REDEEM

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THE CREW!

FROM THE HOD DESK

Dr. V Rajini

This edition covers the various events from July 2023 to Sept 2023, with interesting line up of faculty and student achievements, contributions, events conducted, efforts for collaborative research, visits by eminent professors abroad, Innovation Day updates and student articles. We hope and work to present more such engaging and competitive articles in the upcoming years.

EDITORIAL

In our childhood, every time we got good marks, the teacher smiled and our parents gave us a hug and appreciation. Every time we didn't get good marks, there were frowns. So like an obedient dog, we tried to get good marks. Later in corporate life, every time we did some good work, the boss was happy and gave us a raise, or a promotion. Every time we didn't do it, we got a kick. So we again trained. Okay, so we get on this treadmill. And one day you wake up and you say, man, how long can this continue? I'm no longer enjoying this. I'm no longer happy. We then see the difference between pleasure and happiness and realize that happiness has nothing to do with success or achievement or what you have in your life. We all know people who have everything and are miserable. We all equally know people who have nothing, but they're always smiling. So it's an attitude. Psychologists call this as synthetic.

Synthetic means it's made, and manufactured by our mind. And so the trick here is to control your thoughts. The more you think about yourself, the more unhappy you're likely to be. The more you lose yourself, the more happy you are. So you can only be happy if you forget about yourself. Then we should understand about acceptance that happiness comes from liking what we have rather than having what we like.

Human Sanskar is the 'acceptances' derived from the summation of all our imaginations from all time. It is being updated over time. We have some sanskar at one moment t. At the next moment (t+1), our sanskar can be articulated as Sanskar (t+1) = Sanskar (t) + Environment (t) + Self-exploration (t). Unless we understand the value of the third component, we get carried away by the first two. It's hard to stop the influence of deep-rooted sanskars and hence we learn to live with it. Though we are fully aware of things through WhatsApp, etc., we just momentarily realize things, but we keep doing the same thing over and over again. It's like filling water in a basket, though water is leaking through all the holes of the basket, however the basket gets cleaned. Though our efforts to live in continuous happiness and prosperity seem to be futile, we get some residual benefits in the long run. Joy and negativity are both more contagious than COVID-19. It is simply a state of mind. It lies within us and is always within our grasp. But it often takes a lifetime of seeking to find that out. We see how online shopping companies are simulating the demanding environment by making the product unavailable for some time and then the customer will feel happier in buying the product which is more in demand than the actual requirement. They take advantage of the simulated happiness.

EDITORIAL

Respect people when they are alive.
Serve people when they are alive.
Open doors for people when they are alive.
Do something good with the people when they are alive.
Celebrate life with the people when they are alive.

You hear that somebody is in hospital. You don't go and check on them. You don't even look them up to say, how are you doing? You hear that someone is struggling. You don't even go to meet with them. You don't even go to ask them, how can I help? But then as you hear that that person is dead, you stop everything that you are doing. You take leave from work, You put petrol in your car to drive a long distance to go and do what you call, pay my last respect. What respect are we paying? When they were alive, we never called them. When they were struggling, we never reached out to them. But simply because they are part of the family and we know them, then we are able to stop everything that you are doing and make time to go to a funeral and we say we are going to pay our last respects. Are we really being respectful?

We have indoctrinated ourselves that when we go to a funeral, we are paying our respects. And it is just trying to appease your conscience that at least you saw their dead body. So if they go to heaven, they might put forth a few good words about you. This is called misplaced compassion. You're being compassionate over the dead who cannot even receive your gifts, who cannot receive your flowers, who cannot even see the flowers that you're putting on their grave. Assume that your family or friends are nomore, There is no point in having 'N' number of regrets that I could have done this, that, etc. and pondering over post mortem reports. They are live now. Give them the flowers now. Value them now. Some times the value of things are known only when we loose them. What little thing you do when they are alive matters the most than just showing your attendance in the funeral so celebrate life when family and friends are alive.

"We think there is endless time to live but we never know which moment will last. So care, share, celebrate every moment with your friends and family."

