

# REDEFINITION

VOLUME 12 ISSUE 4

APRIL 2024



## ***Highlights...***

ICPEDC 2024  
SPARC Workshop  
Student articles  
Campus Chronicles



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# THE CREW



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## STUDENT REPRESENTATIVES

### II - A

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### II - B

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Supraja V        Prashant V A

# FROM THE HOD DESK



I am delighted to bring out the April 24 edition of REDEEEM. This edition highlights the activities of the department, students and alumni interactions during the last quarter of the academic year 2023-24. It was indeed an eventful quarter, and it is impressive to see such a diverse range of activities from international and national conferences to workshops and guest lectures.

Noteworthy mentions include the SPARC workshop, where Prof. Prahlad Vadakepet and his esteemed team from NUS graced our campus for six insightful days. Additionally, the quarter saw the fruition of innovation with the granting of two patents to faculty members and one to a student team. C J Manoj Shyam's success at the ST Microelectronics Innovation Fair, adds another layer of pride to the department.

In recognition of their unwavering dedication, Dr. R Leo and Dr. K. Murugesan have been honored by our alumni association for their 25 years of service at SSN.

As we bid farewell to the current editorial team, their final contribution encapsulates their journey through placement experiences, sports endeavors, and a comprehensive campus roundup. Kudos to them for their outstanding work!

It's great to witness our students actively engaging in YRC and NSS activities, strengthening community engagements. We look forward to the forthcoming editions, brimming with even more captivating activities and features.

# EDITORIAL

Life is much simpler than most people want you to believe. You do 'x', and you get 'y'. That's it. It's a simple math equation. The problem is the average person thinks he deserves 'y' just because he wants it. This person has been taught to believe that he can achieve 'y' just by talking about it, just by being a good person, or just by being born. This makes no sense. You certainly can't achieve 'y' without doing 'x'. You cannot deserve something you have not earned. When you believe you deserve something you have not earned, you're evading reality. You're trying to reverse the law of causality. Fake friends want unearned respect, as if respect—the effect—could give them personal value—the cause. They want unearned admiration, as if admiration—the effect—could give them virtue—the cause. They turn to you to give them these things.

Effectiveness is your priority, but efficiency is still important. Efficiency allows for effectiveness. To be efficient, you must start systematizing your internal and external environments. But before you can systematize anything, you need to organize it. You need to determine which parts of you would be system stay and which parts go. Creative ownership relieves you of dependence. Everything in your life can be taken away from you except your will, skill and skull. Gaining ownership over these three things will accelerate your progress on the path to intelligent achievement. Peoples who use creative problem-solving skills to find new solutions for unexpected hurdles are more likely to thrive in challenging work environments. But creativity is irrevocably suppressed due to old way of learning which nurtured only memory and built a false belief about intelligence. Many are victim of this and are struggling to thrive and living a shaky, unfulfilled and meaningless life even after getting higher levels of education. Many searches for other ways for managing their deficiency. Only in recent times a lot of initiatives are taken through NEP 2020 to develop true intelligence, competence and confidence to be comfortable all through the life amidst all vicissitudes.

A pragmatic mind set will ensure that you stay in touch with reality while always maintaining a sense of personal responsibility in your life. A pragmatic mind set will also increase your resilience, which is the key to overcoming the pain associated with trauma, tragedy, or adversity. Our brain has a negativity bias—it has a preference for negative information over positive information. Studies show that negative information is quickly routed through your amygdala and into your long-term memory banks while positive information has to be held in your awareness for more than twelve seconds to be stored in your long-term memory banks. This is why you will remember forever the one negative comment your boss made but will instantly forget the fifteen positive comments he made before and after. This is also why a small negative thing will spoil your mood for the entire day. Even if you do a lot of good things to your relatives but they always talk about the one bad thing you did, forgetting all the good things you have done. If you do not have definite human conduct, the stress, negativity, and the panic environment overthrow your confidence and potentials and make you prosaic. Sometimes the events, places you experience and the persons you meet will give confidence, but these feelings are short lived as your long-time friend (Sanskar) is successful in driving your thoughts and feelings back to square one. But we always live with assumptions and preconditioning looking at the fruits not understanding about the roots. We can choose to feel good impressions of peoples only in initial stages of interactions. If we feed bad one, its hard to change it in later stages because the initial impressions are much stronger.

People are better able to point out cognitive blind spots or perceptual biases in others but struggle to identify those same blind spots in themselves and so they actively chose to evade reality and live in ignorance. The only way to prevent this reckoning is to look directly at your failures, your shortcomings, your secrets, your vices...everything. Be pragmatic and take personal responsibility for everything in your life because it's all your fault. We can't blame peoples and environment. These sounds harsh, but only by taking responsibility you can start improving the situation. It doesn't matter what contributed to any of your pitfalls—you get to decide how you use them (or let them use you), moving forward.

***“When you choose to see good things in others, you end up seeing good in yourself.”***

# FROM US TO YOU

## Gratitude and Goodbyes: Reflecting on Our Journey

Dear Readers,

As our time at Redeem draws to a close, we find ourselves pausing to reflect on the incredible journey we've had with this remarkable team. Our experience at Redeem has been nothing short of transformative, filled with moments of growth, learning, and profound gratitude. With gratitude in our hearts and a sense of anticipation for what lies ahead, we bid adieu to this edition of our newsletter.

In coming together as a team, we have witnessed first hand the remarkable things that can be achieved when individuals unite toward a common purpose. But perhaps most importantly, our experience at Redeem has deepened our appreciation for the power of collaboration and community.

With each edition, we aimed to capture the essence of campus life, share exciting events, and highlight the achievements of our vibrant community. Our journey has taught us the value of resilience – the capacity to adapt, evolve, and thrive in the face of adversity. It is through our struggles that we have discovered the depths of our potential and the limitless possibilities that await us on the other side of hardship.

We also want to take this opportunity to thank our professors and the HOD for the invaluable support and insights provided. Their guidance, wisdom, and encouragement have played a pivotal role in shaping the content of our newsletter and enhancing its quality. Their suggestions and feedback have consistently challenged us to strive for excellence and have contributed immensely to our growth.

As we prepare to pass the torch to the next generation of storytellers, we do so with gratitude in our hearts and anticipation for the journey that lies ahead. May they carry forward the lessons learned, the wisdom gained, and the spirit of curiosity that has guided us on this extraordinary adventure

With love,  
Deepti, Chief Student Editor

# FACULTY ACHIEVEMENTS

## Inspiring Scholarly Legacy

### External Recognition

**Dr.R.Seyezhai**, P/EEE completed the clearance for the CDR meeting held at CVRDE for the project on, “**Development of Intelligent Power Management System (IPMS)**” on 12/02/2024 organized by CVRDE, Chennai.

**Dr.R.Ramaprabha** attended the Department Advisory Board (DAB) meeting of the Department of EEE, Sri Sairam Engineering College in the capacity of Academic Expert on 16.02.2024, organized by Sri Sairam Engineering College, Chennai.

**Dr.R.Seyezhai**, P/EEE acted as Session Chair in the International Conference on **Informatics and Smart Engineering Systems (INSES 2024)**, scheduled on 21st & 22nd March 2024, organized by Loyola-ICAM College of Engineering and Technology (LICET) in technical collaboration with National Institute of Technology Silchar on 22/03/2024.

**Dr.R.Ramaprabha** delivered a guest lecture on “**Advancement in Power Converters for Renewable Energy Applications**” on 22.03.2024 organized by B. S. Abdur Rahman Crescent Institute of Science & Technology, Chennai.

**Dr.R.Ramaprabha** chaired a technical paper presentation session at the 7th International Conference **PECTEAM 2K24** conducted by the department of AI & Data science on 23/03/2024 organized by Panimalar Engineering College, Chennai.

**Dr.M.Senthil Kumaran** and **Dr.K.Murugesan** delivered a Workshop Presentation titled “Hands on session in Sensing and Computation in STM

32 - power Quality on 02/03/2024 organized by SSNCE, EEE, Kalavakkam.

### Research Endeavors

**Dr.V.Rajini, S.T.Rama**, “**Performance analysis of induction motor drive system using Alternate arm Converter and Modular Multilevel Converter - A comparison**”, in International Journal of Intelligent Systems and Applications- January 2024, Volume 12, ISSN:2147-67992147-6799, Impact factor 0. 23 indexed in Scopus.

**Sheeba Angel A** and **Jayaparvathy R**, “**Modelling of emergency evacuation in high rise buildings considering congestion at stairs based on Markov chains**”, in International Journal Physica A: Statistical Mechanics and its Applications November 2023, Volume, pp 45312, DOI <https://doi.org/10.1016/j.physa.2023.129352>, **Impact factor 3.3** indexed in WoS/TR/SD.

**R.Seyezhai, Sridhar.M, S.Sridhar, S.Srikirthi and S.Swetha**, “**Investigation of single stage AC-DC PFC LED driver for solid-state street lighting**”, AIP Conf. Proc. 2512, <https://doi.org/10.1063/5.0111941>, pp.020093-1-020093-9, Impact Factor: 0.189 Indexed in WoS.

**G.Ramya, R.Ramaprabha**, “**Residential Energy Management System (REMS) using machine learning** (book Chapter)”, in International Journal Advances in Computers, Elsevier, January 2024, Volume 132, pp. 3347, ISSN-00652458, DOI:10.1016/bs.adcom.2023.07.003, Impact factor 0.5 indexed in Scopus.

A. Jegatheesh, V. Thiyagarajan, N. B. Muthu Selvan & M. Devesh Raj, “**Voltage Regulation and Stability Enhancement in AVR System Based on SOAFOPID Controller**”, in International Journal of Electrical Engineering & Technology, January 2024, Volume 19, pp 31-44, ISSN 2093-7423, DOI <https://doi.org/10.1007/s42835-023-01507-x>, Impact factor 1.9 indexed in WoS/TR/SD.

R.Arun, R.Muniraj, S.R.Boselin Prabhu, T.Jarin and M.Willjuice iruthayarajan, “**Design of robust multi-loop PI controller for improved disturbance rejection with constraint on minimum singular value**”, in International Journal Archives of Control Sciences December 2023, Volume 33, pp 839, ISSN 1230-2384, DOI [10.24425/acs.2023.148884](https://doi.org/10.24425/acs.2023.148884), Impact factor 1.2 indexed in WoS/TR/SD.

Lamrot Hailemichael and Arun R, “**Design of Multivariable PID Control Scheme for Humidity and Temperature Control of Neonatal Incubator**”, in International Journal IEEE Access January 2024, Volume 12, pp 6051, ISSN 2169-3536, DOI-[10.1109/ACCESS.2024.3349426](https://doi.org/10.1109/ACCESS.2024.3349426), **Impact factor 3.9** indexed in WoS/TR/S.

Vani H, Kavitha M, K.Usha, S.Bharathi, “**Evaluating Artificial Intelligence’s Effect on Accounting Information Systems for Small and Medium-Sized Enterprises**”, in International Journal of Migration Letters December 2023, Volume 20, pp 680, ISSN 17418984, DOI, <https://doi.org/10.59670/ml.v20iS13.7599>, Impact factor 0.47 indexed in Scopus.

A.Jegatheesh, V.Thiyagarajan, N.B. Muthu Selvan & M.Devesh Raj, “**Voltage Regulation and Stability Enhancement in AVR System Based on SOAFOPID Controller**”, in International Journal of Electrical Engineering Technology January 2024, Volume 19, pp 31-44,ISSN20937423,DOI,<https://doi.org/10.1007/s42835-023-01507-x>, Impact factor 1.9 indexed in WoS/TR/SD.

Susmita Sau, Sajjan Kumar, Sankar Narayan Patra, Subhash Chandra Panja, “**Signalling Relay Contact Failure Analysis with 3D Profilometry, SEM and EDS**”, in International Journal SSRG International Journal of Mechanical Engineering January 2024, Volume 11, pp 28, ISSN 2348-8360, DOI <https://doi.org/10.14445/23488360/IJMEV1111P103>, Impact factor 0.1 indexed in Scopus.

R.Seyezhai and V.Chamundeeswari, “**Design and Implementation of Fuzzy sliding mode control (FSMC) approach for a Modified Negative Output Luo DC-DC Converter with its comparative analysis**”, in International Journal AUTOMATIKA, Taylor & Francis March 2024, Volume 65, pp 45–57, ISSN: 0005-1144, DOI<https://doi.org/10.1080/00051144.2023.2280875>, Impact factor 1.9 indexed in WoS/TR/SD.

J.Mahadevan, R.Rengaraj, “**A novel fuzzy hybrid red fox chimp for optimal power flow in FACTS devices**,” in International Journal Electrical Engineering August 2023, pp 4481,ISSN09487921,DOI:<https://doi.org/10.1007/s00202-023-01944-x>, Impact factor 1.8 indexed in WoS/TR/SD.

T.Divya and R.Ramaprabha, “**Embedded Switched boost multilevel inverter for PV fed single phase grid**” Electrical Systems March 2024, Volume 20, pp 36-51, ISSN 1112-5209, DOI [https://journal.esrgroup.org/jes/papers/20\\_1\\_4.pdf](https://journal.esrgroup.org/jes/papers/20_1_4.pdf), Impact factor 1.2 indexed in WoS/TR/SD.

Sushree Samikshya Pattanaik, Ashwin Kumar Sahoo, Rajesh Panda, Satyabrata Behera, “**Life Cycle Assessment and Forecasting for 30kW Solar Power Plant using Machine Learning Algorithms**”, e-Prime - Advances in Electrical Engineering, Electronics and Energy, Elsevier Impact factor 1.5 indexed in Scopus.

## Conference Presentations

M.Elenchezhiyan, R.Arun, M.Kaliyamoorthy - **“A comparative study of joint and dual estimation scheme for switched Non-linear system”** in ICPEDC 2024 conducted by SSN College of Engineering in Dept. of EEE, SSN on 18/01/2024.

R.Monika and Dr.R.Seyezhai, **“A Comparative Study of Voltage Source Inverter Topologies in Electric Vehicle Applications”**, in 5th National Conference on Recent Trends in Power & Energy Engineering, RTPEE2024, organized by EEE Dept. during March 21-22, 2024 conducted by SSN College of Engineering in Physical Mode on 22/03/2024.

A.Akash Raj, F.Agilbert Sesu Felick, S.Aravind and R. Ramaprabha, **“Simulation Of Five Level Inverter For Low Power Applications with PV Source in 5th National Conference”**, on Recent Trends in Power and Energy Engineering (RTPEE-2024) held during Mar 21-22, 2024 conducted by Department of EEE, Sri Sivasubramaniya Nadar (SSN) College of Engineering.

A.Harish, M.Karthichangam , A.Muthukumar and R.Ramaprabha, **“Simulation Of High Gain Bidirectional Converter for Microgrid Applications”**, in 5th National Conference on Recent Trends in Power and Energy Engineering (RTPEE-2024) held during Mar 21-22, 2024 conducted by the Department of EEE, Sri Sivasubramaniya Nadar (SSN) College of Engineering.

