Slow Cycling Competition** during womens day celebration held on 03 March 2025.

FUNDED PROJECTS

Project Title: Development of a Digital Twin for Underwater Gliders -A Virtual Real-time Interactive Platform

PI: Dr. J.Preetha Roselyn

Co Pls: Dr.C.Nithya

Dr.U.Sowmmiya

Funding Agency: Ministry of Earth Sciences

Sanctioned Amount: 84.41 Lakhs

Project Title: Design of a Commercially feasible Cyber Physical Intelligent Collaborative Energy Management System for Hydrogen Powered Autonomous Vehicle

Co PI: Dr. Phani Teja Bankupalli

Funding Agency: IIT Palakad Technology iHub

Sanctioned Amount: 29.50 Lakhs

Project Title: Inventive SMPS interface for hybrid water pumping system

PI: Dr.S.Vidyasagar

Funding Agency: SRMIST

Sanctioned Amount: 1.05 Lakhs

Project Title: Condition Monitoring and Fault Identification of Ester fluid filled Transformers using Dissolved Gas Analysis

PI: Dr.C.Nithya

Co Pls: Dr.U.Sowmmiya

Dr.J.Preetha Rosley

Funding Agency: SRMIST

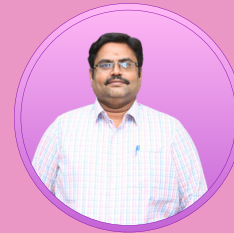
Sanctioned Amount: 3.50 Lakhs



Dr. J.Preetha Rosley



Dr.U.Sowmmiya



Dr.S.Vidyasagar



Dr.C.Nithya



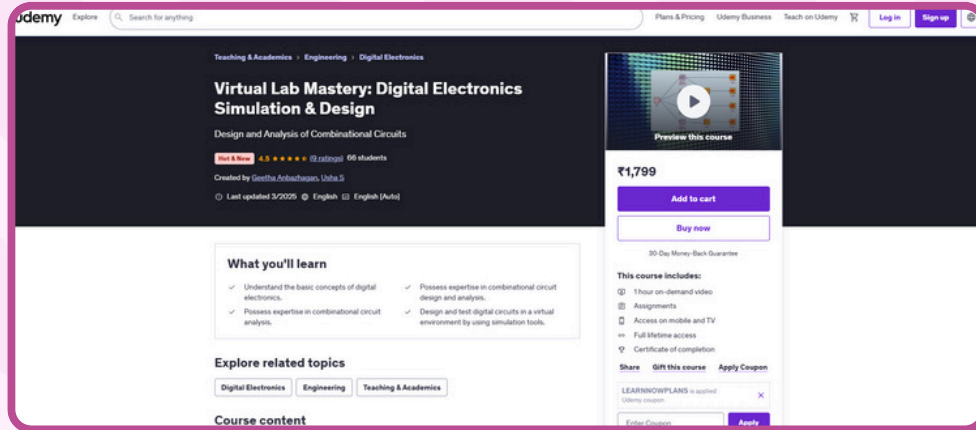
**Dr.Phani Teja
Bankupalli**

ONLINE COURSE PUBLISHED

Course Name: Virtual Lab Mastery: Digital Electronics Simulation & Design

Course Incharge: Geetha A, Usha S

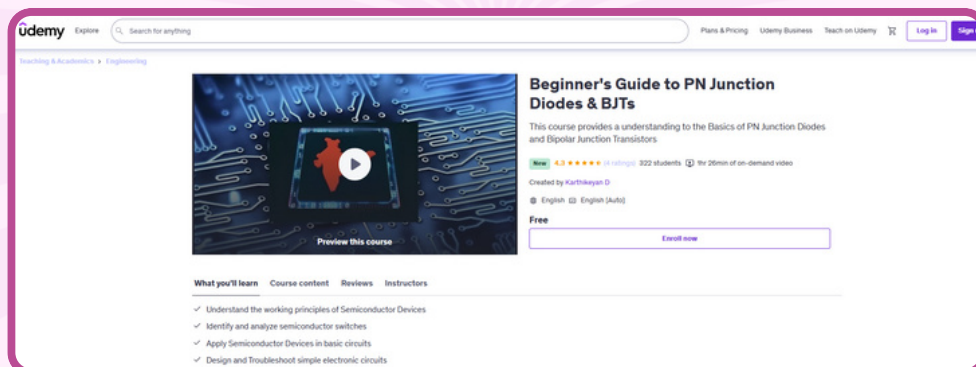
Platform: Udemy



Course Name: Beginner's Guide to PN Junction Diodes & BJTs System for Hydrogen Powered Autonomous Vehicle