FROM US TO YOU

Dear Readers,

It is with great pleasure and excitement that we present to you the second edition of RedEEEm for this academic year, the voice of our vibrant department. RedEEEm is not just a publication; it is a testament to the incredible talents and aspirations of our department's students. We are proud to offer you a diverse collection of articles, essays, interviews, artwork, and much more, all crafted with the aim of capturing the essence of our academic journey and community spirit.

In this edition, we continue to explore the ever-evolving landscape of our discipline, offering fresh insights, thought-provoking perspectives, and a deep appreciation for the work that takes place within our classrooms and laboratories. Our contributors have delved into subjects that reflect the dynamic nature of our field, providing a window into the exciting developments that shape our academic world. We have strived to include content that both informs and entertains, to help you connect with your peers, mentors, and the world of possibilities that await you in your academic journey.

As we present RedEEEm's second edition to you, we hope this magazine serves as a bridge between our past accomplishments and future aspirations. Your feedback and engagement are invaluable to us, and we encourage you to share your thoughts and ideas for future editions.

On behalf of the entire RedEEEm team, we thank you for your support, your contributions, and your readership. We believe that this edition captures the essence of our department and the talents of our students, and we are excited to see how it inspires you.

Enjoy your journey through the pages of RedEEEm and let it be a source of inspiration, knowledge, and connection for all.

Warm regards,
Deepti,
Chief Student Editor

FACULTY ACTIVITIES

External Recognition

- Dr. R. Seyezhai delivered a Guest Lecture titled Orientation: Innovation and Design Thinking (From Ideas to Action) organized by Ellen Sharma Matriculation School, Sholinganallur in association with SSN-IIG, Kalavakkam on 12/08/2023.
- Dr. R. Seyezhai acted as Judge for the Innovation contest organized by Ellen Sharma Matriculation School, Shollinganallur in association with SSN-IIC, Kalavakkam on 07/09/2023.
- Dr.V.Thiyagarajan delivered a talk titled Youth Red Cross (YRC) organized by Shiv Nadar University, Chennai on 09/09/2023.

Research Activity

- V.Rajini, 'Design and Implementation of Remodeled Active PFC rectifier topology for Avionic and Fleet Electrification', in the International Journal, Iranian Journal of Science and Technology, Transactions of Electrical Engineering, Springer, July 2023, DOI https://doi.org/10.1007/s40998-023-00636-3, Impact factor 2.4 indexed in WOS/TR/SD.
- Priyanka B. N and Jayaparvathy R, "A Game Theory based Approach for Study of Inter-interference in Wireless Body Area Networks", in the International Journal, International Journal of Communication Systems July 2023, Volume 36, DOI https://doi.org/10.1002/dac.5561, Impact factor indexed in WOS/TR/SD.
- A. Bharathi Sankar Ammaiyappan, Dr. R Seyezhai Ramalingam, "Energy harvesting for self-powered wearable device applications", in the International Journal, Materials Today Proceedings, Elseiveir July 2023, 2214-7853, DOI https://doi.org/10.1016/j.matpr.2023.06.342, Impact factor 0.45 indexed in Scopus.
- T. Divya and R. Ramaprabha, "Analysis of Modulation Strategies for Switched Boost Multilevel Inverter with Embedded Source", U.P.B. Scientific Bulletin, Series C-Electrical Engineering and Computer Science, Vol. 85, Issue. 2, pp. 271-282, ISSN (print): 2286-3540 / (online): 2286-3559, July 2023, Impact factor 0.138, Indexed in Web of Science (Thomson Reuters).