Vignesh J, M Balaji, **“Design and implementation of battery management system for EV”**, in Fifth National Conference on “Recent Trends in Power and Energy Engineering”, RTPEE 2024 conducted by Sri Sivasubramaniya Nadar College of Engineering, Chennai in India on 22/03/2024.

R.Ramaprabha and K.S.Harshavardan - **“Design and Simulation of Bidirectional Converter Suitable for EV applications”** in 5th International Conference on, “Power and Embedded Drive Control (ICPEDC 2024)” held during 17 -18 Jan 2024 conducted by the Department of EEE, Sri Sivasubramaniya Nadar (SSN) College of Engineering, Kalavakkam.

Vidhya S, Balaji M, Kamaraj V, **“Satellite Image Classification using CNN with Particle Swarm Optimization Classifier”**, in International Conference on Innovative Data Communication Technologies and Applications (ICIDCA 2024) conducted by RVS College of Engineering and Technology, Coimbatore in India on 10/01/2024.

P C Sivan Sriman, K.Murugesan, M.Senthil Kumaran, K.Usha, **“Feature Extraction and tracking using Neuromorphic Cameras for V-SLAM in autonomous vehicles”**, in 7th International Conference on Recent Innovations in Modern Science and Technology conducted by KPR Institute of Engineering and Technology, Coimbatore and Elavenil Foundations, Chennai, in KPR Institute of Engineering and Technology, Coimbatore on 09/01/2024.

R.Ramaprabha and Gokularaman S R, **“Analysis and Modification of Fault Detection Methods in Photovoltaic Array”**, in IEEE - Second International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE 24) held during 22 – 23 Feb 2024 conducted by Vellore Institute of Technology (VIT), Vellore.

Karthika M,Balaji M, Kamaraj V, **“Design and Performance Evaluation of an Interior Permanent Magnet Synchronous Motor for an Electric Three-Wheeler”**, in Second International Conference on Emerging trends in Information Technology and Engineering conducted by VIT Vellore on 23/02/2024.

R. Abhinaya, Lakshmi Prabha B, R. Seyezhai, Deeikshanya. S and Harini.V.B, “**Design and Simulation of Ripple Free Non-inverting DC/DC CUK Converter with Valley-Fill Circuit for LED Applications**”, in International Conference on Mechanical Engineering Design, ICMechD 2024, March 21-22, 2024 conducted by SSN College of Engineering in Physical Mode on 22/03/2024.

M Karthikeyan, R Rengaraj, R Harini, “**Dry Bean Classification using Deep Learning**”, in 2023 International Conference on Data Science, Agents & Artificial Intelligence (ICDAAI) conducted by Chennai Institute of Technology in Chennai on 18/03/2024.

R.Ramaprabha, S.Sangeetha, R. kshitha Blessy, R.Lekhashree and P.Meenakshi, “**Development of AC-DC Converter for Hybrid PV Integrated Microgrid System**”, in International Conference on Mechanical Engineering Design 2024 (ICMechD2024) held during Mar 21-22, 2024 conducted by Department of Mechanical Engineering, Sri Sivasubramaniya Nadar (SSN) College of Engineering.

R.Ramaprabha, Anjana Ethirajan, S. Hariprasath, S.Mohammed Ashik, Medarametala Venkata Sai Kiran and T.Y.Navinsai Kaarthik, “**Implementation of Bidirectional Converter with Asymmetric Half Bridge Converter based SRM Drive using PV for Electric Vehicle**”, in International Conference on Mechanical Engineering Design 2024(ICMechD2024) held during Mar 21-22, 2024 conducted by Department of Mechanical Engineering, Sri Sivasubramaniya Nadar (SSN) College of Engineering.

Thaga Sheriff M, Vishwajith N, Rahul S J, Balaji M, Ramaprabha R, “**Design and Implementation of Solar Tracking System for smart charging**”, in 4th International Conference on Artificial Intelligence, 5G

Communications and Network Technologies conducted by Velammal Institute of Technology, Chennai at Velammal Institute of Technology, Chennai on 22/03/2024.

Paari A, Nikesh D , Sai Krishna Karthik P , Balaji M, “**Advanced precision agriculture: IOT integration for optimal smart farming**”, in 4th International Conference On Artificial Intelligence, 5G Communications and Network Technologies conducted by Velammal Institute of Technology, Chennai, India on 22/03/2024.

Sneha S , Sriranjini S , Himasai T , Balaji M, “**IOT based traffic congestion management and accident detection system**”, in 4th International Conference On Artificial Intelligence, 5G Communications and Network Technologies conducted by Velammal Institute of Technology, Chennai, India on 22/03/2024.

S.T.Vigneshwar , M.Balaji , S.Prabhu, “**Comparative Analysis of Permanent Magnet Synchronous Motor and Switched Reluctance Motor for Drone Application**”, in International Conference on Mechanical Engineering Design 2024 (ICMechD 2024) conducted by Sri Sivasubramaniya Nadar College of Engineering, Chennai in India on 22/03/2024

Gowtham M R , HemaNandini R ,ManirajaR , Balaji M ,Prem Karthik M, “**Development of state of charge algorithm for Lithium-ion battery**”, in International Conference on Intelligent Computing Techniques in Electrical Energy System conducted by Francis Xavier Engineering College, Tirunelveli, Tamil Nadu, India. in India on 13/03/2024.

R.Panda and P.K.Tiwari, “**A Hybrid Wind-Thermal Bidding Model in a Day-ahead and Real-time market considering regulating cost**

in a competitive power market”, in 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC).

R.Panda, S.S.Pattanaik, P.K.Tiwari and A.K. Goswami, “**Forecasting of Market Power using LSTM in day ahead market**”, 2023 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-5., doi:10.1109/PESGRE58662.2023.10405194.

B.K.Das, R.Panda, S.Deb, A.K.Goswami and P. K.Tiwari, “**Probabilistic Modeling of Plug-in Electric Vehicles Charging Demand and Charging Cost Minimization**”, 2023 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-6, doi: 10.1109/PESGRE58662.2023.10404532.

## Projects Applied

Dr. P. Vasuki, ASSP/IT as PI & Dr.R.Seyezhai, P/EEE applied for an External funded project titled Empowering Mobility: Unveiling an **Affordable AI-Driven Smart Electric Wheelchair with Speech Recognition and IoT Brilliance** on 05/02/2024 to the funding agency SERB Power Grant for a duration of 3 years for a funding amount of 29,88,000 Rupees.

Dr.Rajini, Dr V Thiyagarajan and Dr.Muthu Selvan NB submitted a proposal titled “**Empowering Resilient Smart Transportation: Renewable Energy Converter Integration Reliability Enhancement through Health Monitoring in Market Dynamics**” to SPARC for amount Rs. 1.28 Crores.

Dr. R.Arun submitted a proposal titled “**Intelligent Machine Learning Assisted Autonomous Marine Robot with Dexterous Arm for Aquatic System Inspection and Sample Collections**” to DST and Innovation for IoT & IoE for amount Rs. 77 Lakhs.

Dr.K.Murugesan, Dr.M.Senthil Kumaran, applied for an external grant for Rs. 2 lakhs, under AICTE VAANI Seminar grant in 12 regional languages titled, “**Workshop On Energy, Sustainability And Climate Change Under The Aegis Of Vaani Scheme-AICTE**” on 27.03.2024.

## Patent Portfolio

Dr.V.Rajini, Dr.Alagu Dheeraj were granted a National patent for a Design titled “**An interleaved center clamped forward converter for high current applications**” on 04/01/2024. The patent application no is 201741039792.

Dr.V.Rajini, Dr.R.B.Jeyapradha were granted a National patent for a Design titled “**A modular intelligent transformer for low and medium voltage applications**” on 24/01/2024. The patent application no is 201641014396.

Santhosh Aravind S, Sai Prashanth B and Praveen S B, from the EEE 2021 batch, were granted a patent titled “**Cuffless Non-Invasive Blood Pressure Monitor**” on 16/4/202. The Patent application no is 202141017842.

## Faculty Enrichment Episodes

Dr.K.Murugesan attended a 5-Day Faculty Development Program - “**Universal Human Value - 2**” by AICTE at Sri Sairam Engineering College from 23-27 Jan 2024.

Dr.R.Ramaprabha and Dr.R.Seyezhai attended a 5-Day short-term course (STC) - “**Applications of Machine Learning Techniques in Sustainable Technologies (AMLST-2024)**” during 24 -28 January 2024, organized by NIT Rourkela (Online).

Dr.R.Leo attended a 5-Day Faculty Development Program - “**Unlocking Industry Insights in Data Science**” on 12/02/2024 organized by Madanapalle Institute of Technology & Science.

Dr.Sajjan Kumar attended a 5-Day Faculty Development Program - “Universal Human Value - 2” by AICTE at Sri Sairam Engineering College from 23-27 Jan 2024.

Dr.Sajjan Kumar attended a 5-Day Faculty Development Program titled **Role of Green Energy towards Sustainable Smart Cities** during 13-17 Feb. 2024 organized by JSS Academy of Technical Education, Noida.

Dr.R.Leo attended a 10-Day Faculty Development Program titled, “**Cloud and Fog Computing Platforms**”, for IoT Applications during 26th Feb to March 8, 2024, organized by NIT Warangal.

Dr.Saravanan P, attended a one week FDP on “**Generative AI**” during 4-9 March 2024, organized by D Y Patil College of Engineering, Pune.

Dr.R.Ramaprabha attended a 1-Day Workshop titled, “**Approaches for Enhancing Institutional Perception in NIRF Rankings**”, on 24/03/2024 organized by ISDE Academy at Online.

Dr.R.Leo attended a 7-Day Workshop titled, “**Unleashing the Potential of AI in Power Quality**”, during 26th Feb to 2nd March 2024 organized by SSN College of Engineering at Chennai.

## Events Archive

### Conferences

Dr.R.Leo, Dr.R.Arun, Dr.Rajseh Panda, Dr.A. Mariselvam organized “5th International Conference on **Power and Embedded Drive Control (ICPEDC 2024)**” at SSN EEE Department during 17th and 18th January 2024.

Dr.V.Thiyagarajan, Dr.N.B.Muthu Selvan, organized a Conference titled 5th National Conference on Recent Trends in Power and Energy Engineering - 2024 at SSN College Of Engineering on 21/03/2024.

### FDPs/STTPs

Dr.V.Rajini, Dr. Sajjan Kumar, Dr.R.Leo, Dr. R. Mandal organized a five-day **Faculty Development Program** titled Advanced Technologies in Electrical Engineering (Online Mode) during 13-17 February 2024.

Dr. Rajasi Mandal and Dr. Sajjan Kumar organized a Five-Day **Short-Term Training Programme on “Off-grid and Grid-tied Renewable Energy Systems: Technology, Control, and Applications”** during 25th to 29th March 2024.

### Workshops/Seminars

Dr. R. Seyezhai, Prof./EEE, Dr. R. Ramaprabha, ASSP/EEE and Dr. M. Balaji, ASSP/EEE organized with SSN-IIC- “The Role of **Green Innovation to achieve UN Sustainable Development Goals**”, at EEE seminar hall on 20/02/2024.

Dr. R. Seyezhai, Prof./EEE, Dr. R. Ramaprabha, ASSP/EEE and Dr. M. Balaji organized with SSN-IIC “**Entrepreneurship Skill, Attitude & Behaviour Development**” at M.E. I Year classroom on 26/02/2024.

Dr. V. Rajini, Dr. R. Seyezhai, Prof./EEE, Dr. R. Ramaprabha, ASSP/EEE, Dr. M. Balaji, ASSP/EEE and Dr. V. Thiyagarajan, ASSP/EEE, organized with IEEE PELS & IEEE PES Student Chapters, -“**Hands-on Training in STM Processor**”, Mar 04-05, 2024 at Simulation Lab on 04/03/2024.

Dr.V.Rajini, Dr. R. Seyezhai, Prof./EEE, Dr. R. Ramaprabha, ASSP/EEE, Dr. M. Balaji, ASSP/EEE and Dr. V. Thiyagarajan, ASSP/EEE organized with IEEE PELS & IEEE PES Student Chapters -“**Exploring AI Applications in Electrical Engineering**”, at EEE Seminar Hall on 15/03/2024.

Dr.V.Kamaraj, Dr.R.Seyezhai, Dr.R. Ramaprabha & Dr. M. Balaji organized with ISTE - “**Power System Switchgear and Protective Technologies**” at EEE Seminar Hall on 27/03/2024.

Dr.V.Rajini (convener), Professor & Head, Coordinators: Dr.K.Usha & Dr.S.Krishnaveni -“**Environmental Impacts of the Industrial Revolution**”, at EEE Seminar Hall, SSN College of Engineering on 13/03/2024.

Dr.V.Rajini, Dr.V.Thiyagarajan organized an invited Guest Lecture by Mr. Raj Vikram Singh, University of Queensland, Australia on “**Research Opportunities & Innovative Project Ideas**” at SSN College Of Engineering on 20/02/2024.

Dr.P.Saravanan organized a guest lecture series on the theme, “**Automotive Electronics**” on Feb19, 2024. Dr.M.A.Bhagyaveni, Director CIPR, CEG, Chennai, has delivered the talk on “**Networking in Automotives**” and Dr.N.C.Lenin, Professor/SELECT, VIT, Chennai, has delivered the talk on “**Wipers, lights & sensors in modern automotive systems**” in this guest lecture series.

Dr. R. Ramaprabha organized an Invited Guest Lecture titled, “**Advanced DC-DC Converters for PV Interfacing**”, to ME. Ist Year students on 06/03/2024.

## Industry Engagement Zone

Dr.V.Rajini attended the meeting with **L&T** for possible research collaborations on 22/01/2024.

Dr.R.Seyezhai, P/EEE demonstrated “**the various Power Converter topologies and lifetime estimation of Power Converters**” for the industry experts from the Rane Madras Team and they visited the Renewable Energy Conversion laboratory on 24/01/2024.

Dr.R.Seyezhai, P/EEE and Dr.N.B.Muthuselvan, ASSP/EEE presented “**the design and simulation studies of bidirectional converter for EV**” for their consultancy work to C-Tech Technologies, Chennai on 29/01/2024.

Dr.R.Ramaprabha explained the solar energy research lab facilities with **Rane, Madras Team** during their visit to the college campus on Jan 24, 2024.

Dr.R.Ramaprabha attended the meeting with the EEE team for **the possible Collaboration Opportunities with L&T-DES** led by Mr. Biju Puthalath Thazhe Kuniyil & Mr. J. Dheepan, L&T, Chennai on Jan 23, 2024.

Dr. R. Ramaprabha & Dr.R.Seyezhai submitted a **project proposal to L&T Digital Energy Solutions** through SSN -iFound on Mar 08, 2024.

Dr. R. Ramaprabha & Dr.R.Seyezhai submitted a **project proposal to L&T Digital Energy Solutions** through SSN - iFound on Mar 08, 2024 for Rs. 31.33 lakhs after preliminary discussions with Mr. J.Dheepan & Mr. Giri. This project submission is the outcome of the discussions with Mr. Biju Puthalath Thazhe Kuniyil & Mr. J. Dheepan, L&T, Chennai on Jan 23, 2024 through online meeting. The discussion on the proposal submitted is scheduled on April 04, 2024 with L&T team.