Course Incharge: Karthikeyan D

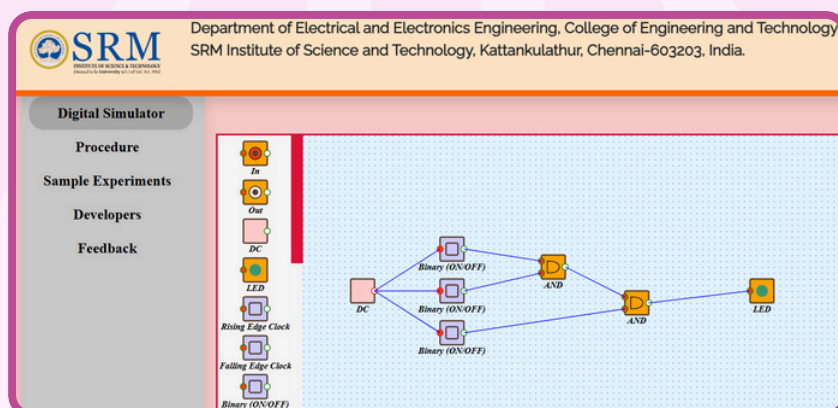
Platform: Udemy



Virtual Lab Name: Digital Electronics Lab

Developers: Geetha A, Usha S

Platform: SRM Website



RESEARCH PUBLICATIONS

- Ramya, K., Gopalakrishnan, J., Bharatiraja, C., Verma, R., & Mihet-Popa, L. 2025. **A Complete Review of Electromagnetic Interference in Electric Vehicle.** *IEEE Access*, 1–
<https://doi.org/10.1109/ACCESS.2025.3534017>
- Aravind, R., & Bharatiraja, C. 2025. **A Nonisolated High Gain DC – DC Converter With Two Inductor Structure For EV Applications.** *Journal of Applied Science and Engineering*, 28(9), 1833–1842.
- Ramakrishnan, Venkatesan, Dominic Savio A, Mohammad Shorfuzzaman, and Waleed Mohammed Abdelfattah. 2025. **“An Enhanced Vehicle-to-Vehicle Wireless Power Transfer System for Electric Vehicle Applications Using a Reconfigurable Coil Approach.”** *IEEE Access* 13: 9931–41.
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- R, Palanisamy, M. Nivethitha Devi, Manikandan T. R, K. Mekala Devi, Rashima Mahajan, Selvabharathi D, and Selvakumar K. 2025. **“Comparative Analysis of Different Types of Pulse Width Modulation Techniques for Multilevel Inverters.”** *Indonesian Journal of Electrical Engineering and Computer Science* 37(1):680. doi: 10.11591/ijeecs.v37.i1.pp680-688.
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- Sekar, R., M. Jagabar Sathik, Mamdouh L. Alghaythi, Meshari S. Alshammari, and K. Vijayakumar. 2025. **“Lower Energy Storage Based 9L-Switched Capacitor ANPC Inverter Topology with Voltage Boosting Features.”** *IEEE Access* 1–1. doi: 10.1109/ACCESS.2025.3535941.
- Ramesh, Pabba, R. K. Pongiannan, Lukas Demel, Roman Hrbac, and Narayanamoorthi R. 2025. **“Maximum Efficiency and Power Point Tracking System for Hybrid Compensated Wireless Charging of Electric Vehicle.”** *Results in Engineering* 25:104100. doi: 10.1016/j.rineng.2025.104100.

- Sai Eswar, Kommoju Naga Durga Veera, M. Arun Noyal Doss, Mohammad Shorfuzzaman, and Ali Elrashidi. 2025. "Microgrid System for Electric Vehicle Charging Stations Integrated with Renewable Energy Sources Using a Hybrid DOA-SBNN Approach." *Frontiers in Energy Research* 12.
- Bharatiraja, C., A. Mahesh, and Brad Lehman. 2025. "Power Electronic Converters in Inductive Wireless Charging Applications for Electric Transportation." *IEEE Journal of Emerging and Selected Topics in Power Electronics* 1-1. doi: 10.1109/JESTPE.2025.3526763.
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PATENTS

Granted

- **Dr.S.Shanmugapriya** received patent grant for the title, "Touch-free sensor device for automatic water dispense", Government of India, Grant number: 6406957.
- **Dr.S.Vijayalakshmi, Dr.C.Anuradha** received patent grant for the title, "IoT based electric vehicle energy consumption predicting device ", Government of India, Grant number: 441929-001.
- **Dr.K.Saravanan, Dr.V.Kalyanasundaram** received patent grant for the title, "Machine learning based robotic equipment for quarantined patient", Government of India, Grant number: 441929-001.
- **Dr.K.Saravanan, Dr.S.Vidyasagar** received patent grant for the title, "ML based medication dispensing system", Government of India, Grant number: 442224-001.

