SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

THE PULSE

ELECTRICAL AND ELECTRONICS ENGINEERING

2024 ISSUE 3

NAAC
A++

MHRD Govt. of India
UGC
University Grants Commission
Category 1
with 12B Status

nirf NATIONAL INSTITUTIONAL RANKING FRAMEWORK
(2024)
12th Ranked University

QS
(2025) World Ranking
one among 46 Indian Universities

THE WORLD UNIVERSITY RANKINGS
(2024) World Ranking
one among 91 Indian Universities

QS 4★ RATING
VERY GOOD
QS 4 Star Rated Globally

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

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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 10th in India, 2nd among private institutions, and 301-350 in QS World University Rankings 2024.

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.**

Dean's Message

Dr.K.VIJAYAKUMAR
Dean, SoEEE

Dear Students, Faculty, and Esteemed Colleagues,

With great enthusiasm, I address you as the Dean of the School of Electrical and Electronics Engineering. The department of EEE has a proud legacy of academic excellence and innovation. The strength of any discipline lies in collaboration—both within the school and beyond. Faculties need to be committed towards fostering strong partnerships with leading industries, research institutions, and academic communities worldwide.

In today's fast-paced world of technology and innovation, it's essential that students, as a community, stay connected and engaged with the broader world beyond your classrooms. Opportunities like external events, competitions, and collaborations open doors to new perspectives, cutting-edge technologies, and invaluable industry connections. These experiences are crucial in shaping your future as electrical engineers, equipping you with the skills and insights needed to tackle global challenges.

I encourage each of you to actively seek out and participate in intercollegiate competitions, industry conferences, and collaborative projects. These opportunities not only deepen your knowledge but also help build a robust network that will be instrumental in your professional journey. By stepping outside the classroom and embracing these experiences, you are positioning yourselves for success in an ever-evolving technological landscape.

Let's continue to push boundaries, explore new horizons, and make the most of the opportunities available to us. Together, we can shape the future of engineering with innovation and collaboration.

HoD's Message

Dr.R.SRIDHAR
Professor and Head
Department of EEE

Dear Faculty and Students,

It is with immense pride and enthusiasm that I take on the role of Head of the Department of Electrical and Electronics Engineering. As we stand at the forefront of a rapidly evolving technological landscape, our department will not just aim to keep pace—but to lead.

The EEE department has always been a powerhouse of talent, research, and innovation. Together, we will build on this strong foundation to take on new challenges, whether it's contributing to the future of clean energy, advancing electric vehicle technologies, or driving breakthroughs in AI and embedded systems. The future of technology lies in our hands, and I am confident that our department will set new benchmarks in academic excellence and industry collaboration.

Students, are the heart of this department. We are committed to providing you with the best tools, mentorship, and real-world opportunities to shape your skills and become global leaders in technology. Whether through cutting-edge research projects, hands-on industry training, or intercollegiate events, we are here to support your journey. Collaboration will be our driving force. We will strengthen ties with industries, research institutes, and international universities, creating an ecosystem that fosters innovation and fuels entrepreneurial spirit. Our goal is not only to nurture engineers but to cultivate thought leaders and innovators of tomorrow.

Let's charge ahead—our future is bright, and it's electric!

Editors' desk

Dear Readers,

Welcome to the third edition of "The Pulse" for 2024! We're excited to share the latest updates and accomplishments from the Electrical and Electronics Engineering department for the period from July to September.

These past months have been filled with significant achievements, including new publications, patents, and outreach activities. Our students and faculty have excelled, contributing to various technical and non-technical events. Highlights include the inauguration of the EEE Association, vibrant celebrations of Teachers' Day and Ethnic Day, and many other initiatives showcasing the dedication and talent within our community.

We hope this edition is both informative and inspiring.

Warm regards,
Team Newsletter.

Team members

Dr. PRADEEP V
Assistant Professor
Faculty Mentor

Dr. THAMIZH THENTRAL T M
Assistant Professor
Faculty Mentor

KAVYA N
III Year, EEE
Content Writer

GIDEON STEVE B
III Year, EEE
Graphic Designer

ROHINI S
III Year, EEE
Content Writer

JAGADEESH SARVIN RAJ J
II Year, EEE
Proofreading and Quality Control

HARI PRASATH M
II Year, EEE
Event Coverage Lead

VEDANT JAIN
I Year, EEE
Digital Content Manager

Students' CORNER

EEE ASSOCIATION INAUGURATION

The inauguration of the Electrical and Electronics Engineering Association at SRM Institute of Science & Technology on 12th September 2024 set a vibrant tone for the department's new academic year. The event was graced by the presence of Dr. R. Sridhar, Head of the EEE Department and President of the Association, along with faculty members, including Dr.V.Pradeep, the Association Coordinator. The occasion began with a warm welcome extended by Karthik and Purab, who introduced the dignitaries and invited the audience to stand for the Invocation Song and followed by lighting of the lamp.

Dr. Sridhar's welcome address highlighted the association's achievements and stressed the importance of continuous collaboration between students and faculty for academic and professional growth. Following this, the newly appointed office bearers, including Vice President Rethu Nandan and Secretary Nitish Kumar, were introduced and recognized for their commitment to the association's success.

Mr. Dinesh Kumar, the Ex-Vice President, addressed the gathering and shared his experiences, offering insights into the role of leadership within the association and inspiring the new office bearers to uphold the association's values. The current office bearers, including the Vice President and Secretary, expressed their gratitude and emphasized the need for unity and cooperation among the members.

The event concluded with a strong sense of motivation, as the dignitaries and office bearers encouraged all attendees to continue striving for the association's growth and success.

PLACEMENT RECORDS

2021 - 2025 BATCH

HONDA

Sabarish M

GE VERNOVA

Rajeshwari P

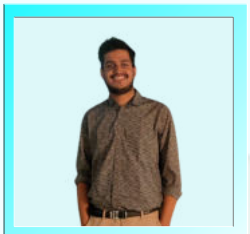
ALSTOM

Ishwariya R

ALSTOM

Indraneela Das

EULER



Swastik Panda

EULER

P K Rama Sai

STELLANTIS

Dinesh Kumar S

UNO MINDA

Dhikshanya S

UNO MINDA

Rupan Adhikary

Marut Air

Jatin Prasad

Marut Air

Thaaneshvaran

Marut Air

Shrisha Kabdwal

SIEMENS

Sowmiya

VOLVO

Vignesh

AWARDS AND ACHIEVEMENTS

Sachin Anand, a first year student won the first price in the **Funder's Birthday Trophy Cricket tournament** conducted in SRMIST from 19-08-2024 to 22-08-2024.

Sachin Anand, first year student won the second price in the **cricket tournament** conducted in IIT Madars from 23-09-2024 to 27-09-2024

Atish Dinda and **Souvik Maity** received the **"IEI Active student award 2024"** by IEI local chapter, Kattankulathur on 18-09-2024.

KAVYA N and Vaitheeswari R, third year student won the price for best idea in **Global Product Development Ideathon 24 - 2.0** conducted in SRMIST from 24-09-2024.

Akash S first year student won the second price in the **"2nd Chengalpattu district kids and junior athletic championship 2024"** by organised by Tamil Nadu Athletic association on 17-8-24.

STUDENTS PARTICIPATION

Shri Vaishnavi B S, a third year student has completed the **"Social Work Internship"** organized by CSW Foundation from 01-07-2024 to 10-07-2024.

Chitesh Thangasamy NA, a second year student has completed the internship at **"Andromeida Maritime Solutions Pvt Ltd"** from 04-06-2024 to 4-08-2024.

Tanishk Jain, first year and **Hari Prasath,** second year students has participated in the **"CNC Programming and Practice in CNC Machines"** organised by Department of Mechanical Engineering, SRMIST KTR from 09-09-24 to 14-09-2024.

Tanishk Jain, a first year student has participated in the **"Capture The Flag"** organised by CINTEL Student Association, SRMIST KTR on 13-08-2024.

Tanishk Jain, a first year student has participated in the **"E-VOLVE"** organised by, IEEE SRM Student Branch on 16-09-2024.

Hariharan J, a first year student has participated in the **"Human Robot Interaction"** organised by, Department of ECE, SRMIST KTR on 13-09-2024.

Hariharan J, Neha Sravani D, Telu Swayambhu, Bharath raj Saravanan, a first year students has participated in the **"Ideathon 2.0"** organised by IEEE SSIT SRMIST SB on 13-09-2024.

Debojyoti Ganguly, a first year students has participated in the **"Campus Quest 3.0"** organised by Coding Ninjas SRM Club on 06-09-2024

Vedant Prakash Jain, Gracia Samitha S, Atin Hegde, Aakash A, Divyasri D, Vijayraj D, Jithu Tomy, Vaitheeswari R, Kavya N, Vishwajeet Bilonia, Sundarrasu S, Hari Prasath M, Goldwin R, participated in the **"The Design and Development of Power Electronic Converters for Electric Vehicle Applications"** organised by Department of Electrical and Electronics Engineering from 03-09-2024 to 04-09-2024

Atin Hegde, Sanjay PD, Samarpan Kharel, Aparajita Pal,Pranavraj V has participated in the **"Circuit crafter - Hands on PCB Design"** organised by Department of Electrical and Electronics Engineering and SRM MTS Student Chapter, SRM IST Kattankulathur from 12-09-2024 to 13-09-2024.

Atin Hegde, Shahil Ansari MD, Tanishk Jain, Rishe SM, Sharvesh SM, MonisThilak R C, Eshan Vengal George, Atish Dinda, Souvik Maity has participated in the **"Home Appliance's Engineering"** organised by Department of Electrical and Electronics Engineering, SRM IST Kattankulathur on 24-09-2024

Rukkumani M D, Tharunkanth MS, Kavya N, Atish Dinda, Dhana Prakash B, Souvik Maity,Rohan S, Siddharth S M, Vaitheeswari R, Vishwajeet Bilonia, Aakash A, Sundarrasu S, Vinay S, Vijayraj D, Divyasri D, Shreeraj M, Rohini S, Shivam Kumar Rai, third year student has participated in the **"Skill development program on power system simulation tools"** organised by SRM IST Kattankulathur from 12-09-2024 to 13-09-2024.