Dr.R.Seyezhai, Dr.R.Ramaprabha & Dr.M. Balaji met The Director, Real Time Systems, IGCAR, Kalpakkam on 14.03.2024 for **possible project/consultancy activities**. The team – IGCAR is interested in the collaborative project with initial discussions and give the next discussion date in the month of April with few more technical details in the subject area of power drives.

Dr.R.Ramaprabha attended the meeting along with **Green Hydrogen project group** to present the industry collaboration for the project. Mr.Vikram Kapur, Mr.Avik Sanyal & Mr.Anurag Kumar from M/s. ReNew, Chennai interacted with the project group on Jan 18, 2024.

Dr.V.Rajini interacted with Harinee Muralidharan and Mr. Ashwin Sriram of FORD India on “**Academia Awareness**” on 23/02/2024.

Dr.V.Rajini and Dr.V.S. Nagarajan met KA Nair of **Stone link technologies** to discuss the partnership agreement of Esamarp Technologies on 10/02/2024.

### From the Vault

Dr. R. Seyezhai, P/EEE and Dr. V. Chamundeeswari, ASSP/St. Josephs College of Engineering attended **the patent hearing meeting** and presented the queries raised by the controller with regard to the patent on Power electronic encode and Decode Circuit on 02/01/2024.

Dr.R.Seyezhai, P/EEE reviewed the progress of the internship project provided by Shrimitha Energy Solutions Private Limited - “**Detection of DR using Artificial Intelligence**” in online mode on 25/01/2024.

Dr.R.Seyezhai, P/EEE has been invited to review papers

for the **Informatics and Smart Engineering Systems** (INSES2024) on 25/01/2024.

Dr.R.Seyezhai, P/EEE has been invited to review papers for the **Informatics and Smart Engineering Systems** (INSES2024) on 25/01/2024.

Dr.R.Ramaprabha Reviewed a paper for **International Journal of Electronics** (T&F), **Renewable and Sustainable Energy**(Elsevier), paper for **COMPEL** and eight Papers for ICPEDC 2024 on 18/1/2024.

Dr.R.Ramaprabha attended the meeting for presenting **DST project proposal** (Green Hydrogen Energy Group) along with the team on Jan 22, 2024 in the presence of Dr. Ranjith Krishna Pai, Scientist-F/Senior Director, Climate Change and Clean Energy (C3E) Division, Department of Science and Technology (DST), Ministry of Science and Technology, New Delhi.

Dr.R.Ramaprabha and the NIRF team submitted the data for NIRF2024 (Engineering & Overall Category) on Jan 31, 2024.

Dr.K.Murugesan participated in the **Poetry, Singing, and Stand Up Comedy competition** & the SNF GOT Talent Contest organized by Shiv Nadar Foundation on 11-01-2024 and won the **First Prize in Poetry Competition**.

Dr.V.Rajini attended the Result passing board meeting for the V and VII semester examinations, Dec 2023 on Feb 23, 2024.

Dr.V.Rajini, Dr.M.Balaji, Dr.N.B.Muthuselvan discussed the targets for CO, CAT, and ESE with Prof. Samudra on 19/02/2024.

Dr.R.Seyezhai, P/EEE reviewed a paper for **Alexandria Engineering Journal** on Feb 12, 2024

Dr.R.Seyezhai, P/EEE reviewed a paper for **Alexandria Engineering Journal** on Feb 12, 2024

Dr.R.Seyezhai, P/EEE submitted the budget requirements regarding the prototype development of the project, “**Eco-Friendly Solar Multi Utility Pole**” to ANIHEES, Anna University, Chennai on Feb 27, 2024.

Dr.R.Ramaprabha reviewed 3 papers for the International Conference on **Informatics and Smart Engineering Systems** (INSES-2024) conducted by Loyola ICAM College of Engineering and Technology (LICT) during March 21-22, 2024.

Dr.R.Ramaprabha reviewed two papers for the 2024 10th International Conference on **Advanced Computing and Communication Systems** (ICACCS 2024) by Sri Eashwar College of Engineering, Coimbatore, Tamil Nadu, India.

Dr.R.Ramaprabha reviewed a paper for WiSPNET 2024 - International Conference on **Wireless Communications Signal Processing and Networking** by the Department of ECE, SSN College of Engineering Feb 26, 2024.

Dr.R.Ramaprabha attended the department preliminary budget meeting on Feb 13, 2024.

Dr.R.Leo reviewed two international Journal papers(WoS), one in **IET Renewable Power Generation** and the other in **the Journal of Computer Networks and Communications**, a Hindavi Journal on Feb 24, 2024.

Dr.V.Rajini reviewed a paper for **Frontiers** in Electrical Engineering and submitted the review report on Feb 21, 2024.

Dr.R.Seyezhai, P/EEE as Faculty Incharge for **Build Club**, attended the meeting at SSN Innovation centre with the students along with SSN iFound delegates to discuss regarding the club activities in March 2024.

Dr.R.Ramaprabha reviewed 1 paper for **Journal of energy Storage** (Elsevier), 1 paper for **RSER** (Elsevier) and 1 paper for an **international conference INSCS2024**. – Mar 12, 2024.

Ms.Anjana Ethirajan’s application has been **shortlisted for CSIR – HRDG SRF** and she attended personal interview on 21.03.2024 at New Delhi. She is full-time PhD candidate of **Dr. R. Ramaprabha**.

Dr.R.Leo reviewed three international Journal papers (WoS), one in **IET Renewable Power Generation**, one in **IEEE Access**, and other in **MDPI**.

Dr.R.Seyezhai conducted meeting in Meeting Hall, EEE Dept. with an agenda of **review the progress of Faculty funded projects** sanctioned for EEE department and their outcomes on 26/03/2024.

Dr.Sajjan Kumar, AP/EEE was appointed **as an observer by NCCIP-AICTE for AICTE approved 3-day FDP** to face Faculty Development Program on Universal Human Value (UHV). This FDP was hosted by R.M.K. Engineering College (An Autonomous Institution), Chennai from 21-23 March 2024. As an observer deputed by NCCIP-AICTE, he visited the host institution for smooth conduction of this FDP and after completion of this event, he submitted the report to NCCIP team for issuing the certificates to successful participants. As a guest, he also participated in tree plantation.



## Welcome Dr. Rajasi Mandal

Dr. Rajasi Mandal, has joined SSN as a Assistant professor in the department of Electrical and electronics engineering, on 19th January 2024. She has 2 years of experience in Teaching.

She completed her UG from Swami Vivekananda Institute of Science and Technology in 2013 and her PG (Renewable Energy) from IEST, Shibpur in 2016. She holds a PHD in Electrical Engineering from IIT Dhanbad. Prior to her association with SSN, She served as a guest faculty in Dr B. R. Ambedkar NIT Jalandhar.

She has presented several papers in National Conferences, published Articles and book chapters in reputed journals

We warmly welcome her to the Department of Electrical and Electronics Engineering.

# THE DEPARTMENT CHRONICLES

## A Journey Through Our Events

### The 5th International Conference on Power and Embedded Drive Control (ICPEDC - 2024) (Springer)

**Date:** January 17 and 18 2024

**Conference Chair:** Dr. V. Rajini

**Convenors:** Dr. R. Leo, Dr. R. Arun, Dr. A. Mariselvam, and Dr. Rajesh Panda.

The main objectives of ICPEDC - 2024 are to discuss the latest developments and research results in all aspects of the design, modeling, and application of devices, circuits, and systems related to power and embedded drive control.



The conference brings together academicians, manufacturers, scientists, researchers from industries, and students to exchange their research results and address recent technologies. The conference was inaugurated by the Chief guest **Dr. Ramazan Bayindir** on 17th January. Dr. V.E. Annamalai, Principal, SSN College of Engineering presided over the function. The conference had a keynote address on the 17th morning by Dr. Ramazan Bayindir Professor, Faculty of Technology, Electrical - Electronics Engineering, Gazi University on the topic "**Why Need Increase in Grid Flexibility?**" In the afternoon session, we had an online keynote address by **Dr Kenneth Okedu, Associate Professor, from Melbourne University**



on the topic, "**Performance of DFIG and PMSG Wind Turbines using Different Control Strategies**". In the second day morning session, we had keynote address by **Dr. Subhransu Das from GCE Odissa** on the topic "**DC Microgrid using Computational Intelligence**". In the Afternoon session we had keynote address by **Mr Samuel Jebasing, HCL, Chennai** on the topic **IoT Powers and Drives the Embedded**. **140** papers were received and **44** papers were selected with rejection ratio of more than 1:3. These papers were presented for two days of the conference across four sessions. All the papers will be presented to Springer LNEE for publications in **Scopus Indexed Journals**. The conference was an overall success with good feedback from the participants.



## 5th National Conference on Recent Trends in Power and Energy Engineering - 2024

**Chair:** Dr. V Rajini, Professor & Head of EEE  
**Conveners:** Dr. V Thiyagarajan and Dr. N B Muthu Selvan, Associate Professors/EEE

This conference aimed to facilitate the exchange of knowledge, experiences, and expertise among researchers and industry professionals, promoting interdisciplinary collaboration and learning. The response to RTPEE – 2024 was overwhelming, with over **20 esteemed institutions** shown interest and a total of **85 submissions received**, indicating the remarkable enthusiasm of authors for this conference. After meticulous consideration, **40 papers were selected** for oral presentation during the event, covering a diverse array of topics within power and energy engineering.



Eminent personalities from both academia and industry including **Mr. B Murugavel, Chief Business Officer at ATRIBS, Chennai; Dr. K Vijayakumar, Associate Professor at IIITDM Kancheepuram; and Dr. P Krishnamoorthy, Executive Engineer at TANGEDCO, Chennai**, delivered keynote speeches on important topics in the field. The conference served as a platform for delegates to exchange new ideas and share their research experiences, paving the way for future collaborations. The organizers expressed their sincere gratitude to the management of SSN College of Engineering for their invaluable support and provision of facilities for this conference.



## 6 Day workshop on AI potential in solving power quality issues sponsored by SPARC

The Dept. of EEE organized a 6-day workshop on 'Unleashing the Potential of AI in Power Quality: From Monitoring to NeuroClassifier with Hands-on' sponsored by Scheme for Promotion of Academic and Research Collaboration (SPARC) from the 24th of February to 3rd March 2024. The workshop was Convened by Dr.V.Rajini, Dr.V.Kamaraj, Dr.R.Rengaraj and Coordinated by Dr.M.Senthil Kumaran, Dr.K.K. Nagarajan, Dr.M.Devesh Raj, Dr.G.R.Venkatakrishnan. The workshop covered the basics of power quality monitoring and introduced participants to the application of artificial intelligence (AI) techniques, including machine learning and neural networks, in power quality analysis. The workshop was inaugurated into an optimistic start by the HoD, Dr.V.Rajini.



The workshop followed a comfortable flow where resource persons shared knowledge under the **areas of power quality issues in electrical systems and classifier objectives** and slowly transitioned towards AI and the **application of deep learning algorithms in solving power quality issues through MATLAB**. It was further enhanced with them sharing their subject matter expertise on **microcontroller and sensor interfaces, hardware design, EV and PV grids**, followed by an **Introduction to Industry 4.0** and with **hands-on using STM-32 in solving real-time problems on power quality**.



## RESOURCE PERSONS

**Dr. Prahlad Vadakkepat**, an Associate Professor at the National University of Singapore, is a prominent robotics expert, holding leadership positions in the Federation of International Robot-soccer Association. He advocates for innovative thinking in students through the Igniting Minds initiative and conducts research in frugal innovation, distributed robotics, humanoid robots, and neuro-fuzzy controllers.

**Dr. Rajesh C. Panicker**, Lecturer in ECE since July 2013, holds a Ph.D. in Electrical and Computer Engineering from NUS. Specializing in digital and embedded systems, his research focuses on biomedical circuits, signal processing, and pattern recognition. An IEEE member, he reviews for top journals and conferences.

**Dr. Adrish Bhumik**, Post Doctoral Fellow, NUS Adrish Bhaumik, a postdoctoral researcher at the National University of Singapore, holds a B.Tech. from Netaji Subhash Engineering College and a Ph.D. from the Indian Institute of Technology, Dhanbad. He previously worked at CSIR—Central Mechanical Engineering Research Institute.

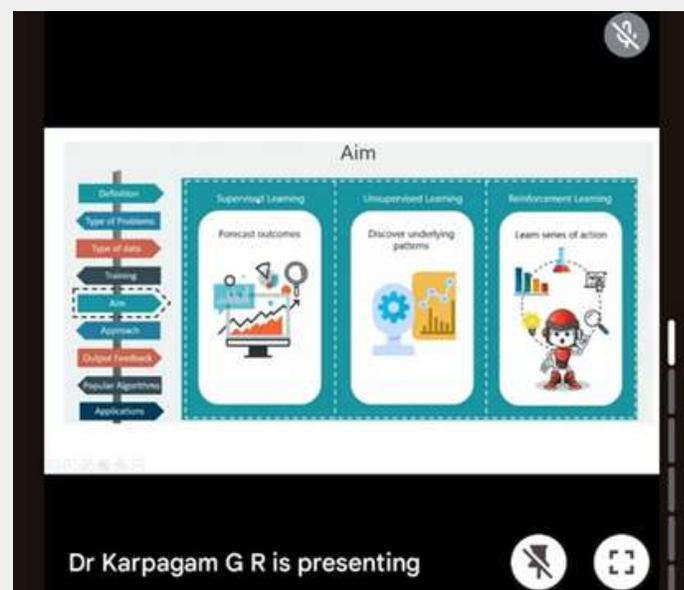
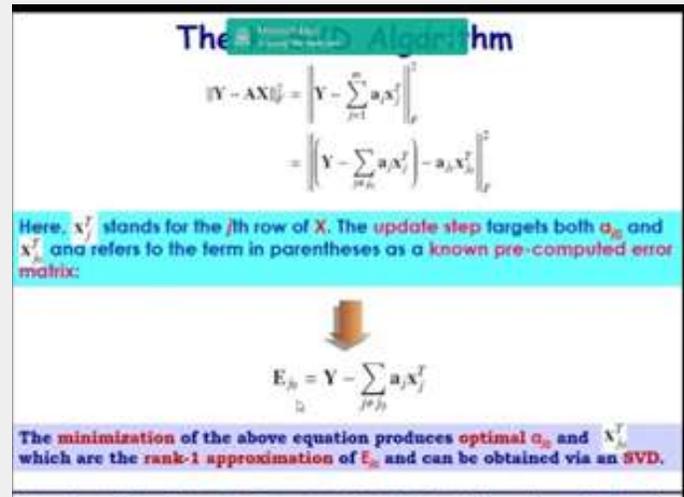
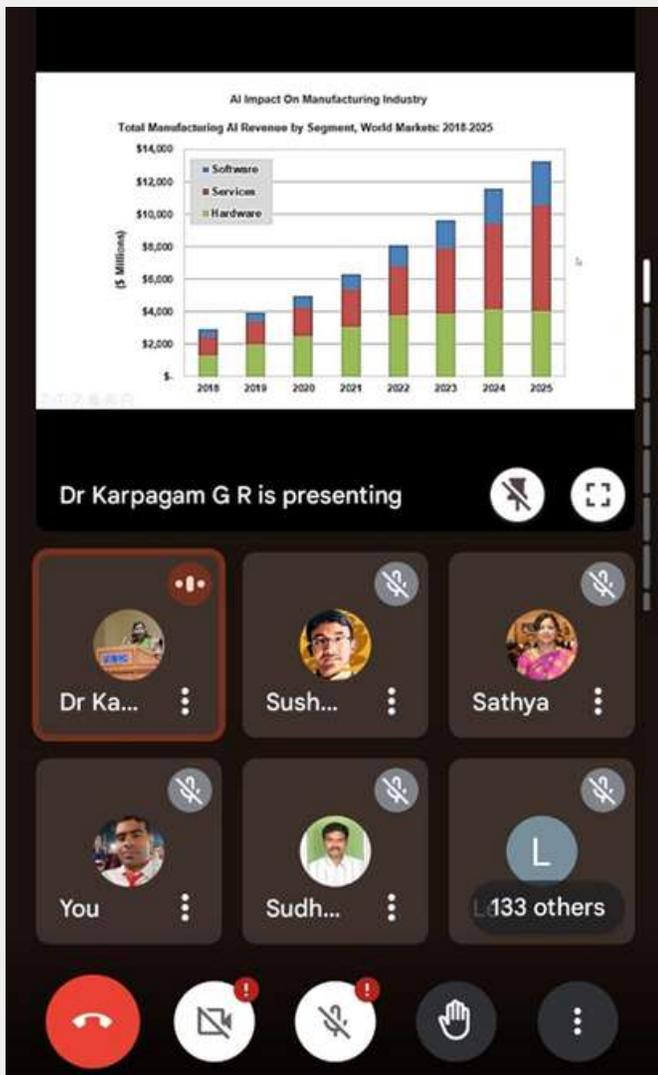