Published

- **Dr.R.Sridhar, Dr. R. C. Ilambirai** published patent title, "System and Method for Providing Back-up Energy with Power Factor Correction for a Hybrid Fan and LED Lighting", Indian patent, Application Number: 202441104127A.
- **Dr.R.Narayanamoorthi** published patent title, "A system for Wireless Charging and a method thereof ", Indian patent, Application Number: 202541002612.
- **Dr.C.Bharatiraja** published patent title, "A system for wireless charging of an electric bike", Indian patent, Application Number: 202341078576 A.
- **Dr.D.Sattianadan** published patent title, " A system and method for blockchain based integrity verification in cloud computing systems", Indian patent, Application Number: 202511010794 A.
- **Dr.R.Narayanamoorthi** published patent title, "A A multi-functional energy-harvesting tile for sustainable power generation", Indian patent, Application Number: 202541009578 A.
- **Dr.C.Bharatiraja** published patent title, "A dual-receiver wireless charging system for battery-operated vehicles and method thereof", Indian patent, Application Number: 440873-001.
- **Dr.C.S.Boopathi** published patent title, "Compact 24-hour heart rate monitoring holter device for cardiac rhythm analysis", Indian patent, Application Number: 202441068452.
- **Dr.R.Sridhar, Dr.A.Geetha and Dr.S.Usha** published patent title, "Mini UPS for Essential Home Appliances", Indian patent, Application Number: 202541015701.
- **Dr.K.Vijayakumar, Dr.A.Geetha, Dr.S.Usha, Dr.T.M.Thamizh Thentral,** published patent title, "Solar Powered Touchless Sanitary Napkin Incinerator", Indian patent, Application Number: 202541020570.
- **Dr.C.Bharatiraja,** published patent title, "A system and a method for controlling torque and flux in a switched reluctance motor", Indian patent, Application Number: 202541018208 A.

FACULTY FACILITATIONS

- **Dr.U.Sowmmiya** has been appointed as the **Curriculum Committee Member** at **Universitas Ahmed Dahlan, Indonesia**, held on 13-01-2025.
- **Dr.U.Sowmmiya** has partial delivery for the **Course at Universitas Ahmed Dahlan, Indonesia** held on 14-01-2025.
- **Dr.U.Sowmmiya** mentored Solar Lamp Lighting, assuming to **Government School students** located at Thiruporur on 21-01-2025.
- **Dr.A.Geetha** and **Dr.D.Karthikeyan** engaged in a Radio talk at SRM Muthucharam 90.4 MHz FM radio on the **Importance of Electric Vehicle** aired on 30-01-2025.
- **Dr.C.S.Boopathi** acted as the keynote speaker for the **AICTE ATAL workshop** conducted by Vels University held from 20-01-2025 to 25-01-2025.
- **Dr.J.Divya Navamani** and **Dr.A.Lavanya** presented the lecture topic “**Workshop of AI- Powered Research: Enhance Article Writing and Publishing Strategies**” at Adhi College of Engineering and Technology held on 25-01-2025.
- **Dr.M.Arun Noyal Doss** was invited as the **Session chair** in the International conference on recent advances in engineering and computer applications held on 24-01-2025 and 25-01-2025 in LJ University.
- **Dr.M.Arun Noyal Doss** served as the **Examiner in PhD Examination** in Bharath Institute of Higher Education and Research on the date of 18-02-2025.
- **Dr.D.Suchitra** appointed as **BoS Member** in Sri SAIRAM Engineering College on 25-02-2025.
- **Dr.M.Arun Noyal Doss** was invited as the **Session chair** in the international conference on Session Chair in Emerging Trends in Electric Machines, Power and Energy Systems held on the 25-02-2025 and 26-02-2025 in SRMIST, Ramapuram.
- **Dr.R.Femi** served as the **Faculty coordinator for AICTE and Brainovision FDP AI Tools** held from 17-02-2025 to 21-02-2025.
- **Dr.J.Preetha Roselyn** served as a **Special guest at MTS Techsym at IITM** and NIOT held on 28-02-2025.
- **Dr.C.Bharatiraja** served as the **Session Speaker for the FDP** in NIT Warangal held on 01-03-2025.
- **Dr.D.Sattianadan** attended the **DC Meeting** in the SSN College of Engineering on 18-02-2025.

FACULTY PARTICIPATION

- **Dr.C.Anuradha, Dr.S.Vijayalakshmi, Dr.R.Senthil Kumar, Dr. Ravi Eswar KM, Dr. C. Balaji** attended a 6-day faculty development program titled “[Electric Vehicle & Charging Station Technology for Sustainable Development](#)” from 13-01-2025 to 18-01-2025.
- **Dr.S.Usha, Dr.A.Geetha, Dr.T.M.Thamizh Thentral, Dr.R.Senthil Kumar, Dr.V.Pradeep, Dr.A.Sureshkumar** attended a 6-day faculty development program titled “[Next Gen in AI/ML and IoT](#)” from 06-01-2025 to 11-01-2025.
- **Dr.N.Chellammal, Dr.J.Divya Navamani** attended a 6-day faculty development program titled “[6-days Online Short Term Programme on Sustainable Smart Energy Technologies](#)” by Malaviya Mission Teacher Training Center at the Indian Institute of Information Technology, Design and Manufacturing ” from 06-01-2025 to 11-01-2025.
- **Dr.M.Arun Noyal Doss Dr.C.Naveen** attended a 6-day faculty development program titled “[Recent progress in Process Modelling, Simulation and Process Control](#)” from 06-01-2025 to 11-01-2025.
- **Dr.R.Palanisamy, Dr.D.Selvabharathi, Dr.D.Karthikeyan, Dr.K.Selvakumar** attended a 6-day faculty development program titled “[Revolutionizing Agriculture through AI Models, Practices and Interventions](#)” from 06.01.2025 to 11.01.2025.
- **Dr.R.Palanisamy, Dr.D.Selvabharathi, Dr.D.Karthikeyan, Dr.K.Selvakumar** attended a 6-day faculty development program titled “[Recent Advancements in Solar Photovoltaic Technology & Research Opportunities](#)” from 13-01-2025 to 18-01-2025.
- **Dr.P.Suresh, Dr.R.Senthil Kumar** attended a 5 days faculty development program titled “[Quantum cryptography and cyber security](#)” from 02-01-2025 to 07-01-2025.
- **Dr.D.Selvabharathi, Dr.R.Palanisamy, Dr.D.Karthikeyan, Dr.S.Usha, Dr.A.Geetha, Dr.T.M.Thamizh Thentral, Dr.K.Selvakumar** attended a 6 days faculty development program titled “[Smart City Infrastructure: Integrating IoT, AI and Renewable Energy For Sustainable Urban Development](#)” from 20-01-2025 to 25-01-2025.
- **Dr.R.Ramya** attended a 3-day faculty development program titled “[GenAI for Academics and Research](#)” from 23-01-2025 to 25-01-2025.
- **Dr.R.Senthil Kumar** attended a 6-day faculty development program titled “[Artificial Intelligence Techniques in VLSI Design](#)” from 20-01-2025 to 25-01-2025.
- **Dr.P.Kanakaraj** attended a 6-day faculty development program titled “[Renewable and Sustainable Microgrid Operation, Control and its Applications](#)” from 20-01-2025 to 25-01-2025.
- **Dr.P.Kanakaraj** attended a 6-day faculty development program titled “[Energy and Electric Vehicles in India: Opportunities, Challenge, and Futures](#)” from 27-01-2025 to 01-02-2025.
- **Dr.R.Femi** attended a 1 day faculty development program titled “[Crafting and Wordsmithing the Perfect Abstract Using Our Easy, Step-by-Step Process](#)” on 15-01-2025.