Desigan B, Sachin T, Dheepaswarupan T, Aparajitha Pal students has participated in the **"Ideation and hackathon 2.0"** organised by SRM IST Kattankulathur from 19-09-2024 to 20-09-2024.

Sneha R,Varshini V S, and Rupak V, second year students, participated International Conference on **"Globalization and Intelligent Educational Technology (GIET-2024) "** on 13 & 14 September 2024 organized by Dept. of EE, ADCET, Ashta, Maharashtra.

Atish Dinda, Souvik Maity, third year students have participated in the Hackathon "Smart Agro Storage Hackathon for Engineers day -2024" organised by Department of Mechanical Engineering, SRM IST Kattankulathur on 17-09-2024.


SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
COLLEGE OF ENGINEERING AND TECHNOLOGY
Kattankulathur, Chengalpattu District
The Institution of Engineers (India)
Kattankulathur Local Centre
DEPARTMENT OF MECHANICAL ENGINEERING
SMART AGRO STORAGE HACKATHON FOR ENGINEERS DAY 2024
Certificate of Participation
This is to certify that Mr. ATISH DINDA, of SRM Institute of Science and Technology, Kattankulathur for his/her active participation as a member of team iNverse IGLOO in the SMART AGRO STORAGE HACKATHON FOR ENGINEERS DAY 2024 organized by the Department of Mechanical Engineering in association with the Institution of Engineers (India), Kattankulathur Local Centre on Engineer's Day, 17th of September, 2024.
Dr. V. Praveena, Convener,AP/ Mechanical Engineering
Dr. A. Vijaya, Convener, Committee member, IE(I) KTR LC
Dr. K. Suresh Kumar, HoD/Mechanical Engineering


SRM Institute of Science and Technology
College of Engineering and Technology
Department of Electrical and Electronics Engineering
Institution of Power Engineers
CERTIFICATE OF PARTICIPATION
This is to certify that Mr/Ms/Dr
M.SHREERAJ
of SRM Institute of Science and Technology, Kattankulathur
has participated in two days Skill Development Program on Power System Simulation Tools organised by the Department of Electrical and Electronics Engineering held on 12th and 13th of September 2024.
Dr. D. Suchitra, Convener, Associate Professor / EEE
Dr. R. Sridhar, Professor, HoD/EEE

Diravia Nathan M, a third year students has participated in the **"Power System Simulation Tool"** organised by SRM IST Kattankulathur on 12-09-2024 and 13-09-2024.

Pinaki Mandal, a first year student has participated in the **"Wealth out of waste"** organised by Universal Human Value Cell SRM IST Kattankulathur on 20-09-2024

Gaurie Nandhana H, a first year students has participated in the **"DSA Club workshop"** organised by The Directorate of Students Affairs SRM IST Kattankulathur on 22-09-2024.

Piyush Narayan, a first year students has participated in the **"Solid Waste Management"** organised by The Directorate of Students Affairs SRM IST Kattankulathur on 20-09-2024.

Varshini V S, a second year student has participated in the **"Orkestrim national level technical symposium"** organised by SRM Valliammai Engineering College on 14-9-2024

Varshini V S, a second year student has participated in the **"Poster presentation"** organised by SRM Valliammai Engineering College on 14-9-2024.

Lathief Hussain J, Hethu Vardhan MV, Aditya, Ishan Gaur, Selvasri B, Ruth Salomi, Dhanunjay Anugoju, Karthik Ram G, Narala Heshma Sree, Ashish Raghav, Rohit Sharma, Sai Pranav P, Dharmendiramurthy A, Selvakumar U, Kiruthika K, Devadarshini G, Kamali R, Kankipati Abhi, Madhav B V, Debopama Chowdhury, Shashwat Singh, Shibasish Chowdhury, Josna Mariyam Johnson, Abishek Krishna T, Deepak M S, Ethish Karthikeyan R, Balaji S, Hari Govindh M, Shreyan sharma, Sachit Khurana, Kaushal Chakraborty, Arnav Singh, Siddharth Kumar, Bharani Balan J, Shriram Jayan, Elgin Calister F, Sarath K, Deenavarshan T second year students has participated in the **"Energathon" organised by SRMIST KTR from 25-9-2024 to 27-9-2024.**

Aparajita Pal, Muskan Singh second year student has participated in the **"FPGA Workshop"** organised by SRMIST from 31-7-2024 to 1-8-2024.

Pranavraj V, Aparajita Pal, Rohit Jhajhria, Muskan Singh and Samarpan Kharel second year students has participated in the **"PCB Workshop"** organised by SRMIST on 12-9-2024 and 13-9-2024.

Dheepaswarupan T, a second year student has participated in the **"IOT Ideathon"** organised by SRMIST on 24-09-2024.

Bharath raj Saravanan, Tanishk Jain, a first year student has participated in the **"Hydrogen Fuel Cell Technologies towards Green Transportation"** organised by Department of Electrical and Electronics Engineering, SRM IST Kattankulathur from 30-09-2024 to 01-10-2024.

Jithu Tomy, Gideon Steve, third year students have participated in the **"Healthathon - Biomedical Engineering"** organised by SRM IST Kattankulathur on 19-09-2024.

Varshini V S, Sneha R second year students has participated in the **"Ideathon'24"** organised by SRMIST Kattankulathur on 24-9-2024.

The 2nd year students of Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, under the guidance of Dr.C.Anuradha, Dr.S.Vijayalakshmi Dr.V.Pradeep and Dr.A.Sureshkumar , visited the Ennore Thermal Power Plant. The visit to the plant to North Chennai Thermal Power Station, was a valuable educational experience, offering practical exposure to large-scale power generation. Located in northern Chennai, the plant has a capacity of 1200 MW, contributing significantly to Tamil Nadu's electricity supply. During the visit, the students observed key components such as the conveyor belt system, boilers, turbines, and the control room. The plant's conveyor belt ensures the continuous supply of coal to the boiler, while the steam turbines convert thermal energy into mechanical energy, generating electricity. The cooling system, vital for efficient operation, and emission control technologies to minimize environmental impact, were also key areas of learning. This visit allowed the students to connect theoretical concepts in thermodynamics and energy systems with real-world applications, while also emphasizing the importance of environmental considerations in power generation.

INDUSTRIAL VISIT

the IEI Students Chapter of the Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, in collaboration with the Institution of Engineers (India), Kattankulathur Local Centre, organized an industrial visit to Ascott Electricals Pvt. Limited, Thirumudivakkam. This visit provided an invaluable opportunity for students to gain practical exposure to transformer manufacturing processes. Guided by industry expert Mr. Jinnah, the students toured various departments and learned about the design, production, and testing of different types of transformers, including power and distribution transformers. They observed critical processes such as core manufacturing, winding, insulation techniques, and testing procedures, enhancing their understanding of the engineering principles involved. The visit concluded with an interactive session, where students received insights into career opportunities and were introduced to sustainable practices in transformer manufacturing. This enriching experience allowed students to connect theoretical knowledge with real-world applications, significantly enhancing their technical skills and industry readiness.

The V Semester, EEE students visited Voltech Manufacturing Private Limited, located at Kundrathur Main Road, Kovur. The industrial visit, organized to provide practical exposure to electrical components and systems, was accompanied by faculty members Dr.R.C.Ilambirai and Dr.N.Chellammal. The students were welcomed warmly by the Voltech staff, who guided them through various sections of the manufacturing unit, including battery charge controllers, rectifier units, switchgear, control relay panels, and the design of LV transformers.

Mr. Mohanraj from the training department explained the operation of battery charger panels, while other experts demonstrated the function of relays, relay test benches, transformers, circuit breakers, and switchgear panels. The session on transformers, led by Mr. Vadivel, detailed the manufacturing process and design considerations for current and potential transformers. This visit provided the students with invaluable insights into the manufacturing of key electrical components and enhanced their understanding of real-world applications, furthering their academic and professional growth. The Department of Electrical and Electronics Engineering extends its gratitude to Voltech Manufacturing for offering this enriching experience.

INDUSTRIAL VISIT

As part of the Energathon event held from 25th to 27th September 2024, students and faculty from the Department of Electrical and Electronics Engineering visited Bosch Siemens Home Appliances India Pvt. Ltd., Chennai, on 25th September. The aim was to identify real-time industrial problems for innovative solutions during the event.

After an introductory briefing about the company, known for its brands like Bosch, Siemens, and Gaggenau, participants toured the refrigeration and laundry plants. They observed key processes, including sheet pressing, casing assembly, and washing cycle testing.

The visit concluded with an examination of the distribution panel, where problem statements were identified for the participants to address over the next two days. This experience provided valuable insights into industry challenges and fostered a spirit of innovation among the students.