FACULTY ACTIVITIES

- Anjana Ethirajan, FT-RS/EEE and R. Ramaprabha, “Mathematical Modeling of PV and Wind for 2.4 kW Connected to a Common DC Bus”, in the International Journal, AIP Conference Proceedings 13 July 2023, July 2023, Volume 2829, Issue 1, Article No.: 040003, ISSN : 0094243X, DOI: https://doi.org/10.1063/5.0156765, Impact factor 0.19 indexed in Scopus WOS

- Aryan, R. Ramaprabha, Rohit Tripathi, Rashmi Agarwal, “Efficient performance testing for PV array sets using capacitor charging method”, Materials Today: Proceedings, 2023, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2023.04.595 (https://www.sciencedi
- rect.com/science/article/pii/S2214785323025233)

- S. Vinod, M. Balaji , S. Rudhra, and S. Prabhu, “Solar powered DC arc welding machine – an initiative towards efficient and sustainable energy”, in International Journal of Environmental Protection and Ecology June 2023, Volume 24, pp 888-894, ISSN 1311-5065, DOI , Impact factor 0.5 indexed in Scopus.

- R. Deepalaxmi, R. Arthi, M. Logesh, E. Malini, and M. Raghul, “Design and implementation of Arduino based autonomous school van with Student monitoring System” in International Journal, AIP Conference Proceedings - International Conference on recent advances in mathematics and computational engineering: ICRAMCE 2022 6–7 January 2022 Chennai, India July 2023, Volume 2829, pp 449 - 538, ISSN 0094243X, 15517616, Impact factor 0.41 indexed in Scopus.

- V. Thiyagarajan, “A New 51-Level Asymmetrical Inverter Circuit with Reduced Number of Components”, in International Journal Lecture Notes in Electrical Engineering July 2023, Volume 973, pp 1 - 13, ISSN 1876-1100, DOI https://doi.org/10.1007/978-981-19-7728-2_1, Impact factor 0.148 indexed in Scopus.

- V. Thiyagarajan, “A New Inverter Module with Minimum Circuit Components Suitable for Renewable Energy Applications” in International Journal AIP Conference Proceedings July 2023, Volume 2786, pp 1 - 9, ISSN 1551-7616, DOI https://doi.org/10.1063/5.0145412, Impact factor 0.164 indexed in Scopus.

FACULTY ACTIVITIES

- Jasmine Gnana Malar, V. Thiyagarajan, N. B. Muthu Selvan, M. Devesh Raj, “Electric Vehicle Onboard Charging via Harris Hawks Optimization-Based Fractional-Order Sliding Mode Controller”, in International Journal Rev. Roum. Sci. Techn.– Électrotechn. et Énerg July 2023, Volume 68, pp 30 - 35, ISSN 0035-4066, DOI https://doi.org/10.59277/RRST-EE.2023.68.1, Impact factor 0.7 indexed in WOS/TR/SD.

- A.Inba Rexy, R. Seyezhai, “Ripple steering Interleaved Boost PFC Converter Analysis, Simulation and Experimentation” in International Journal Electric Power Components and Systems, Taylor and Francis August 2023, Volume 51, ISSN ISSN-1532-5008, DOI https://doi.org/10.1080/15325008.2023.2201258, Impact factor 1.5 indexed in WOS/TR/SD.

- D.Shruthi, R.Rajesh Kanna, R.Rengaraj, R.Rajasingh, “Design of nano- and microgrids using the HetNet switching strategy”, in International Journal Adaptive Power Quality for Power Management Units using Smart Technologies, CRC Press August 2023, Volume 1, pp 449 - 456, ISSN 9781003436461, Impact factor indexed in Scopus, DOI.https://www.taylorfrancis.com/chapters/edit/10.1201/9781003436461-8/design-nano

- Prabhu Sundaramoorthy, Vijayakumar Arun, Balaji Mahadevan, Peruthambi Venkatesh, Puluru Venkata Aravindha Reddy, Sane Siva Mohan, Sareddy Raju Kumar Reddy, and Somu Santhosh Kumar Reddy , “Finite Element Analysis on Doubly Salient Singly Excited Machine for Electrified Transportation Systems”, in International Journal Progress in Electromagnetics Research C July 2023, Volume 135, pp 145-156, ISSN 1937-8718, DOI doi:10.2528/PIERC23050102, Impact factor 0.3 indexed in Scopus