- **Dr.K.M.Ravi Eswar** attended a 6-day faculty development program titled “Recent Advancement in e-Mobility for Developing Power Utility” from 06-01-2025 to 11-01-2025.
- **Dr.K.M.Ravi Eswar** attended a 7-day faculty development program titled “Vehicle Electrification: Future Mobility Trends” from 27-01-2025 to 02-01-2025.
- **Dr.R.Ramya** attended a 6-day faculty development program titled “Design & Development of e-Content for Online Learning and MOOCs” from 27-01-2025 to 01-02-2025.
- **Dr.C.Subramani** attended a 5-day faculty development program titled “Innovative Research Advancements in Medical Science” from 27-01-2025 to 31-01-2025.
- **Dr.B.Vinothkumar** attended a 5-day faculty development program titled “From Strategy to Success: Innovation, Effective Leadership, Team Synergy, and Stress Control” from 27-01-2025 to 31-01-2025.
- **Dr.K.Saravanan** attended a 6-day faculty development program titled “6G networks” from 20-01-2025 to 25-01-2025.
- **Dr.K.Saravanan** attended a 6-day faculty development program titled “Fortification of Artificial Intelligence Tools for empowered learning in Higher Education” from 27-01-2025 to 01-02-2025.
- **Dr.S.Shanmugapriya** attended an 8-day faculty development program titled “UHV-IV FDP” from 18-01-2025 to 25-01-2025.
- **Dr.R.Ramya, Dr.N.Kalaiarasi** attended a 4-week faculty development program titled “Effective Engineering Teaching In Practice” from 01-01-2025 to 28-02-2025.
- **Dr.R.Ramya** attended a 5-day faculty development program titled “PDP on Indian Knowledge Systems and Universal Human Values” from 03-02-2025 to 07-02-2025.
- **Dr.B.Vinothkumar, Dr.C.Subramani** attended a 6-day faculty development program titled “Revolutionizing Healthcare and Biotechnology: The Role of AI and Computational Techniques” from 03-02-2025 to 08-02-2025.
- **Dr.R.Rajarajeswari, Dr.N.Kalaiarasi, Dr.D.Anitha, Dr.R.Uthra, Dr.C.Subramani, Dr.R.Senthil Kumar, Dr.D.Suchitra, Dr.P.Suresh, Dr.B.Vinothkumar and Dr.K.Saravanan** attended a 6-day faculty development program titled “Advanced Technologies for Smart Power Systems Smart Cities & Mobility Engineering and Management” from 10-02-2025 to 15-02-2025.
- **Dr.N.Kalaiarasi, Dr.D.Anitha, Dr.Uthra.R, Dr.D.Suchitra, Dr. R. Femi, Dr.R.Rajarajeswari** attended a 5-day faculty development program titled “AI tools” from 17-02-2025 to 21-02-2025.
- **Dr.C.Subramani Dr.B.Vinothkumar** attended a 6 Days faculty development program titled “Disaster Risk Management Analysis and Mitigation” from 17-02-2025 to 22-02-2025.
- **Dr.R.Femi** attended a 7-day faculty development program titled “Power Electronics and Drives: Shaping the Future of Electric Vehicles” from 10-03-2025 to 16-03-2025.
- **Dr.R.Femi** attended a 10-day faculty development program titled “NEP-2020: Orientation & Sensitization Programme” from 17-03-2025 to 28-03-2025