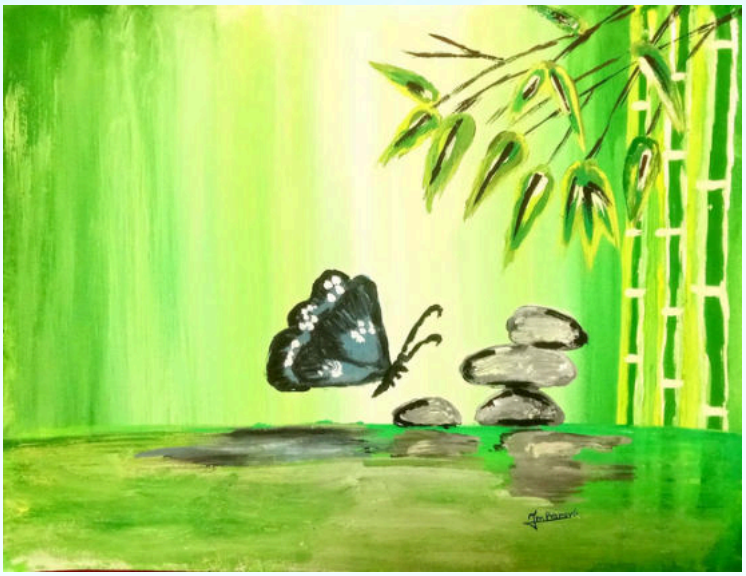
Ethnic Day Celebration

The Electrical and Electronics Engineering Association (EEEA) at SRM Institute of Science and Technology, Chennai, organized a vibrant Ethnic Day celebration that brought together students and faculty for an exciting and culturally enriching experience. Held in front of the campus and the main Electrical Science Block, the event showcased the beautiful and diverse traditions of India, with students adorning colorful attire that reflected their unique cultural backgrounds. The celebration was a joyous occasion, promoting a strong sense of unity, pride, and respect for India's diverse heritage.

Various engaging activities were organized throughout the day, adding to the festive spirit. These activities included traditional dance performances, music, and cultural competitions where students enthusiastically participated, displaying their talents. A fashion show further highlighted the diversity of ethnic attire, allowing students to take center stage and showcase the beauty and significance of their traditionals.

Ethnic Day holds great significance as it fosters cultural awareness and promotes inclusivity within the student community. It serves as a powerful reminder of the diverse cultural fabric that unites individuals from different parts of the country. By celebrating each other's traditions, students develop a sense of belonging and mutual respect, enhancing their appreciation for the differences that enrich their shared experiences. The event stands as a symbol of unity, demonstrating how SRMIST values and honors the diverse backgrounds of its students and faculty.

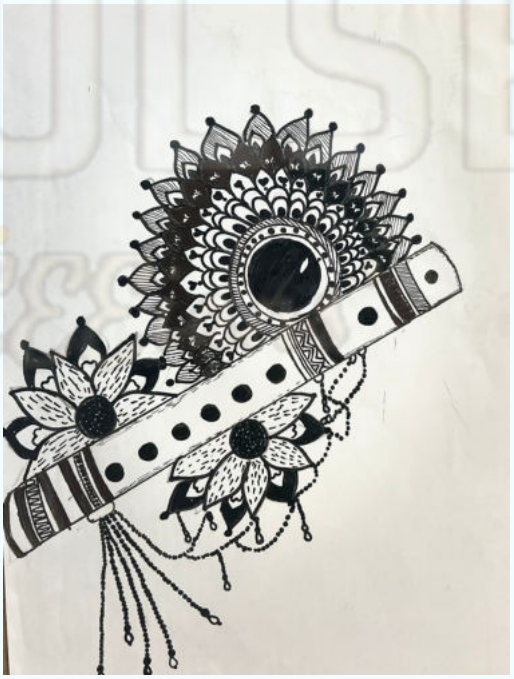
Students Article



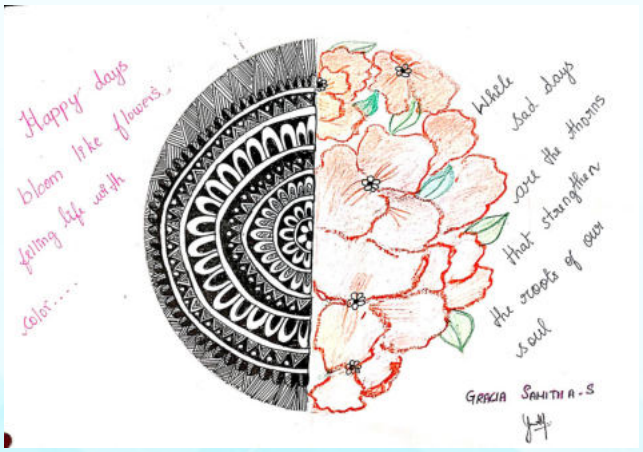
Pranav J M
RA2411005010059

Swethasree Saravanan
RA2411005010021

Disney Swethasree Saravanan
RA2411005010021



Charulatha P Poongavanam K
RA2411005010024



GRACIA SAMITHA S
RA2411005010042

Untitled Creep Story

by DEBOJYOTI GANGULY (RA2411005010035)

It was around 3 am on a cold Saturday night, the roads were empty lest for a couple of stray dogs taking shelter in whatever tiny pockets of warmth they could find on and around the road, fluorescent streetlights lit up the roads in the small town for it was, I was quite tired for I have been driving for the past 8 hours with short breaks for refueling and nourishment needs, I cannot be sure about the happenings of that night for I might as well had been hallucinating due to exhaustion however I am not sure if hallucinations are remembered that vividly for I remember every conversation I had that night, I remember every word I spoke and every word I heard, I remember the feeling of deep fear grip me as if it were death's own cold touch and I remember the voice which came through the static of the radio.

If I recall correctly the frequency was set to 94.3 FM which was the frequency of a quite popular Hindi radio station in our city, the station typically played upbeat songs and had some quite chatty radio hosts but on that particular night it was replaced by an eerie silence instead of the chatter the silence seemed to stretch a bit too long, I checked the radio wondering if it had lost signal, but the static came in loud and clear, the kind that made hairs on the back of your neck stand on end. I turned the dial, hoping to pick up a clearer signal, but no matter which direction I turned the static remained, Frustrated, I was about to turn the radio off when something strange happened. Through the crackling voice I heard a faint voice. At first, I thought it was just more interference but then the words got clearer,

"Stop"

I froze, my heart pounding in my chest, I looked around, but the road was still empty, and the night was just as quiet save for the hum of my engine and the whisper of the wind outside. The voice came again, louder this time.

"STOP NOW"

I slammed on the brakes instinctively, the tires screeching against the asphalt as the car came to a halt. I sat there, breathing heavily, hands gripping the steering wheel tightly. The voice disappeared as suddenly as it had come, replaced once again by the endless static.

I sat there for a moment, trying to make sense of what just happened. My brain told me it had to be some sort of prank, or maybe my own exhaustion playing tricks on me. But deep down, I knew something was wrong. The air had grown colder, and a feeling of dread settled over me, heavy like a blanket.

That's when I noticed it. Just a few meters ahead, barely visible in the dim glow of the streetlights, was a shadow—a figure standing in the middle of the road. My blood ran cold.

It was as if the person had appeared out of nowhere. They didn't move, just stood there, staring in my direction. I couldn't make out their features, but there was something unnerving about the way they stood so still, their form barely distinguishable from the shadows around them.

I don't know how long I sat there, too terrified to move. Then, slowly, the figure began to walk toward my car.

Panic set in. My foot hovered over the accelerator, ready to speed off at a moment's notice, but something kept me rooted in place. The figure came closer, and I could finally make out their face— or rather, the lack of it. The face was shrouded in darkness, no features visible. Just an empty void where their eyes and mouth should have been.

The voice came again, this time not through the radio, but in my head.
"Do not leave."
I wanted to run, to flee, but I couldn't. It was as though some invisible force had gripped me, keeping me frozen in place as the figure approached my car, inch by inch.

THE LIFE OF GIRL

by SOHAM PANDA (RA2411005010052)

A girl is born,
And the hearts of so many are torn.
She lies there doomed for life,
Destined to become just someone else's wife.
As she grows,
The hunger games continue.
Hunger for equal opportunities,
Hunger for freedom,
And when she does get these,
Hunger for protection,
Hunger for safe space,
Hunger to breathe and walk freely,
Without pepper sprays,
Without just counting for long nights to turn into longer days,
And today when her hunger for education and opportunities is getting satiated gradually,
She starves to death in the campus of safety,
A girl is dying,
With her, dies the entire nation.
With her, die hopes.

Is EV the future for India?

by Videep Bothra (RA2311005010051)

With the rise of EV culture in India, where Companies like TATA, and Mahindra are keen on capitalising on the boom of EV by manufacturing in India and companies like Hyundai, Mercedes Benz and BYD want a bite of the pie of revenue by importing their EV models from foreign markets this proves both the Market runners the consumers and the governments keen in having a EV car culture in the markets of India,

But is EV the right fuel type for India?

I say the opposite for a developing country like India, with a population of its grandeur it doesn't seem possible for an update in its fuel infrastructure and also factoring in the fact that India fulfills less that 4% it's electric needs by sustainable sources that is such a hypocrite take on the sustainability factor of transitioning to EV.

That is when an upcoming fuel type comes in the form of hydrogen fuel cells, With Japanese manufacturers like Honda and Toyota leading the world in this technology and other companies following right after even then the governments are not supporting it within the countries hydrogen would be the ideal fuel type for a developing country like India since

Wide Availability: Hydrogen is widely available across the world.

Existing Infrastructure: India can use its existing infrastructure instead of developing new infrastructure.

Environmental Benefits: There are little to no negative emissions in the process of consuming hydrogen fuel.

In conclusion, While EVs are currently receiving more attention and investment, hydrogen fuel cells offer a promising alternative. A balanced approach that includes both EVs and hydrogen fuel cells might be the most sustainable path forward for India.

Facultys' CORNER

TEACHERS' DAY CELEBRATION

The Electrical and Electronics Engineering Department hosted a lively and meaningful Teachers' Day celebration on 12th September 2024, organized by the Electrical and Electronics Engineering Association (EEEA). The event opened with a warm welcome from the hosts, who emphasized the importance of educators and introduced the newly appointed association office bearers, marking a new chapter for the association.

The celebration featured a joyful cake-cutting ceremony, symbolizing the appreciation of teachers' contributions. It continued with a series of engaging games, such as Dumb Charades, Musical Chairs, and Guess the Component, a fun yet educational activity that linked the celebration to the field of electrical engineering.