The workshop provided participants with an in-depth exploration of power quality challenges and hands-on exposure to AI applications in monitoring. Through interactive exercises and real-world examples, attendees acquired practical skills applicable to their roles. Networking opportunities with industry professionals enriched their learning journey. Participants received comprehensive training materials for ongoing reference and a certificate of participation upon finishing the workshop.

## Five-days online Faculty Development Programme on Advanced Technologies in Electrical Engineering

Dr. V. Rajini, Dr. Sajjan Kumar, Dr. R. Leo, & Dr. Rajasi Mandal have successfully organized a five-days online Faculty Development Programme on “Advanced Technologies in Electrical Engineering” during 13th to 17th February 2024. In this FDP, a total of 10 eminent speakers from academia and industry have delivered their lectures on advanced technologies like Machine Learning,

IoT, Industry 4.0, Embedded Systems, Block Chain, and Data Science used in electrical applications. Total **269 faculties and research scholars** had registered for this FDP and out of 269 participants, the active participants count was almost more than 120 in each session. The participants provided a positive feedback on each session and it was an overall success.



## Five Days Short Term Training Programme on “Off-grid and Grid-tied Renewable Energy Systems: Technology, Control, and Applications” (OGRES: TCA-2024)

**Dr. Rajasi Mandal and Dr. Sajjan Kumar** had successfully organized a Five-Day Short-Term Training Programme on “**Off-grid and Grid-tied Renewable Energy Systems: Technology, Control, and Applications**” during 25th to 29th March 2024. **Dr. V. Rajini** acted as the convenor. In this STTP, total 10 eminent speakers from academia and industry have delivered their lectures on advanced technologies related to electrical power systems. Totally 80 participants attended this STTP. Participants are immensely benefitted from the technical information disseminated in this STTP. We received very good feedback from the participants.

The sessions for March 25th to March 29th, 2024, include a comprehensive array of topics in the field of electrical engineering. Starting on March 25th with the Inauguration and an Introductory Speech by Dr. Rajini **Dr. Chandan Kumar Shiva** from SR University handled the forenoon session, the program also features **Dr. Saubhagya Ranjan Biswal** from Vignan’s Foundation for Science Technology and Research discussing “**Integration of Machine Learning Techniques for Optimal Sizing and Placement of Renewable Energy Systems in Radial Distribution Networks**” in the afternoon session. On March 26th, **Dr. Debayan Sarkar** from NIT Silchar explored “**GMPP Enhancement in Building Integrated Photovoltaic (BIPV) based Off-grid System**” in the forenoon, while **Dr. Adrish Bhaumik** from the National University of Singapore discusses “**Recent Trends of EV**



**Technology in Indian Scenario**” in the afternoon. March 27th, **Dr. Madan Kumar Das** from NIT Jalandhar delivered a talk on “**Design and Development of Reduced Components Multi-Level Inverter and their Application in PV Systems**” in the forenoon and **Dr. Maloth Ramesh**, Guest Faculty at NIT Jalandhar, discussed on “**Off-grid Renewable Energy Systems: Control and Applications**” in the afternoon. On March 28th, **Dr. Anirban Mishra** from Dronacharya Group of Institutions, Greater Noida, addressed about “**Power Quality Issues of Wind Turbines**” in the forenoon, while **Dr. Nandan Kumar Navin**, Guest Faculty at NIT Jalandhar, talked about “**Fuzzy Reinforcement Learning Framework for Operation and Control of Power Systems integrating Renewable Sources**” in the afternoon. Finally, on March 29th, **Dr. Debottam Mukherjee** from IISc Bangalore discussed about “**State Estimation and Cyber-Attacks in Modern Power Sector**” in the forenoon, followed by **Dr. P. Ramakrishna**, Assistant Professor at NIT Jalandhar, talked about “**Solar Power based Multi-Level Inverter fed Permanent Magnet Synchronous Motor Drive**” in the afternoon, which also included the Valedictory function.

## National Level Technical Workshop on Hands-On Training In STM Processor

Department of Electrical and Electronics Engineering, in association with IEEE PELS & IEEE PES Student Chapters organized a National level Workshop on, **"Hands-on Training in STM Processor"** during March 4-5, 2024 at Simulation Lab, EEE department, SSNCE.

The event was led by **Dr. V. Rajini**, Head & Professor of the Electrical and Electronics Engineering department, serving as the Convener. Assisting Dr. Rajini were the Coordinators: Dr. R. Seyezhai, Faculty Incharge of the IEEE-PELS Student Chapter; Dr. V. Thiyagarajan, Faculty Incharge of the IEEE-PES Student Chapter; Dr. R. Ramaprabha, ASSPEEE; and Dr. M. Balaji, ASSP/EEE.



The workshop aimed to provide participants with practical training and insights into STM processor technology, facilitated by resource personnel from **Nissi Engineering Solution Pvt. Ltd., Chennai**. The objectives were to offer hands-on experience in working with STM processors, to enhance participants' understanding of advanced processor technologies, and to provide a platform for

networking and knowledge exchange among participants and industry experts. The workshop consisted of interactive sessions covering various aspects of STM processor technology, including: Introduction to STM Processors, Architecture and Features, Programming Techniques, Some simple applications (LED Blinking, Switch on and off - all hands-on using the apparatus provided by the NISSI team) on day 1. Some more complex applications like register assignment, interrupt enabling, DAC and ADC applications (all hands-on using the apparatus provided by the NISSI team) on day 2.



Engaging presentations by experts from Nissi Engineering Solution Pvt. Ltd., Chennai, providing in-depth knowledge and practical insights into STM processor technology.

Interactive hands-on training sessions allowing participants to apply theoretical concepts in practical scenarios.

Networking opportunities for participants to connect with industry professionals and peers interested in processor technology.

Certification provided to participants upon successful completion of the workshop, recognizing their dedication and expertise in STM processor technology.

Participants expressed high levels of satisfaction with the workshop, highlighting its practical relevance and the expertise of the resource persons. They appreciated the hands-on approach and the opportunity to interact with industry professionals.

### FEEDBACK FROM THE STUDENTS :

"It was a nice opportunity. Prior to this workshop, I had limited knowledge about STM32 processors, but the interactive session, facilitated by the great trainers from NISSI, provided valuable insights. The trainer's active involvement, hands-on debugging support, and

willingness to clarify doubts made the learning experience highly engaging." – Hari Prasath, EEE-A 2nd year

"Participating in the National Level Technical Workshop on STM Processor was an enriching experience for me. The workshop provided a comprehensive understanding of STM processor technology, thanks to the clear presentations and engaging hands-on sessions. I appreciated the expertise of the resource persons from Nissi Engineering Solution Pvt. Ltd., Chennai, and found their explanations to be highly informative. The workshop was well-organized, and the facilities provided were conducive to learning. Overall, I am grateful for the opportunity to enhance my skills in this area and look forward to applying what I've learned in future projects." – Rashmika V & Renuka B, EEE-B 3rd year



## Hands On Training For Line Distance Protection

The department of Electrical and Electronics engineering recently convened for a comprehensive workshop on Line Distance Protection. Held on March 23, 2024 **Dr. S. Tamilselvi and Dr. V. Rajini** spearheaded the workshop, bringing together industry experts **Mr. John Meshach Jebamani P. and Mr. Sangili Kumar K. from NISSI Engineering Solution Pvt Ltd.** Mr. Jebamani, with his decade-long experience in service management and substation commissioning, offered a unique perspective on real-world applications. Mr. Kumar, a seasoned trainer and technical support specialist, shared his expertise in both theoretical concepts and practical troubleshooting.



The workshop agenda offered a well-rounded learning experience. Participants began with a theoretical foundation, delving into the intricacies of Line Distance Protection and its role in fault detection and isolation. The session emphasized the importance of these protective measures in safeguarding substations, bus bars, and generating stations.

The workshop commenced with an in-depth presentation elucidating the intricate aspects of **Line Distance Protection and its associated faults.** The presentation delved into the complexities of fault detection, isolation, and the pivotal role of protective measures in various infrastructural settings such as substations, bus bars, and generating stations. Emphasis was placed on the nuanced understanding required for **fault sensing and the implementation of zonal protection strategies.**

Following the informative presentation, participants were provided hands-on experience facilitated by the utilization of advanced equipment including the D-60 Multilin relay and Omicron. **The D-60 relay** served as a crucial tool for fault detection and isolation, capable of discerning fault types and swiftly triggering circuit trips when necessary. The faults were deliberately induced with precision using Omicron, offering a realistic simulation environment for practical learning.

Participants were meticulously instructed on the setup and configuration procedures essential for seamless utilization of the D-60 relay. This included detailed guidance on connecting the relay to personal systems via Ethernet cables, elucidating data transfer mechanisms, and configuring the relay settings to ensure comprehensive protection against various fault scenarios.

The setup encompassed a spectrum of protective measures including Distance Protection, Fault Location, SOTF (Switch-On-To-Fault), VT (Voltage Transformer) Fuse Fail, Aided Scheme, Broken Conductor Detection, Power Swing Detection, Backup Protection Configuration, Direct Trips Configuration, Breaker Fail Protection, Auto Reclose Mechanism, Stub Protection.



With the aid of **EnerVista Software**, speakers meticulously fed the aforementioned settings into the D-60 relay, ensuring its readiness to tackle diverse fault scenarios. Subsequently, fault simulations were conducted using Omicron, where voltage and current parameters were systematically altered to induce specific fault conditions. Participants were afforded the opportunity to observe real-time responses and outcomes reflected in the D-60 interface, thereby consolidating theoretical knowledge with practical insights.



The workshop culminated in an enriched understanding of Line Distance Protection mechanisms and fault isolation strategies among participants. Through a blend of theoretical discourse and hands-on experimentation, attendees gained proficiency in configuring and deploying advanced protective measures, essential for ensuring the reliability and resilience of power distribution systems in diverse operational contexts. This workshop stands as a testament to the commitment towards fostering excellence in power system engineering education and professional development.



## National Level Technical Workshop on " Exploring AI Applications in Electrical Engineering"

Department of Electrical and Electronics Engineering, in association with IEEE PELS & IEEE PES Student Chapters organized a National level Workshop on, "**Exploring AI Applications in Electrical Engineering**" on March 15, 2024 at EEE department seminar hall, SSNCE.

The workshop was convened by a dedicated team of faculty members from the Department of Electrical and Electronics Engineering (EEE). **Dr. V. Rajini**, Head & Professor, provided overall leadership, **Dr. R. Seyezhai**, **Dr. V. Thiyagarajan**, and **Dr. R. Ramaprabha** served as faculty in charge of the IEEE-PELS student chapter, IEEE-PES student chapter, and Assistant Secretaries of the EEE department respectively. **Dr. M. Balaji**, also played a key role in organizing the event.



The IEEE PELS Workshop on Exploring AI Applications in Electrical Engineering provided a focussed exploration of AI's impact on the field. The introductory session covered AI technologies like **machine learning, neural networks, and data analytics**, setting the stage for in-depth discussions. Around 40 students attended the workshop.

Experts delved into practical applications during sessions, showcasing AI's role in enhancing power system efficiency, control algorithms, fault detection, and predictive maintenance. Attendees gained insights into implementing AI techniques directly into electrical engineering projects.

During the workshop, guest lecturers provided insightful briefings on potential applications in the field. **Shri. Sitangshu Shekhar Biswas**,





engineering, particularly focusing on **rotor magnetic field oriented control of asynchronous induction machines and solar photovoltaic applications.**

The workshop concluded with a forward-looking discussion on AI's future in the field, emphasizing innovation, sustainability, and performance enhancement. The event's success in facilitating collaboration and knowledge exchange highlighted AI's pivotal role in advancing electrical engineering.

**Scientific Officer, BHAVINI, Kalpakkam**, discussed the Application of ML/DL in Electrical Engineering for Rotor Magnetic Field Oriented Control of Asynchronous Induction Machine. **Dr. G. Suganya, Associate Professor at SCOPE, VIT University** (Chennai Campus), delivered a presentation on the Impact of Machine Learning and Deep Learning in Solar PV Applications." Their talks shed light on innovative approaches and advancements in utilizing machine learning and deep learning techniques within electrical



## Workshop on Environmental Impacts of the Industrial Revolution

The department of Electrical and Electronics Engineering organised a workshop on “Environmental Impacts of the Industrial Revolution” on 13.03.2024. The faculty team for the event was led by **Dr. V. Rajini**, Professor & HoD, who served as the Convener and Assisting Dr. Rajini are **Dr. K. Usha** and **Dr. S. Krishnaveni**, who served as Coordinators.

**Dr. G. Thiagu**, Founder, NewBee Group of companies (NewBee Technologies, NewBee Energy, Newbee Techmart, SensoTrak Systems), Chennai served as the

workshop’s resource person. The aim of the workshop is to raise awareness of the **effects of the industrial revolution on the environment among the student body**. The team of 52 UG students participated in the workshop.

**Dr. G. Thiagu** provided an overview of the Industrial Revolution, including its impact on environmental changes. He inspired the students to think about the greenhouse effect and the actions that they can take to protect the environment for future generations. He also emphasized the advantages of startups.