- **Dr.C.Subramani** attended a 2-day international conference titled “ 8 th International Conference on Innovative Computing and Communication (ICICC-2025) ” from 14-02-2025 to 15-02-2025.
- **Dr.R.Senthil Kumar** attended a 6-day faculty development program titled “ [Generative AI: Techniques, Tools, and Applications](#) ” from 03-02-2025 to 08-02-2025.
- **Dr.R.Senthil Kumar** attended a 6-day faculty development program titled “ [Artificial intelligence for Science and Engineering](#) ” from 17-02-2025 to 22-02-2025.
- **Dr.P.Suresh** attended a 5-day faculty development program titled “ [Revolutionizing Electric Vehicle Powertrains: The Role of Wide-Bandgap Semiconductors in Overcoming Challenges and Shaping Future Trends](#) ” from 17-02-2025 to 21-02-2025.
- **Dr.N.Chellammal** attended a 6-day faculty development program titled “ [GIAN course on Hybrid Renewable Energy Systems in Microgrids](#) ” from 20-02-2025 to 25-02-2025.
- **Dr.R.Femi** attended a 1 Day faculty development program titled “ [Academic how-to: Free step-by-step instructions for preparing a graphical abstract](#) ” on 20-02-2025.
- **Dr.N.Chellammal** chaired a 2-day international Conference titled “ [International conference EMPOWER 2025-SRMIST Ramapuram](#) ” from 25-02-2025 to 26-02-2025.
- **Dr.R.Femi** attended a 3-days paper presentation on “[Data Driven Analysis of Electric Vehicle Charging using Gradient Boosting and Random Forest Machine Learning Models](#)” 3rd International Conference on Smart Grid Energy Systems and Control (SGESC-2025), NIT Kurukshetra ” from 21-02-2025 to 23-02-2025.
- **Dr.R.Femi** attended a 3-day paper presentation on “[Modeling of Solid-Liquid Transition in Low-Temperature Phase Change Material Gallium for Next Generation Thermal Energy Storage and Cooling Technologies](#)”, 3rd International Conference on Smart Grid Energy Systems and Control (SGESC-2025), NIT Kurukshetra ” from 21-02-2025 to 23-02-2025.
- **Dr.R.Femi** attended a 3-days International Conference titled “ [3rd International Conference on Smart Grid Energy Systems and Control \(SGESC-2025\), NIT Kurukshetra](#) ” from 21-02-2025 to 23-02-2025.
- **Dr.U. Sowmmiya** attended a 6-day faculty development program titled “ [Hybrid Renewable Energy Systems in Microgrids](#) ” from 20-02-2025 to 25-02-2025.
- **Dr.B.Vinothkumar** and **Dr.R.Senthil Kumar** attended a 6 Days faculty development program titled “ [Smart Communication In IoT : Security & Future Applications and Possibilities](#) ” from 24-02-2025 to 01-03-2025.
- **Dr.R.Ramya** attended a 8 Days faculty development program titled “ [NEP 2020: Orientation & Sensitization Programme](#) ” from 28-02-2025 to 08-03-2025.
- **Dr.M.Arun Noyal Doss** attended a 15 Days faculty development program titled “ [Power Electronic Application to Renewable Energy Systems, Electric Vehicle and Intelligent Control](#) ” from 17-02-2025 to 03-03-2025.
- **Dr.R.C.Ilambirai, Dr.S.Lourdu Jame, Dr.P.U.Poornima** attended a 5 Days faculty development program titled “ [Faculty Training Program on Behavioral Psychology](#) ” from 17-03-2025 to 21-03-2025.
- **Dr.R.Uthra, Dr.D.Anitha, Dr.N.Kalaiarasi** attended a 3-day faculty development program titled “ [How Teachers Can Make a Difference](#) ” from 04-03-2025 to 06-03-2025.



Events

CLUB ACTIVITY



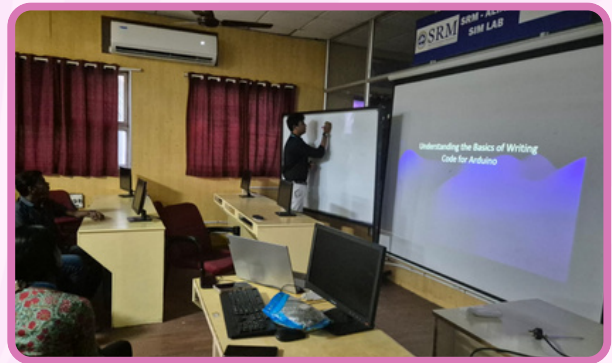
Hands On Training Controlling Frequency Of LED using Arduino - IoT Club (Electrical division) on 23-01-2025



Hands On Training on Tinkercad software tool for IoT - IoT Club (Electrical division) on 29-01-2025



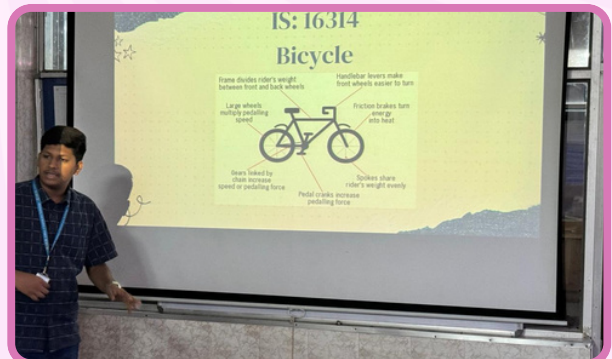
Hands-On with IoT: Exploring Sensors in Action - IoT Club (Electrical division) on 13-02-2025