The celebration featured a joyful cake-cutting ceremony, symbolizing the appreciation of teachers' contributions. It continued with a series of engaging games, such as Dumb Charades, Musical Chairs, and Guess the Component, a fun yet educational activity that linked the celebration to the field of electrical engineering.

Continued...

These activities allowed teachers and students to bond in a relaxed and lighthearted setting. Teachers shared their feedback in a reflective session, expressing gratitude for the thoughtful celebration, and Nitish Kumar extended a heartfelt Vote of Thanks, acknowledging the efforts behind the event.

The enthusiastic participation of the faculty members was a highlight of the event, as they actively engaged in all the activities with great energy and a sense of fun.

Their spirited involvement not only elevated the event's excitement but also strengthened the bond between faculty and students, making the day even more memorable. This level of engagement reflected the strong sense of community within the department, with teachers and students coming together to celebrate in a meaningful and enjoyable way.

The success of the event showcased the dedication of the organizing team, who worked diligently to manage every detail. Their seamless coordination of activities, along with engaging games and thoughtful touches, fostered a warm atmosphere.

The day concluded with the National Anthem, leaving participants with a sense of unity, collaboration, and appreciation, strengthening the teacher-student relationship within the department.

PUBLICATIONS AND PATENTS

Number of papers published in 2024 : **166**
Number of papers in IEEE Transactions : **6**
Total citations of the department : **24637**
H-Index of the department : **62**
i10-Index of the department : **618**
Number of patent published in 2024 : **8**
Number of patent granted in 2024 : **11**

List of Articles

- Ramesh, P., Komarasamy, P. R. G., Rajamanickam, N., Alharthi, Y. Z., Elrashidi, A., & Nureldeen, W. (2024). A Comprehensive Review on Control Technique and Socio-Economic Analysis for Sustainable Dynamic Wireless Charging Applications. Sustainability, 16(15), 6292. https://doi.org/10.3390/su16156292
- Navamani Jayachandran, D., Kathirvel, B., & Anbazhagan, L. (2024). Comparative analysis of various restructured Quadratic Boost DC-DC converter. E3S Web of Conferences, 547, 01009. https://doi.org/10.1051/e3sconf/202454701009
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- Bharatiraja, C., M. Deepak, and Mahesh Krishnamurthy. 2024. "Performance Comparison of Enhanced Model Predictive Control and Model Predictive Direct Torque Control in SRM Drives." Pp. 1-6 in 2024 IEEE Transportation Electrification Conference and Expo (ITEC). IEEE.
- Geetha, Anbazhagan, S. Usha, Jagadish Babu Padmanabhan, R. Palanisamy, Albert Alexander, Geno Peter, R. Ramkumar, and Vivekananda Ganji. 2024. "Performance Evaluation of Coloured Filters on PV Panels in an Outdoor Environment." IET Renewable Power Generation. doi: 10.1049/rpg2.13040.
- Vasanth Kumar. CH, Preetha Roselyn. J. "Real-time Deep Learning Network based Machine Control for Immersive Chatbot Conversations", J. Electrical Systems 20-3 (2024):3750-3766
- Anita, S., Y. Sukhi, Y. Jeyashree, and N. Manoj Kumar. 2024. "Torque Fault Compensation in Electric Vehicle Switched Reluctance Motor Drives: A Jellyfish Search Optimization Method." Optimal Control Applications and Methods. doi: 10.1002/oca.3133.
- Loganathan Nachimuthu, P. Selvaraju, Sugumaran Ganesan, V. Sivan, C. S. Boopathi "Smart DC Fan Speed Controlling Using Passive Infrared Sensor and Temperature Sensor" Nanotechnol. Perceptions. 20, (2024).
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- Vedulla, Gowtham, and A. Geetha. 2024. "Experimental Study on the Impact of Airborne Dust Deposition on PV Modules Using Internet of Things." Pp. 87-93.
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- **Tian, Hanlei, Wei Han, Jagabar Sathik M, Maolin Chen, Guozhuang Liang, and Saad Mekhilef. 2024. "High-Efficiency, High-Power Asymmetrically Designed Three-Phase Power Supply for Electrolytic Hydrogen Production." IEEE Transactions on Power Electronics 1–6. doi: 10.1109/TPEL.2024.3464675.**
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PATENTS

Granted

- **Dr.R.Narayanamoorthi** received patent grant for the title, " Renewable Energy-Powered System for Roadway Moving Contact Charging of Electric Vehicles and Method Thereof **",** Government of India, Grant number: 202341018289
- **Dr.J.Divya Navamani** received patent grant for the title, " A microbial fuel cell based power harvesting system ", Government of India, Grant number: 202141021951.
- **Dr.R.Narayanamoorthi** received patent grant for the title, "In-motion wireless charging systems and methods for electric vehicles ", Government of India, Grant number: 202341016074.

Published

- **Dr.C.S.Boopathi** published patent title, **"**Cloud-based network security solution with advanced threat intelligence integration**",** Indian patent, Application Number: 202441061967 A.

CONSULTANCY WORK

- **Dr.C.Bharatiraja** has done a consultancy work in **CS701 - Solar Inverter Controller** for **SRM Tech** on 23-07-2024.
- **Dr.C.Bharatiraja** has done a consultancy work in **Dspace Scalexio** for **Abhinavarizel Private Limited** on 20-07-2024.
- **Dr.C.Bharatiraja** has done a consultancy work in **EVSE Charging Discovering System SL 1040A** for **Kazam EV Tech Pvt Ltd** on 06-08-2024.
- **Dr. Phani Teja Bankupalli** has done a consultancy work in **Services for conceptualization of H2-fuel cell system** for **Sharda Motors India Ltd.** on 19-07-2024.
- **Dr.J.Preetha Roselyn** and **Dr.C.Nithya** has done a consultancy work in **Development of Visual Odometry for Autonomous Vehicle** for **Andromeida Maritime Solutions Pvt. Ltd on 02-09-2024.**

AWARDS AND ACHIEVEMENTS

The following **Faculty members** are recognized in the top 2% of the Scientists Global List by **Stanford University, US**


Dr.K.Vijayakumar


Dr.C.Bharatiraja


Dr.M.Jagabar Sathik


Dr.R.Narayanamoorthi

Dr.R.Ramya received **Gold Award** for case study presentation on "**Outcome Based Education**" in National Convention on Quality Circles in Education (NCQCE - 2024) with the theme "**Enterprising Quality Circles for Eminence in Education**" organized by Quality Circle Forum of India (QCFI), Chennai Chapter held at Sathyabama Institute of Science and Technology, Chennai on 20-07-2024.

FACULTY FACILITATIONS

Dr.C.Bharatiraja served as the **Resource Person** at Mahendra Institute of Technology, Mahendirapuri, Namakkal on 19-08-2024.

Dr.Jagabar Sathik attended the **DC meeting** at Rajalakshmi Engineering College, Chennai on 25-07-2024.

Dr.A.Geetha attended the **DC meeting** at Kongu Engineering College (Autonomous), Perundurai, Erode on 13-08-2024.

Dr.C.Bharatiraja attended the **BOS Meeting** at Prathyusha Engineering College on 22-07-2024.

Dr.D.Suchitra attended the **DC meeting** at Sairam Engineering College, Chennai on 30-09-2024.

Dr.J.Preetha Roselyn attended the **chief guest** at Anna University Guindy campus for MTS chapter inauguration on 30-09-2024.

Dr.C.Bharatiraja attended the **resource person** at KSR Polytechnic College from 05-08-2024 to 10-08-2024.

Dr.C.Bharatiraja chaired sessions at from 31-07-2024 to 3-08-2024 at SEFET 2024.

Dr.C.Bharatiraja served as the **panel moderator** at at the international event "India - A Rising EV Mission." on 26-09-2024.

Dr.C.Bharatiraja served as the **panel moderator** at at the international event "DST Startup Utsav" on 06-09-2024.

Dr.C.Bharatiraja delivered a **guest lecture series** at SRM Valliammai Engineering College from 09-09-2024 to 13-09-2024.

Dr.C.Bharatiraja delivered a **guest lecture series** at Satyabama Institute of Science and Technology from 12-09-2024.

Dr.C.Bharatiraja has visited the following companies for technical discussion

- **All India Robotics Association T-HUB -Hyderabad**
- **Fuel cell -ARC**
- **STELLANTIS**
- **Incredible Engineering Private Limited -Chennai**
- **The Automotive Research Association of india - AMTIF Pune**
- **Ford India Pvt Ltd Chennai**

Dr.R.Narayanamoorthi has undergone **Faculty Training and Immersion program** at **Sharda Motors** Ltd from 15-07-2024 to 29-07-2024.

VISIT TO UNIVERSITY COLLEGE LONDON

From July 30-31, 2024, a delegation from the SRM Institute of Science and Technology visited the University College London (UCL) Centre for Engineering Education (CEE) as part of the Global Engagement Fund (GEF) initiative, aimed at fostering international collaboration and enhancing educational practices. The team, consisting of Prof. R. Sridhar, Dr. J. Divya Navamani, and Dr. A. Lavanya, embarked on this visit to explore UCL's renowned Integrated Engineering Programme (IEP) and identify ways to integrate its best practices into SRMIST's curriculum.

On the first day, the SRMIST team received a warm welcome from Prof. Abel Nyamapfene, who guided them through the Engineering Front Building and the various state-of-the-art laboratories. During the tour, the team was introduced to innovative projects developed by UCL students, showcasing the practical application of engineering concepts. A key meeting was held with Prof. Sally Day, the Head of the Department of Electronic and Electrical Engineering, where the SRMIST team gained valuable insights into the teaching methodologies and assessment strategies employed in UCL's EEE program.