- Suguna, R, S.Tamilselvi. and Sundaram. K.M, "Adaptive Controller for Bridgeless New SEPIC Integrated Landsman Converter for PFC in Induction Motor” in International Journal Electric Power Components and Systems - Taylor and Francis July 2023, Volume 1, pp 449 - 454, ISSN ISSN: 1532-5008, , Impact factor 1.5 indexed in WOS/TR/SD, DOI https://doi.org/10.1080/15325008.2023.2228786

FACULTY ACTIVITIES

- K. Mohaideen Abdul Kadhar, S. Rengarajan, S. Tamilselvi, N. Karuppiah, Praveen Kumar Balachandran, A. Thamilmaran, C. Dhanamjayulu, Baseem Khan published a paper titled Finite Impulse Response Filter Design Using Fuzzy Logic-Based Diversity-Controlled Self-Adaptive Differential Evolution in International Journal International Transactions on Electrical Energy Systems - Hindawi July 2023, Volume 1, pp 449 - 457, ISSN ISSN: 2050-7038, DOI https://doi.org/10.1155/2023/1572996, Impact factor 2.639 indexed in WOS/TR/SD
- Vijayalakshmi Mathivanan, Ramaprabha Ramabadran, Beemkumar Nagappan, and Yuvarajan Devarajan published a paper titled Assessment of Photovoltaic Powered Flywheel Energy Storage System for Power Generation Flywheel Energy Storage System Photovoltaic, in the International Journal Solar Energy on November 2023, Volume 264, ISSN 0038-092X, DOI https://doi.org/10.1016/j.solener.2023.112045, Impact factor 6.7 indexed in WOS/TR/SD

- M.Ramya, K K Nagarajan published a paper titled Investigation of transient response on reconfigurable ring FET exposed to heavy-ion radiation strikes using 3D numerical device simulations in International Journal Electrical Engineering September 2023, Volume 105, pp 2687-2701, ISSN 9487921, DOI https://doi.org/10.1007/s00202-023-01833-3, Impact factor 1.6 indexed in WOS/TR/SD

- Ashish Bagwari, J. Logeshwaran, K. Usha, Kannadasan RAJU published a paper titled “An Enhanced Energy Optimization Model for Industrial Wireless Sensor Networks Using Machine Learning”, in International Journal IEEE Access September 2023, Volume 11, pp 96343, ISSN 2169-3536, DOI 10.1109/ACCESS.2023.3311854, Impact factor 3.476 indexed in WOS/TR/SD

- D. Ragul, Dr. V. Thiyagarajan, published a paper titled a novel fault-tolerant asymmetrical 21-level inverter topology with reduced components in the International Journal Rev. Roum. Sci. Techn.–Électrotechn. et Énerg September 2023, Volume 68, pp 200 - 205, ISSN 0035-4066, DOI https://doi.org/10.59277/RRST-EE.2023.68.2.14, Impact factor 0.7 indexed in WOS/TR/SD

FDP/Events Attended

- Dr. R. Seyezhai attended a 6 Day Faculty Development Program titled National Level Faculty Development Programme on, "Role of Electric Vehicles in Shaping Sustainable Transportation Systems" organized by Satyabama Institute of Science and Technology, Chennai from 3-07-2023 to 8.07.2023.

- Dr. Sajjan Kumar attended a 5-Day Faculty Development Program titled Introductory UHV FDP (Hindi) organized by AICTE from 10/07/2023 to 14/07/2023

- Dr.R.Ramaprabha attended a 6 Day National Level Faculty Development Programme titled “Role of Electric Vehicles in Shaping Sustainable Transportation System” organized by the Department of EEE, Sathyabama Institute of Science & Technology, Chennai in hybrid mode from 03/07/2023 to 08/07/2023.

- Dr.R.Ramaprabha attended a 3 Day Workshop titled “Future of Sustainability: Electric Vehicles and Smart Grid” organized by the Department of Electrical and Electronics Engineering and Centre for Electric Mobility (CEM), SRM Institute of Science and Technology, Kattankulathur, Chennai from 27.07.2023 to 29.07.2023.