Hands-On with basic programming for Arduino - IoT Club (Electrical division) on 07-03-2025



Electrical Safety: Quality and Standards - BIS Standards Club EEE on 25-02-2025



QUESTANDARD'2K24 - BIS Standards Club EEE on 27-02-2025

OUTREACH ACTIVITY



Speech and Drawing Competition - UBA adopted village, Chettipunniyam - UBA Team (EEE) on 31-01-2025



Smart Irrigation System - Scientific Social Responsibility Activity in Govt. High School - Kattankulathur on 07-02-2025



Smart Health Monitoring System - Scientific Social Responsibility Activity in Govt. High School - Peramanur on 12-02-2025



Smart IoT Solution for Visually Impaired Individuals - Scientific Social Responsibility Activity in Arignar Anna Govt. Girls Hr. Sec School, Chengalpattu on 14-02-2025

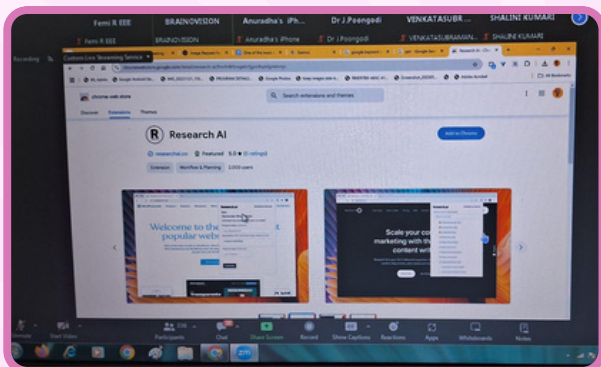


Medical Camp - UBA adopted village, Anjur, - Govt. School, Panchayat Office, on 06-03-2025

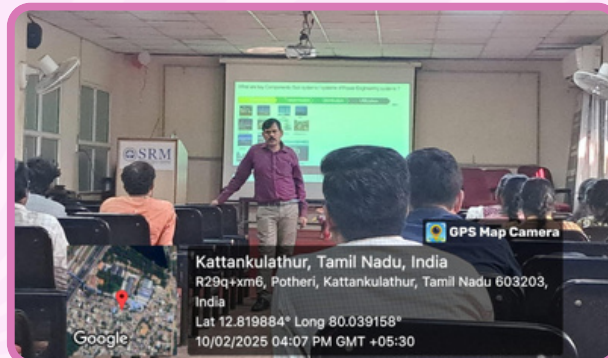


National Science Day - UBA adopted village, Chettipunniyam - UBA Team (EEE) on 05-03-2025

TRAINING PROGRAM



Faculty Development Program on AI Tools
on 17-02-2025 to 21-02-2025



Technical talk on Microgrid and renewable
integration- challenges and opportunities
on 10-02-2025



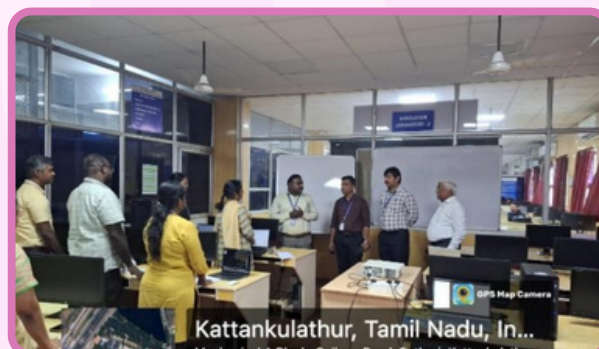
Technical talk on Fundamentals of PID
Controller in Industrial Systems, on 28-
02-2025



Mastering VHDL: Coding and Simulation
with Xilinx on 18-03-2025

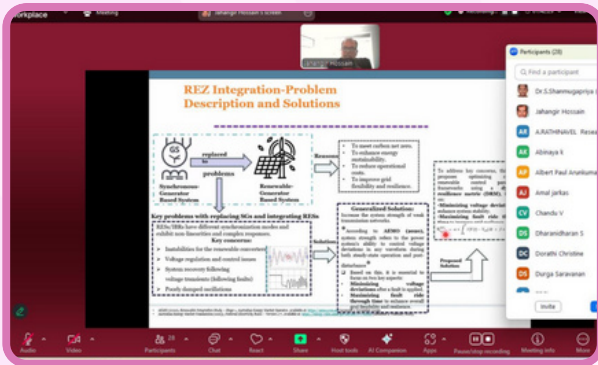


Faculty Training on Performance of HVAC
Systems on 12-02-2025



Guest Lecture & Hands-on Training on
ETAP on 12-03-2025

EVENTS



Lecture Series on Control and Integration of Renewable Energy Systems on 01-03-2025 and 08-03-2025



Exploring machine learning and deep learning networks for complex engineering problems on 08-02-2025 to 13-02-2025



Hands on training on SIMBA and TRAFOL MAGNETIC simulation tools on 28-02-2025



National level hackathon XPLORE EVENTURE - Center for Electric Mobility on 24-01-2025 & 25-01-2025



Empowering Minds: Launch of the Mentor-Mentee Initiative - EEE Counselling Cell on 12-03-2025



International seminar on Cybersecurity for smart grid - Threats, vulnerability, challenges and resilience.