The highlight of the day was a comprehensive briefing by Prof. Emanuela Tilley, the Director of Studies for CEE and IEP Programme Director. She elaborated on the IEP's unique framework, which emphasizes interdisciplinary learning and hands-on project experiences that prepare students for real-world engineering challenges. The IEP encourages collaboration across various engineering disciplines, promoting a holistic understanding of complex engineering problems and fostering innovative solutions. Additionally, the program emphasizes the development of essential professional skills, such as teamwork, communication, and critical thinking, ensuring that graduates are well-rounded and prepared to thrive in diverse professional environments.

The second day of the visit featured a presentation by Associate Prof. Fiona Truscott, who provided an overview of the Design and Professional Skills modules, integral components of the IEP. These modules focus on collaborative, project-based learning, allowing students to engage in team-oriented technical design projects that simulate real-world scenarios. This hands-on experience not only enhances students' technical competencies but also equips them with the soft skills necessary for effective engineering practice.

VISIT TO CENTRE FOR SYSTEM DESIGN NITK SURATHKAL

As part of ongoing efforts to advance virtual lab development, the SRM-PALs team embarked on a productive visit to the Centre for System Design at NITK Surathkal to explore the Virtual Lab (VLAB) Development Studio. Recognized as a Centre of Excellence, the Centre for System Design takes an interdisciplinary approach to engineering systems, focusing on system modeling, simulation, optimization, and both virtual and physical experimentation.

A team of five faculty members from SRM, including Dr.C.Lakshmi (Professor, CINTEL), Dr.R.Ramya (Assistant Professor, EEE), Dr.N.Harshavardhana (Assistant Professor, Mechanical), Dr.N.Arunachalam (Assistant Professor, Chemical Technology), and Dr.A.Alice Nithya (Associate Professor, CINTEL), visited the Centre to gain insights into virtual lab capabilities, explore potential academic partnerships, and learn about integrating these labs into their teaching methodologies.

The visit began with an informative session by Mrs. Anusha and Mrs. Vismeya, research fellows at NITK, who showcased various projects undertaken in the Virtual Labs and their real-world applications. A detailed discussion on content creation and animation processes for virtual labs followed, providing the team with a comprehensive understanding of the development workflow.

The SRM team also had a meeting with Professor K. V. Gangadharan, Professor Department of Mechanical Engineering, Coordinator for the Centre for System Design, who offered valuable insights into the different aspects of Virtual Lab development. He arranged a guided tour of key laboratories, including the Remote-Triggered Lab, E-Mobility Lab, Immersive Learning Lab, Unmanned Aerial Vehicle (Drone) Lab, and Rapid Prototyping Lab, each addressing local challenges with cutting-edge technology.

Following the lab tours, the team visited the Central Research Facility at NITK Surathkal, where they observed demonstrations of advanced technologies, such as the Micromachining Facility, the Metal 3D Printer, and the HVAF+HVOF Coating Facility. The day concluded with a visit to the SEARCH (System for Emergency Assistance, Response, and Communication Hub) centre.

This visit provided the SRM-PALs team with invaluable insights into the infrastructure, development processes, and potential academic collaborations necessary for enhancing virtual lab capabilities. It marks an important step towards integrating innovative virtual lab solutions into SRMIST's educational framework, further enriching the learning experience for students.

FACULTY PARTICIPATION

Dr.N.Chellammal attended a 5 days workshop titled " **Microgrid Systems, Simulation and Implementation using MATLAB** " from 22-07-2024 to 26-07-2024.

Dr.R.Palanisamy, Dr.K.Saravanan, Dr.D.Selvabharathi,Dr.D.Sattianadan and Dr.K.Selvakumar attended a 7 days faculty development program titled " **Accelerating AI-Driven Business Innovation: The Role of CPUs, GPUs, TPUs, and NPUs** " from 16-08-2024 to 22-08-2024.

Dr.A.Geetha, Dr.S.Usha and Dr.T.M.Thamizh Thentral attended a 5 days faculty development program titled " **Computational methods in engineering** " from 17-08-2024 to 14-09-2024 (only Saturday).

Dr.A.Geetha, Dr.S.Usha and Dr.T.M.Thamizh Thentral attended a 5 days faculty development program titled " **Current Trends in Information Technology** " from 22-07-2024 to 26-07-2024.

Dr.R.Femi attended a 1 day faculty development program titled " **Creating and publishing conference posters with Peeref to build on your research output and optimize career progression** " on 05 - 09 - 2024.

Dr.C.Subramani attended a 5 days faculty development program titled " **Image and Signal Processing** " from 09-09-2024 to 13-09-2024.

Dr.S.Vijayalakshmi and Dr.S.Shanmugapriya attended a 5 days faculty development program titled " **Empowering Engineering Educators: Bridging Theory with Practical Skills using NI LabVIEW and Digilent Tools** " from 02-09-2024 to 06-09-2024.

Dr.C.Anuradha, Dr.S.Vijayalakshmi and Dr.V.Kubendran attended a 7 days faculty development program titled **"Essential Skills for Professional Development in Higher Education"** from 01-07-2024 to 07-07-2024.

Dr.K.Subha Sharmini and Dr.R.C.Ilambirai attended a 5 days faculty development program titled **"Exploring Quantitative Techniques for Enriching Qualitative Insights in Data Science Research"** from 22-07-2024 to 26-07-2024.

Dr.R.Senthil Kumar attended a 5 days faculty development program titled **"Internet of Things for Emerging Technical Applications"** from 12-08-2024 to 17-08-2024.


M.P.NACHIMUTHU M.JAGANATHAN ENGINEERING COLLEGE
Approved by AICTE, New Delhi & Permanently Affiliated to Anna University, Chennai.
Sudhanandhen Kalvi Nagar, Chennimalai, Erode - 638 112, Tamilnadu.
DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING
FACULTY DEVELOPMENT PROGRAMME
CERTIFICATE OF PARTICIPATION
This is to certify that Dr. / / Mr. / Ms. R.SENTHIL KUMAR
ASST. PROF(SR. G)
of
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
has participated in Five Days Faculty Development Programme on "INTERNET OF THINGS FOR EMERGING TECHNICAL APPLICATIONS" organized by Department of Electronics and Communication Engineering held from 12-08-2024 to 17-08-2024.
Co-ordinator
Principal
Correspondent

Dr.R.Femi attended a 1 day workshop titled **"Learning journal expectations and decision making to improve your manuscript submissions"** on 18-07-2024.

Dr.R.Ramya attended a 5 days faculty development program titled **"Student Psychology" from** 29-07-2024 to 02-08-2024.

Dr.C.Balaji attended a 1 day workshop titled **"Research Proposal Writing and Funding Opportunities"** on 25-07-2024.

Dr.R.Femi attended a 1 day workshop titled "**Mastering Biomedical Systematic Literature Reviews: Methodologies, Challenges, and Tools"** on 18-07-2024.

Dr.S.Lourdu Jame and Dr.P.U.Poornima attended a 5 days faculty development program titled **" Recent advancements, challenges and simulation methodologies in power electronic applications "** from 05-08-2024 to 09-08-2024.

Dr.S.Lourdu Jame, Dr.S.GEETHANJALI, Dr.R.C.Ilambirai, Dr.Y.Jeyashree, Dr.K.Subha Sharmini and Dr.P.U.Poornima attended a 5 days faculty development program titled **" Industrial automation and robotics "** from 15-06-2024 to 19-06-2024.

Dr.K.Saravanan and Dr.S.Vidyasagar attended a 5 days faculty development program titled **" Next generation digital twin technology overview and hands on "** from 23-09-2024 to 27-09-2024.

Dr.K.Saravanan and Dr.S.Vidyasagar attended a 5 days faculty development program titled "**Next generation digital twin technology overview and hands on"** from 23-09-2024 to 27-09-2024

Dr.R.Palanisamy, Dr.K.Selvakumar, Dr.D.Selvabharathi and Dr.D.Karthikeyan attended a 6 days faculty development program titled **"Next-Gen Educators: Harnessing the Power of Machine Learning"** from 25-09-2024 to 1-10-2024

Dr.K.Saravanan and Dr.S.Vidyasagar attended a 5 days faculty development program titled "**Next generation digital twin technology overview and hands on"** from 23-09-2024 to 27-09-2024

Dr.R.Palanisamy, Dr.K.Selvakumar, Dr.D.Selvabharathi and Dr.D.Karthikeyan attended a 6 days faculty development program titled **"Next-Gen Educators: Harnessing the Power of Machine Learning"** from 25-09-2024 to 1-10-2024

Dr.S.Vidyasagar and Dr.K.Saravanan attended a 6 days faculty development program titled **"Quantum Artificial Intelligence and High Performance Computing for Industrial Digital Twins"** from 09-09-2024 to 14-09-2024

Dr.R.Ramya and Dr.T.M.Thamizh Thentral attended a 5 days faculty development program titled **"Outcome Based Education"** from 05-08-2024 to 09-08-2024

Dr.R.Ramya attended a 5 days faculty development program titled **"Student Psychology"** from 29-07-2024 to 02-08-2024.

Dr.K.Mohanraj attended a 6 days faculty development program titled **"Recent advances in Energy research for sustainable development"** from 05-08-2024 to 10-08-2024.

Dr.R.Femi attended a 1 day workshop titled **"Quantum Technology Spin Qubit Semiconductor Modeling & Simulation using "QTCAD" TCAD Software"** on 05-09-2024.

Dr.N.Chellammal and Dr K Subha Sharmini attended a 5 days faculty development program titled **"Recent Trends in Power Electronics and Drives for Electric Vehicles (RTPED-EV 2024)"** from 08-07-2024 to 12-07-2024

Dr.C.Balaji attended a 1 day workshop titled **"Research Proposal Writing and Funding Opportunities"** on 25-07-2024.

Dr. Phani Teja Bankupalli attended a 1 day workshop titled **"Unleash Facilitator Training_Problem Framing"** on 25-07-2024.