## Workshop on "The Role of Green Innovation to achieve UN Sustainable Development Goals"

The department of Electrical and Electronics Engineering in association with Institution Innovation Council(IIC) organized a workshop on "**The Role of Green Innovation to achieve UN Sustainable Development Goals**" on 20.02.2024. This event was coordinated by Dr. R. Seyezhai, Dr. R. Ramaprabha, and Dr. M. Balaji. **Dr. L. Ramesh, President - The Institution of Green Engineers, Joint Registrar - Dr MGR Educational and Research Institute, Chennai.** delivered the lecture.

The workshop was attended by UG students, research scholars and faculty members. The

speaker emphasized the United Nations Sustainable Development Goals (SDGs) and their objectives in fostering a more sustainable world by 2030. He discussed how innovation plays a pivotal role in achieving these goals by offering sustainable solutions to global challenges. The speaker also elaborated on how innovation contributes to specific SDGs, such as Goal 7 (Affordable and Clean Energy), Goal 11 (Sustainable Cities and Communities), and Goal 13 (Climate Action). The participants interacted with the speaker and the session was well received.



## Workshop on " Entrepreneurship Skill, Attitude & Behaviour Development "

The department of Electrical and Electronics Engineering in association with Institution Innovation Council(IIC) organised a workshop on "Entrepreneurship Skill, Attitude & Behaviour Development" on 26.02.2024. **Dr N.C.Lenin, Professor, School of Electrical Engineering, VIT-Chennai**, delivered the lecture.The coordination of the event was overseen by Dr. R. Seyezhai, Dr. R. Ramaprabha, and Dr. M. Balaji.

The objective of the workshop on Entrepreneurship Skill, Attitude & Behaviour

Development was to equip participants with the essential tools and mindset required for success in the entrepreneurial landscape.

The speaker stressed the importance of key entrepreneurial skills such as creativity, innovation, and risk-taking. He emphasized the upon the practical strategies for cultivating entrepreneurial behaviors, such as goal-setting and resilience. He highlighted the entrepreneurial ventures in the field of electric drives.The speaker motivated the students to pursue entrepreneurial ventures.



## Workshop on “Power system switchgear and protective Technologies”

The department of EEE in association with SSN-ISTE chapter organized a National Level Workshop titled, “**Power system switchgear and protective Technologies**” on 27.03.2024 and the event took place in the EEE Department Seminar Hall. This event was coordinated by Dr.V.Kamaraj, Prof/EEE & SSN-ISTE Faculty In charge, Dr. R Seyezhai, P/EEE, Dr.R Ramaprabha, ASSP/EEE & Dr. M Balaji, ASSP/EEE. Around 60 students participated in the event.

The speaker panel for this event comprised industry experts from Siemens, Chennai. **Karthik Narayanan, a Chief Manager in Portfolio Consulting**, shared his insights. **Yogananth Subramaniam, a Senior Manager in Portfolio Consulting**, also lent his expertise. Additionally, **Vinay A, a Manager in Sales for Smart Infrastructure (EA)**, provided valuable perspectives from the sales side.



This event aimed to provide insights into the latest advancements, challenges, and solutions in the field of power system protection and switchgear technology. The expert’s interaction with the students has given them a better

perspective of their future in the core industries and in booming renewable energy industries. The workshop empowered professionals to address challenges and drive innovation in power engineering.



The session kicked off with straightforward and simple explanations of power generation and distribution processes, employing Single line diagrams to illustrate key components such as circuit breakers, bus couplers, sectionalizer, fuses, transformers and so on. In addition to covering primary and secondary distribution, the seminar provided insights into how indoor and outdoor equipment functions within substations. Attendees gained a deeper understanding of concepts like bus bars and switchboard configurations through practical examples and real-life scenarios.

A significant portion of the workshop was dedicated to Standards (IEC) & Symbols. Speakers also gave a brief explanation to the important terminologies like short time current, withstand time, internal arc fault, AFLR,

clearances, and so on.. Presenters utilized real-world examples to simplify complex concepts, ensuring accessibility for participants from various backgrounds. By connecting technical topics to everyday experiences, the presenters gave an active engagement and interaction among attendees.

They also addressed about the insulation topic, consisting of Air insulations and SF<sub>6</sub> gas insulation, the later was highlighted because of its strong dielectric strength feature. They spoke about various types of faults like over current, line to line, line to ground,etc.. and also about various types of relay starting from electromechanical, static till numericals relays. He also discussed about the basic components of a protection.

Overall, the seminar served as an invaluable learning opportunity for both engineering students and individuals outside the field. By demystifying switchgear technology and



emphasizing its significance in our electrical infrastructure, Siemens facilitated a meaningful exchange of knowledge and ideas, enriching the understanding of power system fundamentals.

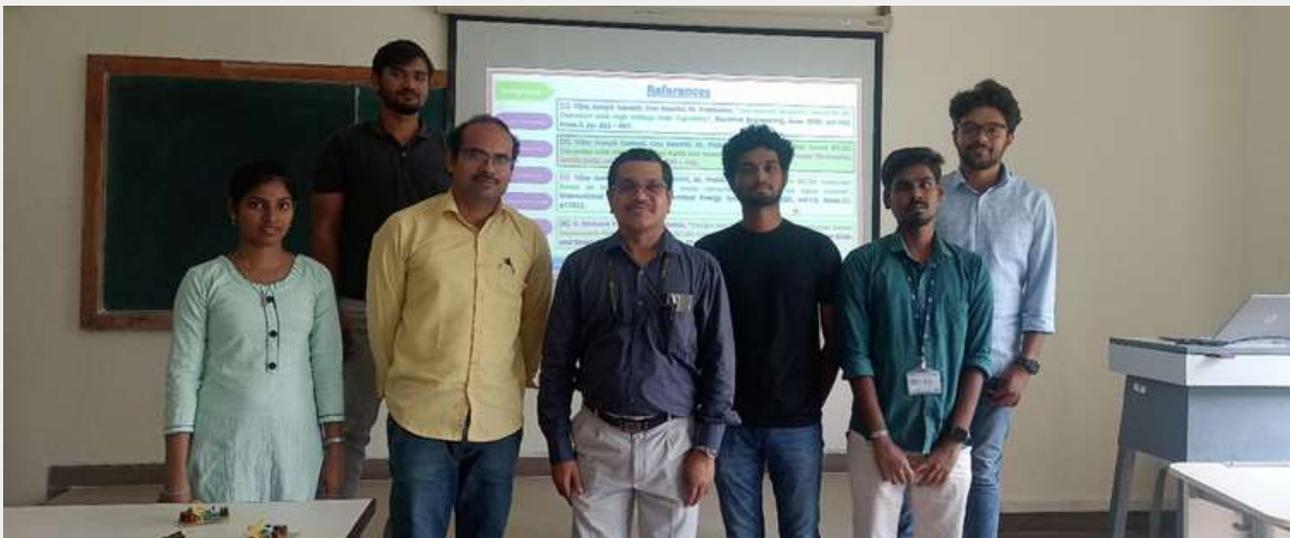
In conclusion, this workshop was a good experience for all attendees. From comprehensive discussions on the basics of power distribution to in-depth explorations of advanced technologies and standards, the workshop provided a wide understanding of this critical aspect of electrical engineering. The real-life examples, practical demonstrations, and engaging presentations facilitated by industry experts not only deepened participants' technical knowledge but also inspired innovative thinking. We extend our gratitude to Siemens for their commitment to education and empowerment, and we look forward to applying these learnings to drive positive change in the realm of electrical engineering.



## Guest lecture on Advanced DC-DC Converters for PV Interfacing

Dr. R.Ramaprabha, Asso.Prof./EEE arranged an invited guest lecture on “**Advanced DC-DC Converters for PV Interfacing**” on 06.03.2024 during 10.00 a.m. to 11.30 a.m. for PG students.

The lecture is delivered by **Dr. M.Prabhakar, Professor, SELECT, VIT-Chennai**. 10 students including research scholars attended this lecture.



## Guest Lecture on “Research Opportunities & Innovative Project Ideas”

SSN-IEEE PES student chapter organized the Guest Lecture on “**Research Opportunities & Innovative Project Ideas**” on 20/02/2024 at SSN College of Engineering, Chennai. The event aimed to provide attendees with insights into the latest advancements, research opportunities, and innovative project ideas within the realm of power and renewable energy systems. The lecture sought to bridge the gap between academia and industry, fostering collaboration and innovation in the field. The event is started with the welcome address by Dr V Rajini, Professor & Head, EEE. The lecture featured an esteemed guest speaker, **Mr Rajvikram Madurai Elavarasan, Research Scholar, University of Queensland, Australia**, who is a prominent figure in the field of power and renewable energy systems. He highlighted various opportunities for research collaboration, including partnerships with industry stakeholders, academic



institutions, and government agencies. They emphasized the importance of interdisciplinary collaboration in addressing complex energy challenges and driving innovation. The lecture showcased a range of innovative project ideas aimed at advancing the efficiency, sustainability, and reliability of power and renewable energy systems. These ideas spanned areas such as smart grid technologies, renewable energy integration, energy storage solutions, and predictive maintenance techniques. The event is coordinated by Dr. V Thiyagarajan, Associate Professor & Faculty Advisor, IEEE PES Student chapter. Around 65 participants attended this event.



## Guest lecture series on "Automotive electronics"

The Guest lecture series on "**Automotive electronics**" has been organised by Dr. P. Saravanan and Dr. V. Rajini. On 19th February 2024, the first session was addressed by **Dr. M. Bhagyaveni, Director CIPR, CEG, Chennai**, on the topic, "**Networking in Automotives**". **Dr. N. C. Lenin, Professor, SELECT, VIT, Chennai**, has addressed the second session on, "**Wipers, lights and sensors in modern automotive systems**", on the same day.



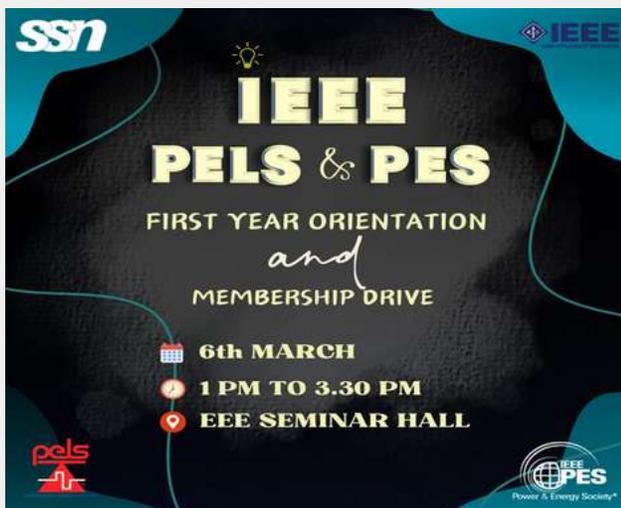
**Dr. S. Ramprabhu, Associate Professor, Department of ECE, MIT, Chennai**, has addressed two sessions on the topics, "**Recent trends in Automotive electronics and EMI and EMC in Automotives**"

The sessions were very informative and interactive which attracted a good strength of second year students of EEE Department. The organizing team thanked the guest speakers for their conceptual lectures to enlighten the students on the current happenings.



## First-Year Orientation Session for IEEE Power Electronics Society (PELS) and Power & Energy Society (PES) Student Chapters

The Department of EEE, in collaboration with the IEEE Power Electronics Society (PELS) and Power & Energy Society (PES) student chapters, organized a first-year orientation session on March 6, 2024. Held at the EEE Seminar Hall, the session aimed to introduce first and second-year students to the purpose, activities, and advantages of joining these prestigious societies. Current chapter members led the orientation, offering a platform for student interaction, learning, and engagement. Approximately 94 students participated in the program.



The first-year orientation session aimed to introduce students to the exciting world of the IEEE Power Electronics Society (PELS) and Power & Energy Society (PES) student chapters. The session focused on familiarizing first and second-year students with the societies' goals and the wide range of activities they offer. These activities go beyond academics and provide valuable volunteering opportunities.



The Interactive sessions were designed to showcase the numerous benefits of becoming a member, including career guidance, networking, and scholarship opportunities. Additionally, faculty advisors were present to share insights on research, startup possibilities, and ongoing projects within the field of power electronics and energy systems.

The session kicked off with an engaging introduction to both societies. Presentations by student representatives (Likhitha, EEE 3rd Yr - PELS; Moukthika, CHEM 4th Yr - PES) highlighted the importance of student participation and the societies' missions.

Students were informed about various volunteering opportunities that align with their interests and career goals. To further engage the audience, an interactive game session (led by Rajamithra, EEE 3rd Yr) shed light on common myths and lesser-known facts about PELS and PES. The session also encouraged exploration of the societies' Instagram pages. Students also had the valuable opportunity to interact with current members (incl. Deepti, EEE 3rd Yr) to gain insights into their experiences and learn about the diverse activities organized by the chapters. This interaction fostered a sense of community and provided a platform for networking.

The event introduced students to the societies, highlighted volunteering opportunities, and fostered interaction between students and current members. It provided valuable knowledge and networking opportunities, laying a strong foundation for future student involvement in the societies.

We extend our sincere gratitude to all participants, organizers, and faculty members for contributing to the success of this orientation session, making it a memorable and enriching experience. The first-year orientation session for IEEE PELS and PES student chapters successfully achieved its objectives.



## Faculty Development Programme on Universal Human Value (UHV) by Dr. Sajjan Kumar, AP/EEE.

NCCIP-AICTE appointed **Dr. Sajjan Kumar, AP/EEE** as an observer for AICTE approved 3-day face to face Faculty Development Programme on Universal Human Value (UHV). This FDP was hosted by R.M.K. Engineering College (An Autonomous Institution), Chennai from 21-23 March 2024.

As an observer deputed by NCCIP-AICTE, he visited the host institution for smooth conduction of this FDP and after completion of this event, he submitted the report to NCCIP team for issuing the certificates to successful participants. As a guest, he also participated in tree plantation.



## Faculty Interactions

On behalf of **E-Samarp technologies**, the Startup company at SSN, **Dr.V.Rajini** and **Dr. V.SNagarajan** visited M/s Stone link technologies on 11th to finalize their patent draft and design



**Dr Rajini** attended Leadership Conclave at Shiv Nadar School, Gurugram on 17th February.



**Mr Pradig Ram**, 2019 passed out batch student visited the department on 27th February, 2024. He got his MS degree in embedded systems from Univ. of Southern California, Los Angeles recently.

## Faculty Recognition by Alumni

The SSN Alumni Association honored SSN EEE Staff members **Dr R.Leo and Dr. K.Murugesan** who have completed **25 years of service** during the annual alumni get-together event **Tribute** on 6th January 2024.



## Cough Sensei - Triumphs at ST Microelectronics Innovation Fair

**T Manojshyaam C J**, a fourth-year student in the Department of Electrical and Electronics Engineering (EEE) participated in ST Microelectronics Innovation Fair and won second prize for his innovative product "**Cough Sensei**". He was guided by **Dr. V. Rajini** and **Dr. R. Rengaraj** throughout the project. Here he shares his experience

I am pleased to announce that "**Cough Sensei**" the device I developed, has achieved remarkable success at the ST Microelectronics Innovation Fair-24, securing second prize along with a cash award of \$500. Hosted at the esteemed ST campus in Greater Noida, this event served as a convergence point for cutting-edge innovations from across the country.