The Department of EEE, SRMIST, conducted an International Seminar on “Cybersecurity for Smart Grid: Threats, Vulnerabilities, Challenges and Resilience” on February 5, 2025, with 102 participants. Coordinated by Dr. R. Rajarajeswari and Dr. D. Anitha, the seminar was inaugurated by Dr. Devika Jay, CEO of GRIDsentry Pvt. Ltd., along with Dr. K. Vijaykumar, Chairperson, SOEE, SRMIST.

Dr. Devika Jay led the first session, focusing on smart grid cybersecurity, IT-OT integration, regulatory compliance, and emerging technologies. The second session, delivered online by Dr. Muhammad M. Roomi from Illinois ARCS, Singapore, covered the WWH cybersecurity model, Panda Power simulations, and smart grid cyber-attack scenarios. The event concluded with an interactive Q&A and a vote of thanks.

TECHNICAL EVENTS

Workshop on Stress Management



The Department of Electrical and Electronics Engineering, SRMIST, in association with the Student Counselling Cell, organized a two-day Workshop on Stress Management for first-year EEE students from February 1 to 2, 2025. The workshop aimed to help students understand the sources and impact of stress while equipping them with effective techniques to manage academic pressure and personal challenges.

The sessions were led by Dr. Kowshika P, a Chennai-based entrepreneur, filmmaker, producer, and film mentor, who brought a unique perspective on stress management through storytelling, mindfulness, and artistic expression. Her creative approach offered students practical strategies for emotional resilience and personal growth. Through interactive discussions, expert insights, and hands-on exercises, the workshop provided a supportive space for students to develop coping mechanisms fostering a smoother transition into college life.

Training program on Deep Learning for IOT based Applications



The Department of Electrical and Electronics Engineering conducted a two-day hands-on training program on “Deep Learning for IoT-based Applications” for VI Semester EEE–A students on 13th and 14-2-2025 at the Project Lab, Sixty students participated in the program, coordinated by Dr.R.C.Ilambirai, along with Dr.S.Lourdu Jame, Dr.P.U.Poornima, and Dr.R. Narayanmoorthi.

The training focused on developing a Battery Health Monitoring System (BHMS) using Edge Impulse, combining deep learning with IoT technologies. Students learned about SoC and SoH estimation, sensor interfacing with ESP32, data collection, machine learning model training, deployment, and IoT dashboard visualization. The sessions included hands-on practice and concluded with a project challenge, enhancing students’ skills in applying deep learning to real-time industrial IoT applications.

TECHNICAL EVENTS

15 days FDP on “Power Electronics applications to Renewable Energy Systems, Electric Vehicle and Intelligent Control”



The Centre for Electric Mobility, Department of Electrical and Electronics Engineering, SRM Institute of Science and Technology, successfully organized a fifteen-day FDP on “Power Electronics Applications to Renewable Energy Systems, Electric Vehicle, and Intelligent Control” from 17th February to 3rd March 2025 in Hybrid mode. Supported by the DST PURSE project, the FDP was structured in three phases—four days of online sessions,

seven days of offline sessions, and a concluding four days of online sessions. Aimed at educators and researchers, the program provided in-depth insights into the latest advancements in power electronics and their critical role in renewable energy systems and electric vehicle technologies. Participants engaged in a series of expert-led sessions, and knowledge-sharing activities that explored cutting-edge innovations, intelligent control systems, and sustainable practices in electric mobility.



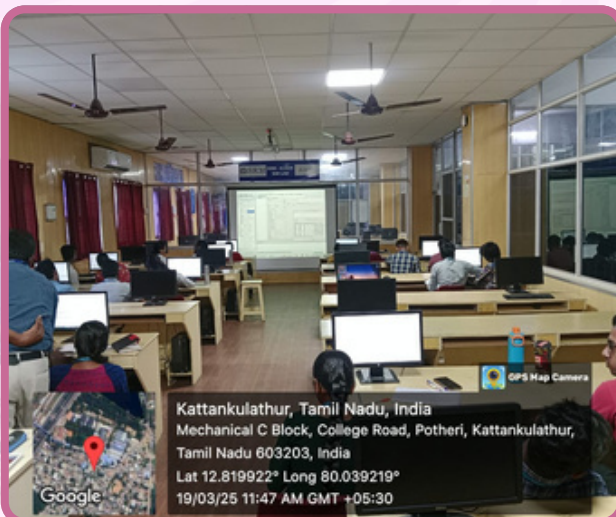
Power Converters Design for Emerging Electrical Applications

The Department of Electrical and Electronics Engineering, SRM Institute of Science and Technology, Kattankulathur, organized a two-day workshop on “Power Converters Design for Emerging Electrical Applications” on 22nd and 23rd February 2025. The event, convened by Dr. R. Sridhar, Professor and Head of the Department, and coordinated by Dr. S. Vijayalakshmi and Dr. C. Anuradha, saw the active participation of 30 attendees.