Dr.R.Femi attended a 5 days faculty development program titled **"Smart and Sustainable Strategy for Renewable Energy and E-Mobility (SUSTAIN-E 2024)"** from 23-09-2024 to 27-09-2024.

Dr.C.Bharatiraja, Dr.V.Pradeep and Dr.A.Sureshkumar attended a 5 days faculty development program conducted by **Stellantis** from 23-09-2024 to 27-09-2024.

Dr. Phani Teja Bankupalli attended a 1 day workshop titled **"Unleash Facilitator Training_Problem Framing"** on **25-07-2024.**

Dr.U.Sowmmiya attended a 5 days faculty development program titled **"AI/ML based Controllers Design and their Applications in Real-time Platform"** from 28-09-2024 to 2-10-2024.

Dr. Phani Teja Bankupalli attended a 1 day workshop titled **"Unleash Facilitator Training_Problem Framing"** on 25-07-2024.

Dr. Phani Teja Bankupalli attended a 1 day workshop titled **"Unleash Facilitator Training_Ideating and Prototyping"** on 01-08-2024.

Dr. Phani Teja Bankupalli attended a 1 day workshop titled **"Unleash Facilitator Training_Testing, Pitching and Wrap up"** on 08-08-2024.

Dr.U.Sowmmiya attended a 1 day workshop titled **"Loop Impedance test in Earthing System"** on 20-08-2024.

Training programme on FPGA

The SRM MTS Student Chapter, in collaboration with the Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, Kattankulathur, successfully organized a comprehensive two-day hands-on training workshop on FPGA applications in embedded systems. This event featured Mr. Yuvaraja S, Chief Technology Officer at JSK LAB Instruments, Chennai, as the invited industrial expert, providing both theoretical and practical knowledge.

The 60 participants gained practical insights into FPGA technology through intensive sessions covering VHDL fundamentals, code development for DC-DC converters and inverters, and the use of MATLAB Simulink with FPGA boards. Highlights included real-world applications such as controlling BLDC drives and buck-boost converters using FPGA. The workshop concluded with certificate distribution, leaving participants equipped with essential skills in FPGA for advanced embedded system applications. This even was coordinated by Dr.J.Preetha Roselyn and Dr.C.Nithya.

TRAINING PROGRAM

Technical Upskills in Electrical Safety

The Department of Electrical and Electronics Engineering, SRMIST, Kattankulathur, successfully conducted a three-day technical upskill training workshop on electrical safety from August 6-8, 2024. Organized for the Electrical Maintenance Department, this session aimed to enhance electricians' knowledge of electrical safety protocols and practices.

The workshop, convened by Dr. K. Vijayakumar was coordinated by Dr. S. Vidyasagar, Dr. V. Kalyanasundaram, Dr. D. Ravichandran, and Dr. K. Saravanan. It provided hands-on safety drills and practical exercises focusing on PPE usage, safe work practices, and emergency procedures. A total of 25 electricians participated in the workshop held at the Electrical Workshop Lab, Room 804, University Block.Key outcomes included improved safety practices, heightened awareness of electrical hazards, and enhanced knowledge of emergency response protocols. Based on participant feedback, plans for advanced safety training and regular refresher courses were recommended to further improve workplace safety.

Placements in Core and IT Sectors Awareness and Training

The Department of Electrical and Electronics Engineering at SRMIST hosted a two-day Alumni Event on Placements in Core and IT Sectors Awareness and Training from August 29-30, 2024. Led by Mr. Prabhu Chinnasamy, CEO of Aptitude Buster Pvt Ltd, the event provided students with valuable insights into placement opportunities, interview preparation, and mock interview experiences.

Day 1 featured sessions on interview preparation, core sector placement strategies, and IT sector placement insights. Mr. Prabhu guided students on key industry trends, technical requirements, and the differences in recruitment processes between core and IT sectors.

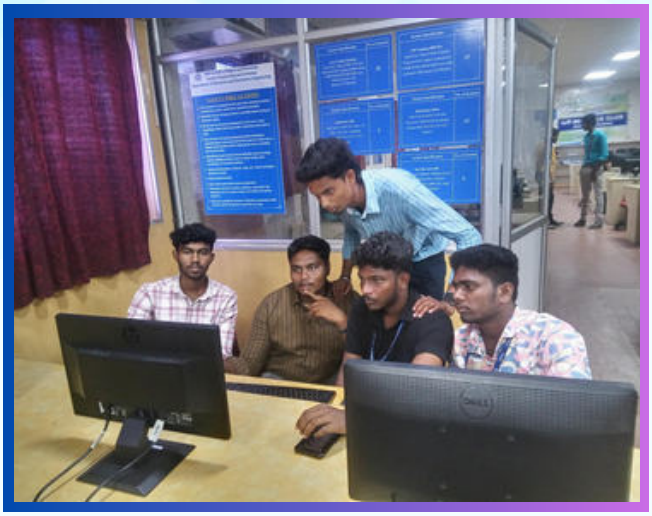
Day 2 focused on mock interviews for both core and IT sectors. Panelists, including industry professionals from Renault Nissan, Power Grid, Accenture, and Bhumi Fellowship, assessed students and provided detailed feedback to enhance their interview skills and readiness. This event was coordinated by Dr.R.Narayanamoorthi and Dr.V.Pradeep.

TECHNICAL EVENT

Alumni Event on Mock Interview and Placement Training

The Department of EEE organized a two-day Alumni Event on Mock Interview and Placement Training, held on August 27 and 28, 2024. The event aimed to enhance the placement readiness of final-year students by focusing on essential interview skills, formal presentation techniques, and quantitative aptitude strategies. The sessions were led by Mr. C. Prabhu, CEO of Aptitude Buster Pvt Ltd, along with his expert team.

The event comprised seven sessions over two days, covering a range of critical topics including how to make a formal presentation, interview fundamentals, tackling frequently asked questions (FAQs), and mastering the quantitative aptitude section of placement tests. Students also participated in two rounds of mock interviews, simulating real-world interview scenarios, followed by constructive feedback to improve their performance. The event concluded with an interactive Q&A session and personalized feedback, helping students better prepare for their upcoming placements. This event was coordinated by Dr.R.Narayanamoorthi and Dr.V.Pradeep.



IoT with Cloud Computing

The Department of Electrical and Electronics Engineering organized a two-day offline workshop on "IoT with Cloud Computing" on August 22 and 23, 2024, attended by 30 participants. The workshop, conducted by AB Technologies, focused on developing IoT applications using ESP8266 and ESP32 microcontrollers. Held in the Simulation Lab 1 (ESB block), the hands-on sessions covered IoT concepts, microcontroller programming and cloud communication. Participants engaged in practical exercises, learning to build IoT projects involving sensors, actuators, and cloud integration. The workshop also addressed key considerations for IoT projects, such as power efficiency, security, and scalability. The event successfully provided students with practical IoT development skills, equipping them with the knowledge to create real-world IoT applications. This event was coordinated by Dr.A.Geetha and Dr.D.Karthikeyan.

WORKSHOP

PCB Design Workshop

The SRM MTS Student Chapter, in collaboration with the Department of Electrical and Electronics Engineering, organized a two-day hands-on PCB Design Workshop on September 12-13, 2024. Led by experts MEF. Murugan. V and Mr. Vadivelan R, the event attracted 24 participants and provided practical knowledge in PCB design and fabrication techniques. This even was coordinated by Dr.J.Preetha Roselyn and Dr.C.Nithya.

Day 1:

Participants were introduced to PCB design basics using KiCAD software, where they simulated circuits and practiced soldering LED circuits on dot boards.

Day 2:

The workshop focused on fabricating PCB boards, including etching circuits with Ferric chloride, assembling components, and testing their functionality by creating working LED circuits.

This intensive workshop equipped participants with essential skills for PCB design, fabrication, and circuit testing, preparing them for future electronic hardware projects.

All India Workshop on Hydrogen Fuel Cell Technologies Towards Green Transportation

The All India Workshop on Hydrogen Fuel Cell Technologies, held on September 30 and October 1, 2024, focused on advancements in hydrogen fuel cell technology for green transportation. The event featured discussions on the integration of hydrogen electric vehicle (EV) technology, emphasizing the role of IoT and cloud storage for safe hydrogen management. Key highlights included sustainable hydrogen production methods through electrolysis, along with a hands-on demonstration by Sharda Motors, providing practical insights into electrolyzer and fuel cell operations. The workshop also covered optimization techniques for power electronics and electric powertrains to enhance fuel cell electric vehicle (FCEV) performance and energy storage solutions. The event concluded with case studies on hydrogen-powered vehicles, showcasing the technology's potential to revolutionize transportation. Participants expressed interest in future workshops and received certificates during the valedictory session. This event was coordinated by Dr.R.Narayanamoorthi

WORKSHOP

Power System Simulation Tools

The IPowerE Student Chapter at SRMIST successfully organized a Skill Development Program on "Power System Simulation Tools," held on Sep 12 and 13, 2024, in the EEE Conference Hall. The event brought together students and industry experts, offering an invaluable platform for learning and networking. Keynote speakers included esteemed professionals such as Mr. Hanmanth Rao G, Chennai Petroleum Corporation Ltd, and Mr. K. Senthil Kumar Senior Manager at the same organization, who shared their insights into the practical applications of power system simulation tools in the industry. Additionally, Mr. D. Jagadeesh Reddy from CADFEM India Pvt Ltd and Mr. Saravanan Balamurugan, CEO of Minaatral Power Systems, provided further expertise. Participants gained a comprehensive understanding of the diverse simulation tools used in the industry, enhancing their knowledge and skill sets in electrical power systems. This program marked a significant step in empowering future electrical engineers and fostering a strong community within the IPowerE Student Chapter. Faculty mentors, including Dr. D. Suchitra, Dr. R. Ramya, Dr. R. Rajarajeswari, Dr. D. Anitha, and Dr. K. Selvakumar, played a pivotal role in guiding and shaping the chapter's trajectory.