I am particularly grateful for the invaluable guidance and mentorship provided by Dr. V. Rajini and Dr. R. Rengaraj throughout the development of "Cough Sensei."

The ST Microelectronics Innovation Fair-24 exemplified a showcase of ingenuity and technological prowess, featuring a diverse array of projects spanning various domains, including IoT solutions, embedded systems, and Machine Learning. Among these exceptional entries, "Cough Sensei" garnered significant attention and acclaim, captivating judges and attendees from Nordic Countries and beyond with its potential to revolutionize respiratory disease detection and management. Notably, the jury panel comprised eminent figures from ST Microelectronics, including the CIO, CTO, and Department Heads.



"Cough Sensei" operates by leveraging a microphone to meticulously analyse cough patterns and assess the potential presence of diseases such as Smoker's cough, Cardiac Cough, Tuberculosis, and COVID-19.

I extend my heartfelt gratitude to my support network, comprising friends, family, professors, and juniors, whose unwavering encouragement has been instrumental in this journey.

As we move forward, fuelled by this success and the encouragement of our peers, I am excited about the possibilities that lie ahead. Together, let us continue to innovate and make a positive impact in the world.



# CAMPUS PULSE

## Exploring the Pulse Points of Campus

### SSN & SNUC INSTINCTS

The three-day cultural celebration was a dynamic and immersive event that spanned a variety of activities, performances, and interactive sessions. The event aimed to celebrate the rich diversity within the college community, providing students, faculty, and staff with a comprehensive experience of different cultures. This report outlines the key highlights and outcomes of the three-day celebration.

The three-day cultural celebration, held from 7-9th March 2024, was a concerted effort to create an inclusive and vibrant atmosphere within the college.

#### **Day 1: Opening Ceremony and celebrity variety show and choreonite**

The first day commenced with an opening ceremony featuring speeches from our beloved guests Dr. Robo Shankar and mimicry artist Sethu. Robo Shankar is a renowned Indian actor and comedian who has left an indelible mark in the Tamil entertainment industry. With his distinctive style and impeccable comic timing, he has become a household name, particularly in the realm of Tamil cinema and television. He effortlessly balanced humor with character depth in many movies as well as become even an inspiration for future comedians. Robo Shankar's versatility extends beyond acting, as he has also proven himself as a skilled mimicry artist.

If he took part, he showcased his talent by mimicking actor Kamal Haasan, leaving everyone in the auditorium amused. His comedic act, including jokes about Dr. Annamalai, our college principal, brought smiles to all. Mimicry Sethu is a talented Indian artist known for his mimicry and dubbing work in the Tamil film and television industry. Despite not feeling his best, he honored our event with his presence and entertained everyone by flawlessly mimicking various actors. His commitment to the event and consideration for the audience were evident through his performance.



#### **The celebrity variety show:**

This show which mainly focused on pone character who is a youtuber as well as a famous stand-up comedian proudly known by people as comedy elements and a punch which makes us laugh. His career which was brought up by his YouTube channel "VIKKALS" which is a family over a million. This show gave a lively experience to the crowd and embodied the passion and talent he has developed.



### Choreonite:

This was a dance competition which held on open air theatre of our institution. Many teams participated in this event and delivered a blasting performance on that day. The judge for this was "Ravi Varma", the contest was 3 hours long and a number of participants from various states were in this contest to prove their talent and passion for dance. The stage was on fire when our dancers entered, and it cause people to outburst in vibe and begun dancing. This shook the crowd and people around came to enjoy the show.



### Day 2 - Reels of fire:

The second day focused on interactive session held in Justice Pratap Singh auditorium which was focused on encouraging young directors and participating in this short film contest. There were the short films directed by our college student was telecasted Infront of the cast and crew as well as the judge who was the well-known director of "Por Thozhil" Mr.Vignesh Raja. This event consisted of a variety of movies which got good responses and came to this contest in which each and every short film tells a story of its own and arousing the peers to enjoy the verse of a world incorporated inside the director's mind.

### Woman's day celebration:

On this wonderful day the ladies who are an inspiration accompanied us. This was a great experience for everyone present because of the charisma and greatness the emit. The chief guests were Dr. Renita Rajan, a renowned dermatologist, Mrs. Niveda Ravikumar, Co-founder of Green delight innovations Pvt. Ltd., Padmashri Anitha Pauldurai current coach for Indian basketball team and last but not least Mrs. Vanitha Sampath Additional director general of police.



### Day 3 - Pattimandram:

The final day featured a variety of shows in which various public figures joined and made this event unforgettable. The main course for the day was a refreshing debate “Pattimandram” which focused on “who prevents the liberty of women man or woman?”. This was a spicy debate consisted of 6 participants 3 on each side which was a great experience to see a debate in a college in Tamil and get over it. The topic itself is something we can’t overlook because of the liberty women have to participate in any profession, activity in which men are pertinent.



### DJ night:

It was a fabulous event held as the final program of instincts and also it is one of the most welcomed events in Instincts. The stadium was filled with a huge crowd which even had students from other colleges. The famous music troupe “MASALA CAFÉ” accompanied us on this wonderful finale night.



The three-day cultural celebration at SSN College proved to be a comprehensive and impactful event. By incorporating a variety of activities and engaging the college community, the celebration successfully celebrated, and these are the major events held as well as enjoyed by most of the audience.

## The 2024 MELA

Every year, our college hosts an event called Mela organized by SSN Lakshya, providing students with a platform to showcase their entrepreneurial abilities.

The event's structure is as follows: students interested in setting up stalls on different themes form teams with their peers, sign up for available slots, and prepare the necessary materials.



The campus came alive with vibrant colours and energizing aroma of food. The food stalls ranged from cupcakes, brownies to lip smacking street food delicacies to refreshments deserts and juices. The students got an extra creative this year in setting up gaming stalls and this mela an incredible one. The day offered all of us the much-needed break from the academic stress and the daily classroom routine. One/two weeks prior to the commencement of the event the stall owners engage in keen promotion of their shops and products to let the student customers know about their shops and services.

### VADI-VU CHARMS & CO

They say that they chose to sell bead bracelets because they believed that "The love for accessories never has an expiry date" and making it customized was an additional charm to their stall.



They battled a handful of challenges and were gifted success. Talking about the difficulties, procuring budget-friendly yet quality raw materials was challenging and also the overwhelming crowd became unmanageable and they had to meet the over-whelming orders of the customers. But despite these hurdles they managed to earn more than double the amount they had invested. They also added how important team work was in organizing and without each other's mutual support this wouldn't be possible at all.



### FLAVOURS AND FABRICS

They planned to set up a chat stall as “A paani poori hater is very hard to find”. The team commented that their only constraint was the minimal quantity chat ingredients as the high demand from students was unexpected. But however, they were very smart in tackling the situation as they quickly introduced a new item to their menu with the available ingredients in the food courts within the college campus.

They proudly said that they were a team of seven friends but worked as one and this collaboration and hard work had made the stall a huge profit and a memorable day in their lives.



### VIBE - RATER

These guys got an extra creative this year. The theme of their stall was games based on friendships and compatibility. They added that they got the idea from movies and TV shows and were inspired to set up one. They commented that there were many people who were interested but lack of space forced them to conduct games for only two/three groups simultaneously. They were a group of 16 guys who worked with enthusiasm and made the stall to what it was that day. Student customers felt that their stall was the best and most favourite among all the stalls of mela. They stated that this remark meant more to them than the profit they attained!



### JIGARTHANDA SAMBAVA CLUB

They were a group of 25 friends and thought to invest on “something that is special and loved by all but not easily available”. So they decided to ship Jigurthanda all the way from Madurai. They added that shipping was not easy and they had to face lot of struggles until they got their product to the campus and overcrowd was a major challenge. They also quoted that they felt grateful for having such a team and each and everyone contributed to make the stall a success and the happy faces and feedback of the customers made their day!



**Yogitha Lakshmi**  
2 nd Year, EEE-B

## Convolve '24

I had the opportunity to participate in *Convolve'24*, a technical fest organised by the department of Electronics and Communication Engineering of our college. The event was a collaborative effort by the Tech Club, IEEE com soc and AECE. The event included a creative aspect of treasure hunt, *Race Around'* wherein we were asked to solve basic physics problems and look for hints around the campus. It also included mock placements for core, management and IT companies. The technical round included puzzles on fundamental physics, circuit problems and basic electronic questions. The IT round tested coding knowledge and skills while management mock placements included aptitude and management related questions. Overall convule was an enriching experience for me and offered the much-needed guidance for placements and knowledge of my domain.



Rithvikha  
2nd year EEE – B  
Winner - Mock Placement (Management)

## Empowering Education Through Service: A Glimpse into the YRC Village Camp

In a commendable effort to foster community engagement and uplift educational environments, a six-day YRC (Youth Red Cross) village camp was recently organized at Alanthur Government School. This initiative, led by the college's Youth Red Cross unit, turned into a vibrant collaboration between students, educators, and local officials, highlighting the power of collective action in making significant contributions to society.

### Inaugural Beginnings:

The camp kicked off with an inauguration ceremony that set a tone of enthusiasm and purpose. Distinguished guests including the headmistress of Alanthur Government School, the principal of the organizing college, the head of the YRC, and the district's BDO officer, graced the occasion. Their presence and encouraging words fueled the volunteers' motivation, underlining the importance of the task at hand—transforming and revitalizing the school's physical environment to enhance learning experiences.



### A Canvas of Change:



Over the next four days, the YRC volunteers donned their creative hats and took on the task of painting the school walls. Armed with brushes, paints, and a plethora of creative ideas, they transformed the mundane into the extraordinary.



Each stroke not only added color to the walls but also infused life into the old corridors, making them welcoming spaces of learning and interaction. The initiative showcased how art and aesthetics can play a crucial role in creating stimulating educational environments where children can thrive.



### Culmination and Celebration:

The camp concluded with a valedictory day, celebrating the efforts and achievements of the volunteers and the school community. This day was not just a closure but a reflection of the hard work, camaraderie, and shared goals of everyone involved. The painted walls stood as a testament to what can be achieved when young energy is channeled towards constructive and community-focused projects.



### Beyond Paint and Brushes:

The YRC village camp at Alanthur Government School was more than just a beautification project. It was a demonstration of how youth can be mobilized to contribute positively to their communities. The participants not only left their mark on the walls but also on the hearts of the students and staff of the school. The initiative underscored the significance of volunteerism and community service in personal and societal development.

As the school reopened its doors post-camp, it wasn't just the bright, freshly painted walls that welcomed the students back but a renewed spirit of hope and joy. The YRC village camp stands as a beacon of what is possible when individuals come together for a noble cause, promising a brighter future for many more communities. **-Komal .Y (EEE A, 2nd year)**

## Celebrating Culture and Talent: The Grand Tamil Saaral Thiruvizha

In an electrifying celebration of Tamil culture and talent, the local college campus was transformed into a vibrant spectacle for the much-anticipated Tamil Saaral Thiruvizha. This cultural festival, a testament to the rich heritage of Tamil Nadu, saw an overwhelming participation from students, faculty, and the local community, eager to partake in the festivities that showcased traditional and contemporary talents.



Dance performances were a significant highlight of the event. Groups of students, adorned in colorful costumes, presented various dance forms

that celebrated Tamil culture. From the intricate footwork and facial expressions of Bharatanatyam to the energetic and vibrant moves of folk dances, the performances captivated the audience, illustrating the diversity and richness of Tamil dance traditions. Adding to the cultural showcase was an impressive display of Silambam, a traditional martial art of Tamil Nadu. Participants wielding bamboo staffs demonstrated the fluidity,



agility, and precision of this ancient art form, reminding the audience of Tamil Nadu's rich martial history and its significance in today's world. The event was further elevated by the presence of esteemed Chief Guests, actor Robot Shankar and Sethu, who brought star power to the festivities. Their engagement with the performances, participants, and audience added a layer of excitement and glamour to the event. Both guests shared words of encouragement and appreciation for the talent on display, emphasizing the importance of preserving and celebrating Tamil culture. Robot Shankar, known for his comedic roles and vibrant personality, entertained the audience with his wit and humor, while also lauding the students for their hard work and dedication to their cultural roots. Sethu, with his inspiring journey in the entertainment industry, shared insights and motivated the students to pursue their passions with determination and resilience. The event was not just a display of cultural performances but a collective effort to keep the traditions alive among



the younger generation. It served as a platform for students to express their talents, connect with their heritage, and celebrate the unity and diversity of Tamil culture. As the event came to a close, the sense of pride and joy was palpable among the attendees. The Tamil Saaral Thiruvizha succeeded in its mission to foster a deeper understanding and appreciation of Tamil culture, making it a memorable day for all involved. It was a vivid reminder of the enduring spirit of Tamil Nadu's heritage, art, and the collective identity that continues to thrive in the hearts of the people.

**-Komal .Y (EEE A, 2nd year)**

## Igniting Entrepreneurial Spirit: The Exciting Journey of MELA 2024

Lakshya, the Entrepreneurship Development Cell of our college, orchestrated a vibrant celebration of innovation and enterprise with its annual event, The MELA, held on the 23rd of February 2024. The event witnessed an impressive array of 60 stalls, each a testament to the entrepreneurial spirit thriving within the student community.

For food enthusiasts, the MELA offered a tempting selection of delights ranging from creamy ice creams and delectable pastries to crunchy cookies and refreshing milkshakes. The savory section did not disappoint either, with options like tangy pani puri, crunchy nachos, succulent momos, crispy french fries, and flavorful pastas.

The accessory section was a treasure trove of handcrafted pendants, earrings, bracelets, hand-poured candles, intricately woven keychains, and beautifully painted tote bags and bookmarks, catering to the taste of every shopper. To boost up the excitement, some stalls hosted interactive challenges and games, while others offered nail art and tattoo services, providing unique avenues for self-expression. Innovative marketing strategies were the name of the game, with students leveraging social media platforms through posts and product-making videos. Some even offered free giveaways to early patrons, adding an extra layer of allure to their stalls.

Notable stalls included “Vadivu Charms” and

“Pinto” featuring handmade candles and quirky accessories, and “Saint and Seven Wonders” and “Le Elite” earning praise for their delicious treats. “Jigarthanda Sambava Club” exhibited a strong commitment to authenticity by bringing the authentic taste of Madurai to MELA, importing the renowned Jigarthanda directly from the heart of Madurai.

A simple yet standout stall, “Thanni Can Poda Vandhen Bro” offered a unique product – water bottles – proving that innovation could be found in meeting basic needs creatively. Meanwhile, “Momo Affair” and “Flavors & Fabrics” drew crowds with their mouthwatering snacks and intricate embroidery works. Beyond the culinary and craft offerings, the event featured engaging game stalls like “Vibe Rater” and “Hit Me If You Can” cultivating an atmosphere of excitement among the customers.