The training focused on developing a Battery Health Monitoring System (BHMS) using Edge Impulse, combining deep learning with IoT technologies. Students learned about SoC and SoH estimation, sensor interfacing with ESP32, data collection, machine learning model training, deployment, and IoT dashboard visualization. The sessions included hands-on practice and concluded with a project challenge, enhancing students’ skills in applying deep learning to real-time industrial IoT applications.

TECHNICAL EVENTS

Hands-on Training Session on Altair Software for Electric Vehicle Applications



The Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology organized a three-day hands-on training session on Altair Software for Electric Vehicle Applications from 19th to 21st March 2025. This workshop aimed to provide III Year B.Tech EEE students with practical skills in simulation and design using Altair software tools, specifically PSIM and Flux, for electric vehicle systems.

The training kicked off with an introduction to Altair PSIM software on Day 1, led by Mr. Mohammed Simak, followed by a hands-on session on designing and simulating DC-DC converters. On Day 2, students delved into 2D simulation in Altair Flux for electromagnetic field simulations, with a focus on electric machine design. This was followed by training on synchronous machine simulation for electric vehicle propulsion. The final day featured 3D simulation in Altair Flux and hands-on training in designing and simulating induction machines, led by experts from SRMIST.

FACULTY ARTICLE

We saw that Trust, Respect, Affection, Care, Guidance, Reverence, Glory, Gratitude and Love are the **nine feelings in the relationship**. Let us explore them one by one.

Trust is the foundation of all meaningful relationships—whether personal, professional, or societal. In the framework of Universal Human Values, trust goes beyond a mere expectation; it is an intrinsic aspect of human nature that nurtures harmony, cooperation, and well-being.

Pause and Think

What is naturally acceptable to you—trust or mistrust?

Trust means:

- Being assured
- Having the clarity that the other person genuinely wants my happiness and prosperity

'Trust' – the Foundational Value in Relationship

- If I am aware of my natural acceptance, I have trust in others' intention - I accept the relationship.
- If I am unaware of my natural acceptance, I may have doubt on intention – I oppose the relationship. This feeling of opposition shows up as irritation or anger (and it may further lead to fighting, struggle and war)

Trust in intention is the starting point for mutual development.

Frequently Asked Questions:

- **If a person is making the same mistake again and again, even after drawing his attention to the mistake, can we say his intention is right?**

Yes. There is a problem with his competence; this we can verify for our own case, we have the right intention, but we keep making many mistakes again and again. Now, we both have to work to improve upon his competence.

- **If I start trusting everyone, I will get cheated. I don't think we should start trusting right away. So my question is, for how long should we observe someone before trusting them?**

-Till we are able to evaluate his competence properly.

Trust begins with recognizing that every human being aspires for happiness and prosperity. While mistakes may arise due to competence issues, intentions remain fundamentally positive. By focusing on trust and working on competence, we can foster stronger, more harmonious relationships. Embracing trust leads to mutual growth, peace, and universal well-being.

(Reference : AICTE approved UHV – II)

To be continued...

Dr.S.Shanmugapriya
Assistant professor

Standards Awareness

-The Compass for Your Path to Excellence

Understanding IS 732:2019 – Building a Culture of Safety in Electrical Installations

In today's electrified world, ensuring the safety, reliability, and compliance of electrical wiring systems is not just good practice - it's a necessity. The Indian Standard IS 732:2019, titled "Code of Practice for Electrical Wiring Installations (Fourth Revision)", acts as a guiding light for professionals and students alike in designing and verifying safe electrical installations.

🔍 What is IS 732 All About?

IS 732:2019 provides a structured framework for:



Safe wiring practices across residential, commercial, industrial, and public premises



Design, erection, and verification of low-voltage electrical systems



Protection against electric shocks, overcurrents, voltage surges, and fire hazards

It serves as a vital link between theoretical electrical knowledge and practical field applications, especially for aspiring engineers.

⚡ What's New in the 2019 Revision: Key Enhancements and Global Integration

Systematic harmonization with the IEC 60364 series has been undertaken to ensure conformity with internationally recognized principles for the design and safety of low-voltage electrical installations, thereby facilitating global interoperability and adherence to best practices.

🔗 Why It Matters

IS 732 isn't just a standard - it's a mindset for quality and accountability. Inculcating it at the student level through the BIS Standards Club prepares future engineers to think safety-first and compliance-ready in all electrical projects they undertake.

👤 "The best way to learn electrical safety is to live it through design and audit."

📌 Let's wire the future with standards, not shortcuts.

Dr. R. Ramya
Faculty Mentor
BIS Standards Club, EEE





***For Feedback, Copyright and Suggestions :
eeeassociation@srmist.edu.in***



**NAAC A++
ACCREDITED**



Category I with
12B Status



(2025) World Ranking
One among 46 Indian
Universities



(2024)
12th Ranked University



QS I-Gauge
Platinum Rated



(2025) World Ranking
One among 107 Indian
Universities



(2024) World Ranking
Ranked 5-7 in Indian
Universities



(2024) Ranked 20th
in India