One Day Outreach Programme on Daily Yoga Routine

An Outreach Programme on Daily Yoga Routine was organized by SRMIST, EEE department in association with Unnat Bharat Abhiyan (UBA) team and Universal human values at the UBA adopted village Pattaravakkam on 23.07.2024.

The daily yoga routine event at Pattaravakkam Government School was initiated to promote physical and mental well-being among students. Recognizing the numerous benefits of yoga, the school aimed to incorporate this ancient practice into the students' daily schedule, fostering a healthier and more balanced lifestyle. The program includes various yoga asanas (postures), pranayama (breathing exercises), and meditation techniques suitable for children of all ages. The main objectives of the yoga routine event such as to improve students' physical health by enhancing flexibility, strength, and coordination and to boost mental well-being by reducing stress, anxiety, and improving concentration. This event is organised by Dr. R. Sridhar, Dr. A. Geetha, and Dr. S. Usha.

OUTREACH ACTIVITY

Ideation and Hackathon 2.0 on SDG

The Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology organized the Two Days Ideation and Hackathon 2.0 on September 19-20, 2024, with the theme focused on Sustainable Development Goals (SDGs). The event aimed to inspire innovative thinking, problem-solving, and creativity among engineering students across India while addressing global sustainability challenges.

A total of 65 teams from various engineering colleges participated, presenting ideas on real-world issues such as green energy, smart cities, environmental conservation, and sustainability. The event encouraged students to explore impactful solutions aligned with the United Nations' SDGs, fostering teamwork and collaborative innovation. Participants worked on developing practical and feasible ideas that could contribute to environmental and societal well-being. Through this hackathon, students not only demonstrated their technical skills but also their commitment to addressing global sustainability challenges.

Global Product Development IDEATHON'24 – 2.0

The Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology organized the Ideathon 2024 on September 26, 2024, at the Machine Lab. The event aimed to foster creativity, innovation, and collaboration by bringing together participants from diverse backgrounds to generate and develop impactful ideas. With a focus on innovative thinking, the Ideathon encouraged students to brainstorm novel solutions to real-world challenges, providing a platform for idea generation and refinement. Participants were given the opportunity to network and experiences to develop comprehensive strategies and actionable plans. The event emphasized the importance of collaboration and creativity in driving innovation, reflecting the department's commitment to nurturing a culture of problem-solving and forward-thinking. This event was coordinated by Dr.A.Geetha and Dr.D.Karthikeyan.

OUTREACH ACTIVITY

Tobacco awareness poster drawing competition @ Pattaravakkam

The Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, in collaboration with the Unnat Bharat Abhiyan (UBA) team, organized an Outreach Programme on Tobacco Awareness at Pattaravakkam Village on July 20, 2024. The event aimed to raise awareness about the dangers of tobacco use and provide a platform for artistic expression through a poster drawing competition. With the theme "Say No to Tobacco," participants creatively conveyed the harmful effects of tobacco use through their artwork. The competition not only fostered creativity but also disseminated important health information to the community. The top three posters were recognized and awarded by Dr. V. Thirumurugan, Associate Director-Campus Life, Department of Maintenance, SRMIST. This event is organised by Dr. R. Sridhar, Dr. A. Geetha, and Dr. S. Usha.

Outreach Programme to Madambakkam Government School on Building Tomorrow's Innovators

On September 20th, 2024, the Department of Electrical and Electronics Engineering (EEE), SRM Institute of Science and Technology, organized an outreach program titled "Building Tomorrow's Innovators" at Madambakkam Government School, Chennai. The event featured a drawing competition, hand-painting station, and a quiz competition, followed by prize distribution and the distribution of school supplies to support the children's education.

A highlight was a tech talk on "Exploring the Power of Education and Empowering Tomorrow's Innovators," delivered by Mr.Kannan G., Mr. Jayaram M.K., Mr. Rama Krishnan, and Mr. Porkovan. Special thanks were extended to Dr. Ellampirai, Headmistress of the school, and the event sponsors for their generous support. This initiative underscored SRMIST's dedication to inspiring and empowering young minds in the community by Dr.K.Saravanan and Dr.S.Vidyasagar.

EVENTS

The Design and Development of Power Electronic Converters for Electric Vehicle Applications

The Department of Electrical and Electronics Engineering (EEE) at SRMIST recently organized a workshop on the design and development of power electronic converters for electric vehicles, attracting 71 participants, including 30 from SRMIST and 41 from other colleges. Inaugurated by Mr. Suresh, Electronics Design Lead at Valeo India Pvt. Ltd., the workshop featured sessions covering key topics such as the fundamentals of EV power electronics, converter design and component selection, simulation analysis using tools like MATLAB/Simulink, and practical PCB fabrication techniques. Participants also learned about component placement, testing, and troubleshooting of converter circuits. A highlight was the tour of SRMIST's Wireless Charging Research Center, where ongoing research in wireless power transfer systems for EVs was showcased. The workshop concluded with a valedictory ceremony led by Dr. K. Vijayakumar, who emphasized the importance of interdisciplinary knowledge in advancing EV technology.

Faculty Articles

The Role of Physical Facility in Understanding Human Values

Is Physical Facility Necessary?

When a human being has lack of physical facility, he becomes uncomfortable and unhappy. But once he gets the physical facility, he forgets about it and starts thinking about hundred other things. Physical facility is necessary for human being but something more is also required.

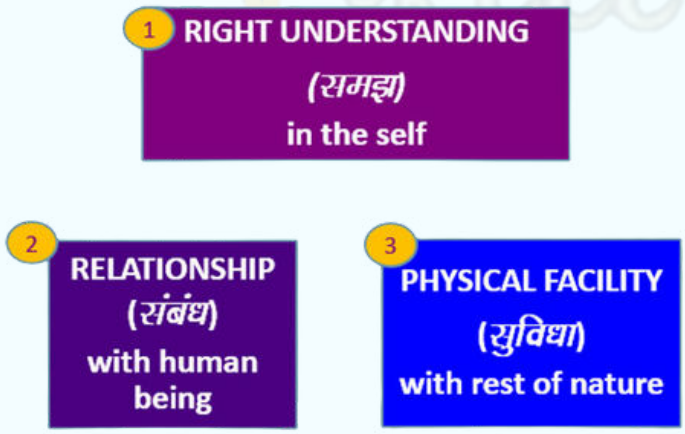
To find out what else is required (over and above physical facility)
Check: Is there unhappiness in our families?
More due to lack of physical facility or More due to lack of fulfillment in relationship?

✓ **How much time and effort are we investing:**
For physical facility ?
For fulfillment in relationship ?

The unhappiness is more due to lack of fulfillment in relationship but Most of the time and effort is spent for physical facility.

For human being, physical facility is necessary but relationship is also necessary but not adequate.

Priority:



- To have continuity of happiness and prosperity, human being needs physical facilities and relationship.
- From physical facility, we can derive prosperity, and from right understanding on relationship we will have happiness.
- If physical facility is our top priority, then will there be relationships?

When we try to fulfil relationship with physical facilities, it will bring unhappiness, making others unhappy too. And if it's at first priority, we will try to accumulate more physical facilities, exploiting more and more from nature and then it leads to deprivation of myself.

- In society we can see two categories of people

1. Lacking physical facility, unhappy and deprived.
2. Having physical facility, unhappy and deprived.

- We would want to be in the category, i.e., having physical facility, happiness and prosperity.

(Ref: AICTE UHV Material and discussions with Resource Person, Umesh Bhaiyya as on 15/7/2024)

To be continued ... PAUSE AND THINK

- **Let us see if we know how many pairs of clothes we have**
- **If there was a shortage of clothes it would be a problem for us, but now that we have clothes, we may not even know how many we have... (and yet we may keep collecting more and more...)**

Dr.S.Shanmugapriya
Assistant professor

அவள்

பொறுமையில் பூமியை மிஞ்சுவாள்
தீமையை செந்தணலாய் எரிப்பாள்
அன்பென்னும் மழைபொழிவாள்
பரந்த மனம்கொண்ட விரிவானமாவாள்

பெண்ணெண்பது பேதைமைக்கே என்பதை மாற்றி
பேரறிவுபெற்ற பெருமைமிகு சுடர்விளக்கு

தன்னலத்தை துறந்தே மண்ணில் பிறர்வாழ
தியாக உள்ளம் கொண்ட அமுதசுரபி

தடையெல்லாம் தளர்வின்றி உழைத்தே வென்று
தரணி போற்றும் மாதரசி

எட்டும் அறிவினில் ஆணுக்கிணையாக கற்றே
எற்றமுடன் தன்னொளி வீசும் குடும்பவிளக்கு

பழைமையை அகற்றி புத்துலகைப் படைக்கும் பெண்
பாரதி கண்ட புதுமைப் பெண்.

முனைவர் ச.லூர்து ஜேமி
உதவி பேராசிரியர்

The Modern Woman's Aura

In a world of converters and amplifiers, she ignites,
A machine heart that rotates through sleepless nights.
Her reinforced housing moulded with steel,
An elegance of innovation, shaped from a passionate zeal.
With each cycle of current in ampere, she asserts,
Efficiency with precision, where ambition flirts.
She is a battery that energise the dream,
She is an engine of strength, an unwavering beam.
A rigid tension cable, she links every divide,
With currents of aim, she won't be denied.
Power of fluctuations, her thoughts stand tall,
A smart grid of courage, she breaks each wall.
Crafting her own circuit board like a custom design,
The driving torque of each one's journey does align.
In the circuitry of vision, she'll spark the flame,
The driving charge, an uprising, her name.