The well-coordinated efforts of the club ensured a seamless experience for all participants. MELA 2024 emerged as a resounding success, a reflection of the creative spirit and entrepreneurial skills of SSN students. As the event came to an end, it left a lasting impression, inspiring future generations to pursue their entrepreneurial dreams with enthusiasm and creativity.

-Harini M

## Zonal Athletic Meet

**DATE:** 29/02/2024

**HELD AT:** SAIRAM COLLEGE OF ENGINEERING.

The Zonal Athletic Meet of Zone 3 took place on 29th February 2024 at Sairam College of Engineering. The event was organized by Agni College of Engineering. This was peculiar Zonal because due to the floods and monsoon season in the previous year in the month of October, November and December, chosen athletes from the previous year Zonal was sent to the Inter Zonal in Namakal. So, this event was done to show due records to the sports department. So, the colleges were not that particular in this event.

All the athletes were prepared to participate for their pride. Overall, there were around 15 to 20 Colleges across the south part of Chennai that is Zone 3, took part in the event.

Our college prepared a sports team consisting of 12 Boys and 8 girls across different years of students and among various department to participate in the event. All the students were enthusiastic enough to set standards of our college high. I participated in 2 events. We started around by 5:45am out of the campus, we reached Sairam college around 7 o' clock, the first to reach there. After the warmups and everything, slowly other colleges and the organizing committee started coming. The first event was the men's 5000m and I placed one short of a medal, 4th in the race. After the first event, the lined-up events all started to take place soon. The track events were 100m, 200m, 400m, 800m, 1500m, 5000m, 10000m, 5000m walk, 110m hurdles, 400m hurdles, 4x100m, 4x400m etc., The field events were

Long Jump, High Jump, Triple Jump, Shot put, Discus Throw, Javelin Throw etc., These events were common to both Men and Women.

As expected, the favorites of the event, St. Joseph's College of Engineering were getting a bunch of medals in both the men and women's category. Other colleges including SSN gave equal competition to the athletes and started grabbing medals. Boys were mostly in getting one short of a third place. I placed 4th in the 5000m, and 3rd place, Bronze in the 1500m Men's division.

The Women team was on fire that day. All the athletes were good, nearly placing in all the events. The team placed in both the relays, securing a bronze in both. Overall, the women team finished third in the competition. Men team secured 4 medals overall. The enthusiasm of the college teams produced great sportsmanship in the event. We got new collabs from the other college athletes. The overall winners in both Men's and Women's category were St. Joseph's College of Engineering. After the event all the athletes congratulated each other for their hard work.

Due to the SSN Trophy conducted in our college at that time, we had to rush back on time. It was a good event to participate in but there are a lot of setbacks. Not our best events but there are a lot of takeaways. Hope we could prepare well for the next event and outperform ourselves next time.

- Mohamed Anas S  
2nd year, EEE-A

## NSS Annual Camp Report

**Date: 24.02.2024 - 01.03.2024**

The NSS unit of SSN College and Anna University conducted the NSS Annual Camp of 2024 in Thandalam Village, Thiruporur, from February 24th to March 1st, witnessed enthusiastic participation from volunteers of the EEE department, including Dhanushram, Mohanram Kaleeswaran, and Sanjay, alongside Ajay Kumar, Haripriya, and Yogesh Kumar.



Over the course of 7 days, various community-oriented initiatives were undertaken with dedication and zeal. Painting activities were a focal point, with teams sprucing up educational institutions like Thiruporur Girls High School, Thandalam Panchayat Union Primary School, and the interiors of an Anganvadi. Additionally, volunteers engaged in a Voter ID registration drive, successfully registering around 100 individuals, while also organizing garbage clearance drives to promote cleanliness and sustainability. Surveys conducted across 85 houses provided valuable insights into the village's challenges and needs, including issues such as land certification and skepticism towards self-help groups.



Planting saplings at educational institutions and conducting a science exhibition for local students highlighted the commitment to environmental awareness and education. The celebration of Youth Day and engaging discussions on important topics like social isolation underscored the camp's holistic approach to community empowerment.

Visits to local heritage sites like the Five Rathas in Mahabalipuram added cultural enrichment to the experience. The valedictory function, graced by esteemed guests including V E Annamalai, principal of SSN College of Engineering, and local dignitaries, served as a fitting conclusion to a week of impactful service. Reflective sessions allowed volunteers to glean insights and celebrate the enduring bond between the NSS unit of SSN and Thandalam Village, embodying the spirit of community engagement and personal growth.

## Technical Talk by Alumni

On 23<sup>rd</sup> February 2024, **Harrison Kurunathan**, an alumnus of SSN college (2014 batch), presented a technical talk on the topic “Enabling Security in Vehicle-to-Vehicle (V2V) Communication” for second year EEE students. He pursued M.E in VLSI sector in SSN college from 2012 to 2014. He completed Ph.D in Electronics and Computer Science in Portugal. He is now a Researcher in CISTER – Research Centre in Real-time and Embedded Computing Systems at Porto, Portugal. During that session, He spoken about the fascinating story of Bertha Benz, who was a pioneer in the automotive industry who embarked on the first long-distance automobile journey in 1888. Her innovation made a revolution in modern automobile technology, inspiring generations of engineers. This talk was arranged by Dr. R. Jeyaparvathy, P/EEE.

He highlighted the importance of security in vehicle-to-vehicle(V2V) communications, emphasizing the need for robust protocols and technologies to ensure the safety and integrity of connected vehicles on the road. It will have the greatest impact on vehicle safety applications. V2V communication enables motor vehicles to access information about the speed and position of other V2V enabled vehicles surrounding it using a wireless communication protocol similar to that of Wi-Fi. That data is then used to alert drivers of potential dangers, helping to reduce accidents and traffic congestion. It can detect dangerous traffic and road conditions, terrain issues and weather threats within a range. V2V has the power to make driving a more predictable and safe activity for everyone on the road.

He also spoken about Vehicular Platooning System, for example, this technology would connect two or more trucks in a caravan to lower fuel consumption and CO2 emissions, improve safety with automatic braking and increases efficiency. He explained the Vehicular Platooning mechanism by showcasing the animation of connected vehicles running on the road, as this animation was made in Unity software using AI technology.



Then he elaborated about its benefits on the futuristic scale. But some cybersecurity attacks also may happen in this technology. He also explained about overcoming the issues of cybersecurity attacks. Finally, he shared his memories about college life at SSN, interacted with the students and he thanked some notable professors who guided and supported him. His technical talk became beneficial for the students, and it created eagerness to know more about V2V communications.

# STUDENT CORNER

From the Student Community

## Artificial Intelligence In Analog Chip Design

-Goutham R, 2nd year

The world we live in is dominated by electronics – from serial lights to space crafts, electronics have become an integral part in our lives. The design of such electronics, or more specifically INTEGRATED CIRCUITS is an industry and domain of high knowledge requirements. Most of the chips (IC) digital with some analog component, averaging at 3% of the total design, but that analog component takes up nearly half of the design time. Such is the significance and effort required to design and integrate analog circuits into the IC's.

Digital is 0's and 1's – can be easily realised using transistors – letting them current saturate would be 1 and letting the gate shut would be 0. It is comparatively clean and simple. However the real world entities are continuous like temperature, pressure, son Power and Embedded Drive Control (ICPEDC 2024)" at SSN EEE Department during 17th and 18th January 2024.

Transducers are devices that transfers one form of energy to the other, like a microphone. For every clock signal, it transfers the signal where the analog component processes it like counting, adding, subtracting or filtering. Then it is transmitted to some other device like a display or even a transducer. In recent days, the trend has been to digitise most components- and have yielded real benefits. For example, Digital Signal Processing in speech have enabled noise cancellation techniques in hearing aids.

There are also requirements where the signals are converted from analog to digital and vice versa. But some functions will always be analog, at least in the border of digital and analog interfaces.

Digital design and analog design vary in few important things- in digital design the transistors are nearly of the same size and the design is focused on the interaction of billions of them, while in analog there are far fewer of them but the individual sizes of each components are different and are susceptible to their surroundings, neighbouring circuits and environment. The physical layout needs to be sent to a simulator to do parasitic extraction, since every interconnect and components bring in parasitic elements, namely parasitic resistance, and capacitance. Parasitic resistance leads to reduction in current flowing through the devices and interconnects since all real-world materials possess resistance in them.

On the other hand, parasitic capacitance is due to proximity of components and interconnects, which lead to unwanted storage of charges in them. This exists because the Integrated Circuits are built up in layers, the metal interconnects or metal silicon layers are separated by insulating layer of Silicon Dioxide, which form a capacitor, an unwanted one. They are unavoidable and cause issues like increased power consumption, lower speed of signals and degradation in performance of the chip. These are modelled and the electromagnetic effect for the circuit is computed, and this is computationally expensive.

These makes analog design an effort intensive, knowledge intensive, evolutionary process.

The circuit designer calculates the variables like the size of the devices and uses a simulator like SPICE to predict how the circuit performs in silicon. This step is iterated until it meets some specifications set earlier. Then, it is sent to the physical layout designer, who prepares the layout, checks the parasitic effects, and checks it against the foundry's design specifications.

Once done, it is passed back to the circuit designer, who rechecks the circuitry and verifies if it still meets the requirements. This happens over multiple cycles for each of the analog blocks and sub blocks in the circuit. Even a small specification change needs a full review again. Compared with digital circuit design, which can be highly sub divided and multiple teams can handle it sequentially, makes analog design feel arduous. Analog design is optimising the space formed by the design requirements and constraints, which is huge. The mixed signal and analog chip designers have to fall on experience and knowledge built up over time. Every SoC-system on chip has to have an analog component, which is becoming a bottleneck and automating analog design would be a gamechanger.

The 1990's saw a great deal of digital EDA tools coming up, and now designers can write high level specifications in a software like Verilog, and the EDA tool translates it to circuits. Engineers have been trying to develop a EDA for analog design since then, and it has majorly focused on 2 aspects. First is circuit sizing or design parameter optimisation. This is the work of picking the values and sizes of devices.

The general approach is to create a cost function and then try to solve for it, usually using Simulated Annealing method or genetic algorithms.

Second is laying out circuits and the interconnects. Procedural layout software does exist, like SLAM and ILAC, but they heavily depend on templates and predefined rules, and they still dim in comparison to an experienced human. There do exist an end-to-end analog design product, like the Berkeley Analog Generator, where high level inputs are translated to design. But still, these software packages either still need a human in the loop or impose lots of constraints to reduce the computation. Thus, engineers haven't yet got these in mainstream, and it remains to be niche.

In recent years, academics have explored the possibility of using AI in helping place the devices. There are some AI startups that work in this like Astrus. There are open-source AI too, like ALIGN (analog layout intelligently generated from netlists) which uses machine learning models and imposed constraints that route and place the devices without human intervention.

Another one is MAGICAL, a mixed signal and analog design system which uses gradient descent to iteratively place the devices and wires. There are two issues with this open source software though. Firstly, the design needs to go to a foundry, which have a set of design rules, Process Design Kit, and that PDK tends to be proprietary. Second, the models need to be industrial sized and quite large and need expensive GPU's and good datasets to train on, which the open source software have difficult time getting a hold on.

Automating analog design has been a hard venture and unlike the digital counterparts are generally difficult to work on. It requires lots of experience and knowledge to produce a circuit and optimise the variables.

## **Artificial Intelligence: A story in the perspective of Electric Field**

S. Vasanthakrishnan, 2nd year

Well, now let's just open our any social media app, scroll down a little bit, I am pretty sure about that most of you got any information or update in the context of Artificial Intelligence. There are no days are going to pass without the involvement or usage (both consciously and unconsciously) in these years. I wrote this article, In order to make a discussion about the role of AI in our very own "Electrical and Electronic Field".

The talks are got pretty hot, afterwards the introduction of the AI named as "**Devin AI**" by the Cognition which is termed as the "**The first AI Software Engineer**". Automations already inscribed it prints in almost most of the industries, the place of Artificial Intelligence holds its role as the answer of the following question. The soldering process of IC is made easily by the automation of robotics, what happens, If I placed a cardboard instead of the IC, does to robot can detect the error and make a response regard to the situation? And the answer is YES, With the help of AI. As we drawn the topic of Electronics we go in that way.

### **Fuzzy system and logic:**

Fuzzy logic, a many-valued logic system, contrasts with Boolean logic, which has only two values (0 and 1).

Fuzzy logic outputs truth values as real numbers between 0 and 1, reflecting the concept of partial truth. While some outputs may be completely true or false, most cases involve varying degrees of truth or falsehood. This logic is based on the understanding that people often make decisions based on imprecise and non-numeric information, hence the term "fuzzy".

Fuzzy logic finds application in various aspects of power systems, including voltage control, stability control, power flow control, stability analysis and enhancement, load forecasting, and improving transmission line performance.

### **Artificial Neural Network:**

Artificial Neural Networks (ANNs) are advanced systems that mimic the structure of biological neural networks in the human brain. ANNs consist of interconnected nodes called artificial neurons, designed to emulate human brain behavior in decision-making and problem-solving. ANNs process inputs by passing them through a network of neurons, with each neuron producing an output based on its input. ANNs find applications in various fields such as power system stabilizers, load forecasting, load modeling, and state estimation.

The Alphabet company says this method has already been utilized to implement Google's tensor processing units (TPUs), a part of Google's cloud-based machine learning application. On the other hand, AI can also help IC designers perform their jobs more efficiently and effectively. For example, AI can analyse large amounts of data and provide insights that suggest design alternatives an engineer may not have considered before.

### **Application of AI in transmission Line:**

In the context of a transmission line, fault detection is crucial. A fault detector identifies faults and feeds this information to a fuzzy system. This system, using three line currents and the angular difference between fault and pre-fault current phasors, determines the type of fault. Fuzzy systems are commonly used for fault diagnosis. Additionally, Artificial Neural Networks (ANNs) and Expert systems can enhance the line's performance. Environmental sensors provide input to the expert systems, which are computer programs written by knowledge engineers. ANNs are trained to adjust line parameters based on environmental conditions. If performance is subpar, adjustments such as varying the number of hidden layers or neurons can be made to improve processing speed and output.

At the end of the article, I want to make it clear that, Artificial Intelligence, had become an inevitable part of most of the sectors, we are all have a fear that the humans are going to replace by the Artificial Intelligence,

remember that, "Calculators doesn't replace human, It helped them to work more efficiently and productively, that is the same case in the Artificial Intelligence, We must to learn how to use this tool and make our sector to develop much and make innovation in them."

## Sports Achievement

-Varsha

I had the privilege to represent SSN College in various inter-college basketball tournaments. One of the memorable moments was securing the runners-up position in the SASTRA Inter-College Basketball Tournament, where our team received recognition with a cash prize of ₹8000, along with certificates and medals.

Additionally, our team performed exceptionally well in the SVCE Inter-College Basketball Tournament, achieving the second position. It was a moment of personal pride for me to be awarded the Best Player of the Tournament trophy, a testament to the hard work and dedication we put into our game.

Though we faced challenges in other tournaments hosted by Hindustan College, MOP Vaishnav College, and the SSN Trophy, we embraced each opportunity as a chance to improve and learn. Every match was a lesson, contributing to our growth as individuals and as a team.