Dr.A.Geetha
Assistant professor

Standards Awareness

-The Compass for Your Path to Excellence

Indian Standards: Ensuring Quality and Safety

The Bureau of Indian Standards (BIS) is the national standards body of India, which develops and implements standards to ensure product quality, safety, and reliability.

Voluntary Standards: Not required by law but enhance product value. Examples are Electric Pressure Cookers, Food Grade Plastic Containers, Hand Tools, Liquid Detergents and Glass Containers for Food.

Mandatory Standards: Legally enforced to protect consumers. Examples are Safety Helmets, Toys for Children, Glass Containers for Food, Household Refrigerators and Electrical Cables.

BIS Certification Marks

The following marks are commonly used to indicate that products meet Indian Standards:

- **ISI Mark:** Indicates quality compliance for industrial and consumer goods.
- **Hallmark:** For gold and silver jewellery, showing purity and authenticity.
- **FSSAI Logo:** For packaged food, ensuring safety and hygiene standards.

Standards – Logo to Product

BIS	ISI Mark	Compulsory Registration Scheme (CRS)	Food Safety and Standards Authority of India
Example: Jewellery Hallmarking	Example: Pressure Cookers	Example: Electronic Product	Example: Food Products
			

Dr.R.Ramya
Assistant professor
Faculty Mentor
BIS Standards Club

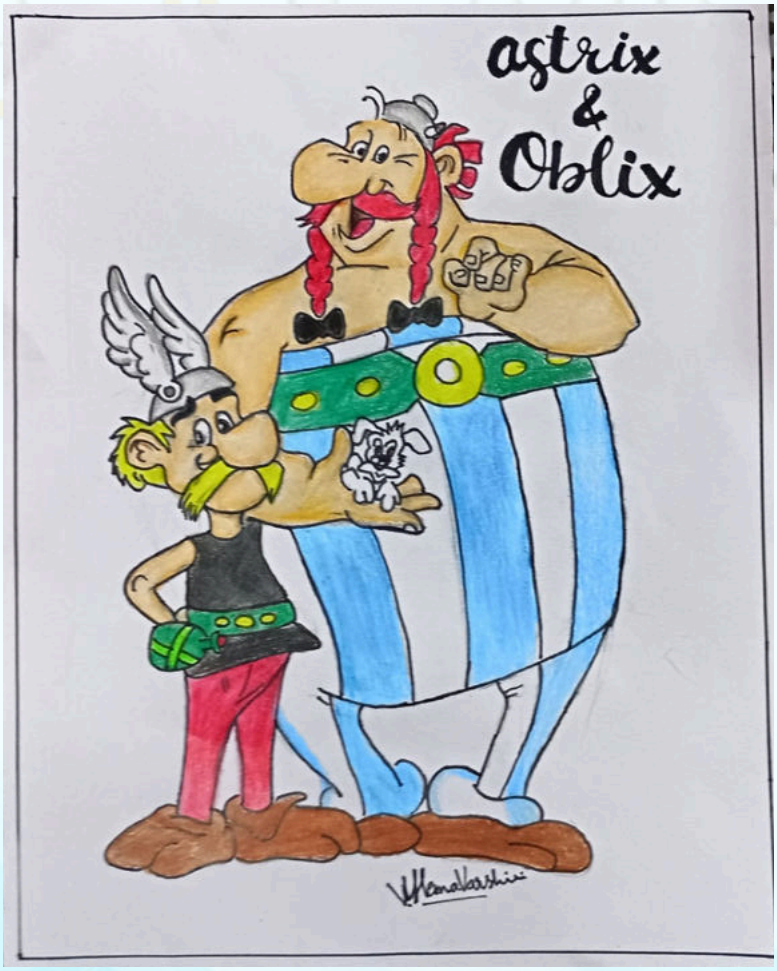
Understanding Human Nature and Behaviour

Human nature and behaviour are complex, shaped by biology, environment, and experiences. Human behaviour is driven by basic needs and emotions—survival, love, fear, and social connection. While instincts like self-preservation are inherent, our actions are heavily influenced by society, culture, and personal values.

Humans are unique in their ability to reflect, reason, and adapt. This capacity for thought allows individuals to make choices beyond instinct, driven by ethics, empathy, and creativity. However, human behaviour can also be unpredictable, as emotional responses often overpower logic.

Ultimately, human nature reflects both individual uniqueness and shared traits. It balances instinct with reason, emotion with rationality, and self-interest with cooperation, shaping the world through an intricate web of interactions.

Dr.V.Pradeep and Dr.A.Sureshkumar
Assistant Professor



Hema Varshini Vidyasagar

Photo Gallery

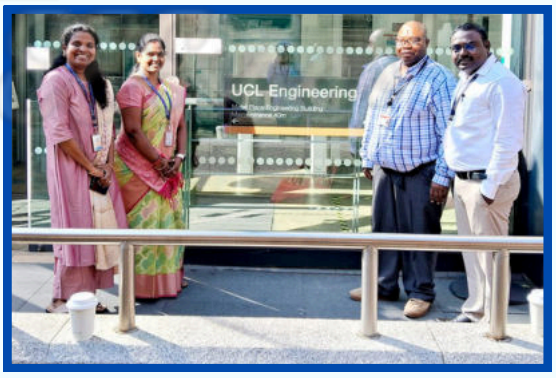
Dr.C.Bharatiraja
Panellist on "Triumph over Barriers in Technology Translation "

Dr.C.Bharatiraja
Panellist on "India – a Rising EV Mission"

Dr.J.Preetha Roselyn
Guest for Anna University Guindy Campus MTS Chapter Inauguration

Prof. Chua-Chin Wang, Dean of R&D at National Sun Yat-sen University, Taiwan visited CEM center

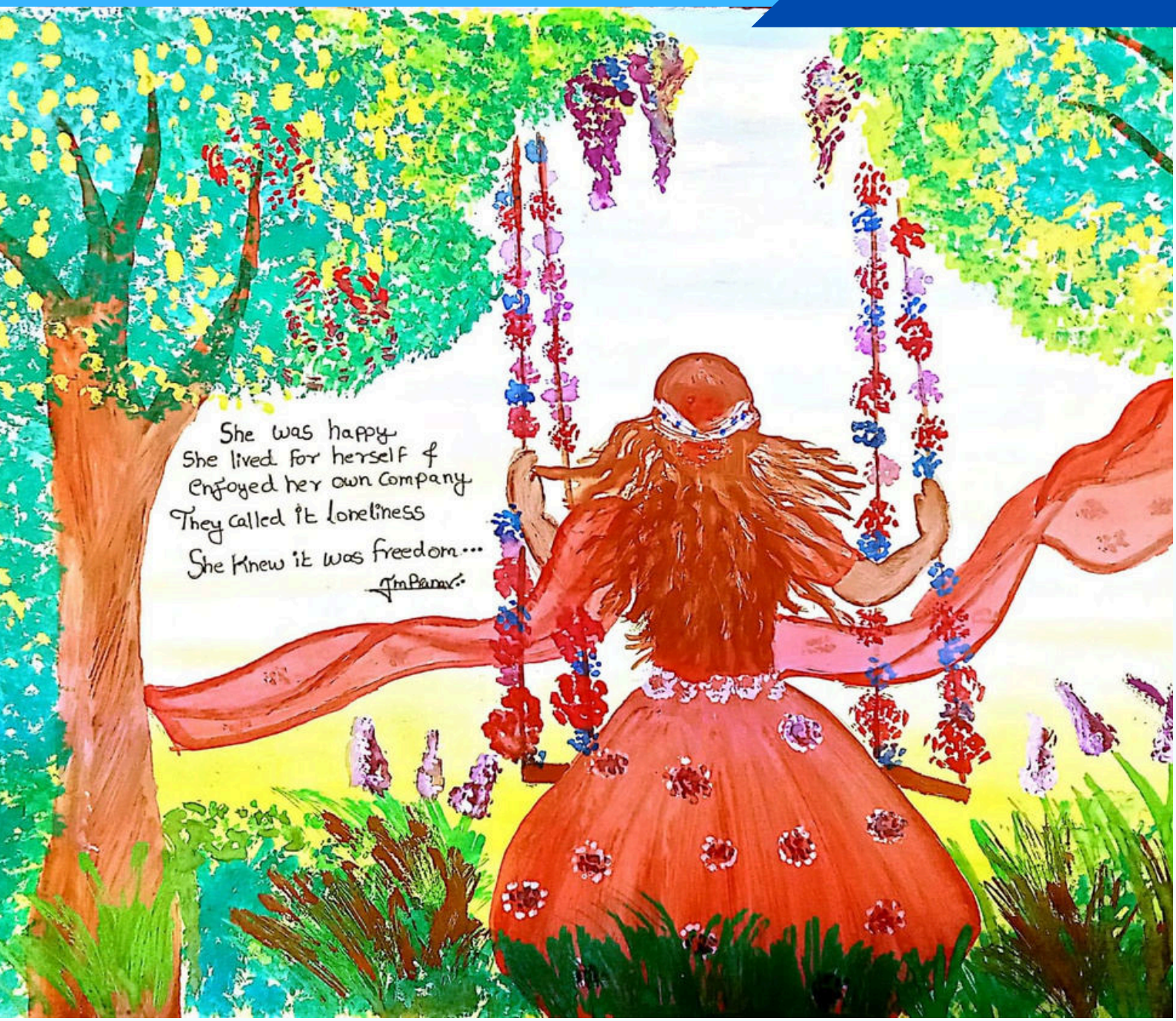
Stellantis Team
visited CEM center



Dr.J.Divya, Dr.A. Lavanya, Dr.R.Sridhar
visited UCL Univerity, London

EEE Association Inauguration

Ethnic day celebration



காலத்தி னாற்செய்த நன்றி சிறிதெனினும்
ஞாலத்தின் மாணப் பெரிது.

A timely help, though small, Is of greater value than all the earth.

- Thirukkural (102)

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