# PLACEMENT EXPERIENCE

## Insights into placements

### **E-Con Systems India Pvt Ltd**

Type: Off-campus

Role: Project Engineer

Type: Core

Description: Intern + Full-Time Employee (FTE)

CTC: 9 LPA + Variable pay (Up to 12 LPA)

Student Name: Thaga Sheriff M

Round 1 of the GET Test 2023-2024 comprised four distinct parts, each challenging different aspects of the candidates' skills and capabilities.

Part 1: Aptitude questions in fill-in-the-blanks format, requiring reasoning.

Part 2: Basic English questions.

Part 3: Two easy-level C coding questions covering fundamental concepts up to lists and logical coding questions.

Part 4: One medium-level C coding question.

Selected candidates progressed to further evaluation rounds.

Rounds 2 and 3 consisted of a full-day session at the company's location, including an in-depth interview, a pen-paper test, and managerial assessments.

Round 4, the managerial round, provided candidates the opportunity to discuss personal situations and undergo managerial interview questions.

Candidates demonstrating exceptional aptitude advanced to Round 5, the Advanced Coding Round, where they tackled high-level C programming questions.

Round 6, the Founder Round, involved one-on-one online meetings with company founders, covering all aspects of resumes, project challenges, internship experiences, and learning outcomes.

Upon successful completion of the entire evaluation process, candidates received a message from HR along with the offer letter, marking the beginning of their journey with the company.

## Wood PLC

Role: GET

Category: Dream

Type: Core

Description: FTE

CTC: 6 LPA

Name: Sneha S

The placement process for WOOD was held offline at the CDC. First, there was a pre-placement talk where they explained about the company, role, package details, and testing process. The test format was written MCQs, which had two rounds. The first was an aptitude test and the second was a technical test.

### APTITUDE AND TECHNICAL TEST:

An aptitude test was conducted for 30 minutes which consisted of both basic and moderate-level quantitative aptitude, verbal aptitude and logical reasoning questions. The quantitative part will take some time and we were not allowed to use calculators so do practice it. The second round was a technical test held for 30 minutes consisting of questions of both MCQ and descriptive format. MCQ's had questions focusing on electrical machines (transformers, induction machines), switchgear and protection (circuit breaker types, circuit breaking time, short circuit current), and some topics from transmission and distributions (skin effect, Ferranti effect, proximity effect, cable grading & construction). There were 2 Descriptive questions:

1. Draw the transformer and label any five parts.
2. Draw a house plan with optimal lighting placement by considering the given dimensions of the house. The question also asked us to pictorially depict at least one appliance in the room. In the transformer diagram try to name all the parts, especially Buchholtz relay. The two tests were evaluated and shortlisted candidates were called for the interview process.

### TECHNICAL AND HR INTERVIEW:

The technical interview round went for about 20 to 30 minutes. The whole interview was more of a technical discussion of various electrical concepts. First, he asked me to name three of my favourite subjects and then he started asking questions from all three. Be careful while selecting your favorite subjects and go with subjects that you know well. The questions were asked to test my basic understanding of the subject. Like, as different power line voltages and the maximum line voltage in India, name the layers of underground transmission lines, use of Buchholtz relay, etc. Next, he started asking me to explain some of my answers from the technical test, focusing more on the questions that I had gotten wrong.

Following this there was a HR round where they just informed us about the terms of the company and the salary package. We received the results after a day. The whole process took a day long so stay calm and rock. Feel free to contact me if you have any questions.

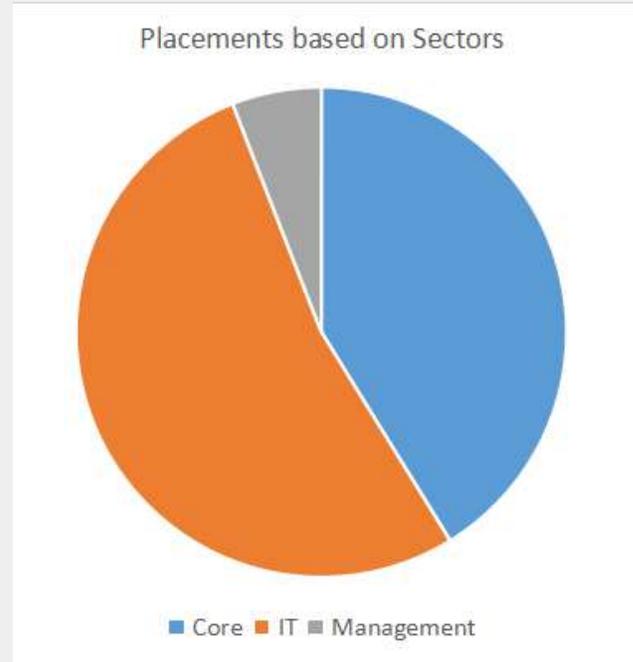
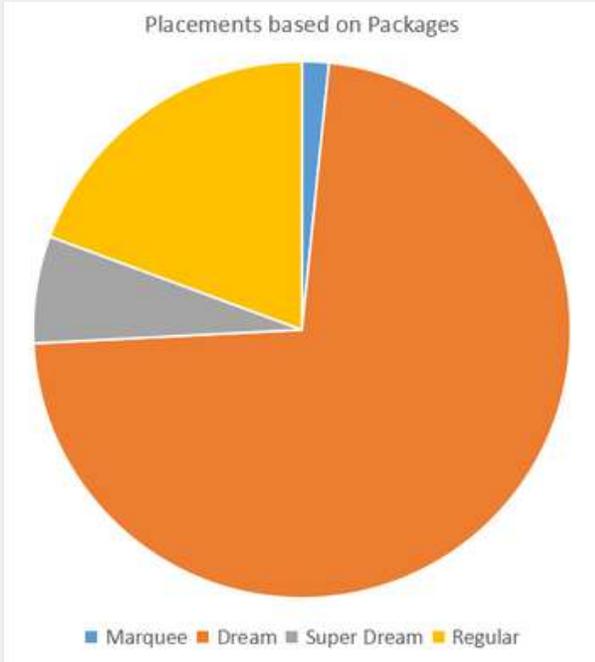
# PLACEMENT REPORT

## Insights from the Placement Report

S.NO	FIRST NAME	LAST NAME	COMPANY	CTC(LPA)	CATEGORY
1	Abdulrahman	Saleem	Value Ingredients Private Limited	5.5	Regular
2	Abhinaya	Ravichandran	Schneider Electric	12	Super Dream
3	Abishek	S	EmbedUR systems	8	Core
4	Agilbert	Felick F	Wood India Engineering and Projects Private Limited	6	Core
5	Akash	S A	Wood India Engineering and Projects Private Limited	6	Core
6	Akshitha	S	Comcast Corporation	8.25	Dream
7	Amaan	Meer	Bosch Global Software Technologies	7	Dream
8	Amirtha	V	TCS	3.5	Regular
9	Anand	P	Freshworks	5	Regular
10	Angeline	K	TCS	3.5	Regular
11	Aprajita	Jaiswal	BNP Paribas	6	Dream
12	Deeikshanyaa	S	TCS	3.5	Regular
13	Deepak	D	TCS	3.5	Core
14	Deepshika	S	NatWest	13	Super Dream
15	Gokul	Sm	Embrizon Technologies	6	Regular
16	Hakash.D		PFF Analytics Private Limited	8	Dream
17	Himasai	Thupakula	Dow Chemicals	8.3	Core
18	Jaya Yayadhi	A	Comcast Corporation	8.25	Dream
19	Jayachandran	J	Royal Enfield	5.25	Core
20	Kanda	Kumar	DevTown	6.6	Regular
21	Ketha	Prakash Reddy	Value Ingredients Private Limited	6	Dream
22	Kovi	Sandeep	Comcast Corporation	8.25	Dream
23	Kumaresh	N	Everstage Inc.	8.2	Dream
24	Lakshmi	A	Greater Goods India	6	Dream
25	M.Prathyumnan		Bosch Global Software Technologies	7	Dream
26	Madhavan	Velraj	TCS	3.5	Regular
27	Mani	Bharathi	Transunion Global Technology Center LLP	8	Dream
28	Manikandan	S	Rocketlane	6	Dream
29	Mona	A	AstraZeneca	7.65	Dream
30	Muralikrishna	S	BNY Mellon	21.64	Marquee
31	Paari	A	Comcast Corporation	8.25	Dream
32	Poovizhi	A	Mr.Cooper	10	Super Dream
33	Pradeep	P	Freshworks	5	Regular
34	Raghul	J	Comcast Corporation	8.25	Dream
35	Rakshana	I	Corizo EduTech	4	Others

36	Revanth	M	Embrizon Technologies	6	Regular
37	Rohin	R	Technip Energies	8	Core
38	Sabarish	L	Bosch Global Software Technologies	7	Dream
39	Sai	Karthik P	Yubi	12.72	Super Dream
40	Saiprasad	A	Royal Enfield	5.25	Core
41	Sakthi	Santosh	Tazapay	6	Dream
42	Santhosh	S	Tata Elxsi Limited	5.5	Core
43	Sasikaran	S	Ignitarium	5	Regular
44	Sathyaprakash	R	JGC India EPC Private Limited	6	Core
45	Siyan	A	DevTown	6.6	Regular
46	Sneha	Rajaram	Embrizon Technologies	6	Regular
47	Sneha	S	Wood India Engineering and Projects Private Limited	6	Core
48	Sreeramrajan	G	Embrizon Technologies	6	Regular
49	Srihari	S	Comcast Corporation	8.25	Dream
50	Sriranjini	S	McDermott International	6	Core
51	Sudarsan	B	DevTown	6.6	Regular
52	Suneeth	D	MindGrove Technologies	6	Core
53	Sunitha	Ravi	Comcast Corporation	8.25	Dream
54	Surya	Jothimurugan	Wood India Engineering and Projects Private Limited	6	Core
55	Suyambu	Nila.S	Corizo EduTech	4	Others
56	Swarna	S	Comcast Corporation	8.25	Dream
57	Swathi	G	ST Telemedia Global Data Centres	10	Super Dream
58	Swetha	Ganesh	Embrizon Technologies	6	Regular
59	Tarun	J	Comcast Corporation	8.25	Dream
60	Thaga	M	MindGrove Technologies	6	Core
61	Thenmozhi	Nantheeswaran	DevTown	6.6	Regular
62	Uma	G	Transunion Global Technology Center LLP	8	Dream
63	Uppili	Gg	Kellog Brown & Root Engineering and Construction (KBR) India P Ltd	6	Core
64	Vanaja	I	Wood India Engineering and Projects Private Limited	6	Core
65	Vasanth	R	EmbedUR systems	8	Core
66	Venkatraman	Sathyanarayana n	Amara Raja Group	4	Core
67	Vishwajith	S	MindGrove Technologies	6	Core
68	Yashaswini	S	Schneider Electric	12	Super Dream

# Placements for EEE 2023-24 in a nutshell



# ALUMNI SPEAKS

## Success beyond the Campus

As you step into the vibrant world of college life, the journey ahead is filled with promise, growth, and invaluable experiences. Reflecting on my time at SSN, having graduated in June 2022, I'm excited to share some insights that I believe will help you make the most of your undergraduate years.

My tenure at SSN was marked by a profound appreciation for the opportunities to engage in meaningful research at the undergraduate level. Embrace these opportunities with enthusiasm and curiosity. Research not only deepens your understanding of your field but also fosters critical thinking, problem-solving skills, and a passion for discovery. Dive into projects that intrigue you, collaborate with faculty mentors, and immerse yourself in the joy of discovery.

While academics are undoubtedly important, it's equally crucial to focus on understanding the core concepts of your subjects. Strive for excellence, but don't let the pursuit of grades overshadow the quest for knowledge. Invest time in studying, attending lectures, and engaging in discussions that enrich your understanding of the subject matter. Remember, true learning extends beyond the confines of a classroom and lays the foundation for a lifetime of intellectual growth. Internships play a pivotal role in shaping your professional trajectory. Plan them wisely, aiming to undertake one every year. Use platforms like LinkedIn to showcase your skills, experiences, and learnings. Actively network with professionals in your field of interest and seek mentorship opportunities.

The connections you make and the experiences you gain during internships not only bolster your resume but also provide valuable insights into the real-world application of your academic pursuits.

Additionally, drawing from my own work experience at Optum, I gained a deep understanding of full-stack web development. This experience not only expanded my technical skills but also provided invaluable insights into the dynamic world of software engineering. Consider seeking out internships or part-time positions relevant to your field of interest to gain practical experience and deepen your understanding of industry practices.



**Vishal Easwaramoorthy**

As you approach your final year, the prospect of pursuing a Master's degree may loom on the horizon. Use this time wisely, for it is a crucial period of transition. With a lighter workload, seize the opportunity to delve deeper into your areas of interest, hone your research skills, and solidify your academic foundation. Engage in projects that align with your career aspirations. Your final year serves as a bridge to the next phase of your academic or professional journey, so make every moment count. Doing this allowed me to get accepted to the University of California San Diego and Texas A&M.

In conclusion, your college years are a time of exploration, growth, and self-discovery. Embrace the journey with an open mind, a thirst for knowledge, and a willingness to seize every opportunity that comes your way. As you embark on this transformative experience, remember that your time at college is not just about earning a degree but about cultivating a passion for learning that will guide you on your path to success.

Welcome to the adventure of a lifetime.

Patent granted story by Santhoosh Aravind S, 2021 batch EEE Alumni

This is Santhoosh Aravind S, from the 2021 batch, EEE Department. We, (Myself, along with Sai Prashanth B and Praveen SB from EEE Department) started on our journey during the Smart India Hackathon 2019, Hardware Edition, where we developed a solution to the problem statement presented by GE Healthcare. Our solution earned us the 2nd prize in the competition, setting the stage for our subsequent endeavors.



Building on our success, we showcased our project at the IIT Bombay TechFest, where our solution impressed the forum and secured the 3rd prize. Continuing to refine our solution, we diligently iterated upon our prototype, culminating in the filing of our patent on 16th April 2021 have applied for a **patent** titled "**Cuffless Non-Invasive Blood Pressure Monitor**."

It is with great pleasure that we share the news of our patent being successfully granted on 16/4/2024. This achievement represents a significant milestone in our journey, and we are deeply grateful for the instrumental role SSN College played in making it possible. This achievement fills us with immense joy and satisfaction, validating the hard work and innovation that went into the development of our solution. Throughout our journey, we extend our heartfelt gratitude to SSN College for their unwavering support at every stage. Their guidance and assistance were instrumental in not only nurturing our project but also facilitating the patent filing process. As we move forward, we remain steadfast in our pursuit of excellence, driven by the passion to make meaningful contributions to society through innovation and collaboration.

We once again sincerely thank SSN for the wonderful opportunity and for helping us throughout the process!

I am currently employed at Bosch Global Software Technologies into the world of Vehicle Motion & Autonomous Vehicle and in a work integrated way parallelly pursuing M.Tech in Embedded Systems at BITS Pilani University. I am wholeheartedly committed to supporting any initiatives or fostering the growth of ideas stemming from our college community in any way I can.