- Dr.R.Ramaprabha attended a 1 Day Workshop on NIRF rankings, NAAC Accreditations and Global rankings of Higher educational institutions in Tamil Nadu organized by Tamilnadu State Council for Higher Education (TANSCHE) at the TANSCHE office at Mylapore, Chennai on 22/08/2023.

- Dr. P. Saravanan attended 5-day workshop titled Arm India VLSI to System Design from 26/08/2023 to 31/08/2023.

- Dr.V.Thiyagarajan attended the 5-Day Faculty Development Program titled Challenges, Applications and Techniques in Engineering Research and Design organized by ARKA JAIN University at Jamshedpur from 12/09/2023 to 17/09/2023

- Dr.R.Ramaprabha attended a 5 Day short-term course titled Smart Grid and Integration of Distributed Generation organized by the Department of Electrical Engineering, National Institute of Technical Teachers Training and Research, Chandigarh (O. Plan No. ICT-572) on 01/09/2023.

- Dr.V.Rajini and Dr.R.Ramaprabha attended a 1 Day Conclave titled QS I-GAUGE Academic Excellence Conclave (Tamil Nadu Chapter) organized by QS I-GAUGE at Hotel Trident, Chennai on 22/09/2023.

- Dr.V.Thiyagarajan attended a 1 Day Seminar titled First Aid in the Digital World organized by Excel Engineering College at Namakkal on 09/09/2023.

Industry Collaboration

- Dr.R.Seyezhai had a discussion with C-Technologies, Chennai regarding the consultancy work and they discussed the topologies for EV charging and the specification for completing the design part and simulation work on 17/07/2023.

- The MOU between SSN EEE and University Malaya is officially signed and various collaborative actions are planned by Dr. V. Rajini on 17/07/2023.

- Dr. V. Rajini was invited by M/S Rane NSK, Guduvanchery for a discussion on their research problem on 14/07/2023.

- Dr.R.Seyezhai and Dr.N.B.Muthuselvan had a discussion with C-tech, Technologies, Chennai for the consultancy work on Bidirectional DC-DC converter for EV Charging regarding the identification of a topology and specifications for the design of the converter on 27/09/2023.

- Dr. V. Rajini had a discussion with Rane NSK regarding a consultancy work proposal submitted on 27/09/23.

Events Conducted

- Dr. R. Seyezhai, Prof./EEE, Dr. R. Ramaprabha, ASSP/EEE and Dr. M. Balaji, ASSP/EEE organized a Workshop titled “Conversion of Innovation into Start-up” at EEE seminar hall on 17/08/2023.

- Dr. V. Kamaraj and Dr.V.Thiyagarajan organized a Seminar titled “Role of Solar Photovoltaics in attaining Energy Sustainability” at SSN College Of Engineering on 28/08/2023.

- Dr.V.Rajini, Dr R.Seyezhai, Dr R. Ramaprabha and Dr M. Balaji organized a Workshop titled “AI Workshop-Series-1: Deep Learning for Image Classification” for third year students on 28/09/2023.

- Dr. M. Devesh Raj, Associate Professor organized a Workshop a one day workshop titled "Analysis and Mitigation of Switching Transients in Power Transmission using EMTP-RV" at System Simulation Lab, Dept. of EEE, SSNCE on 09/09/2023.

Project News

- Dr.R.Seyezhai & S.Devi applied for an External funded project titled Qusai High Gain Inverter fed PMSM based Electric Vehicle on 25/08/2023 to the funding agency MSME IDEA Hackathon 3.0 (Women) and presented the idea for the second round for 2 years for a funding amount of 15,00,000 Rupees on 28.08.2023.

- Dr.R.Seyezhai applied for an External funded project titled Photovoltaic Standalone Smart Poles for Smart Cities to the funding agency MSME IDEA Hackathon 3.0 (Women) for 2 years for a funding amount of 1500000 Rupees on 04/08/2023.

- Dr. R. Ramaprabha as PI and Dr. M. Balaji as Co-PI applied for an External funded project titled “Implementation of Hybrid Renewable Energy System based EV Charging Station with IoT Application for Rural EV Adoption” to the funding agency TNSCST – STPS for 2 Years years for a funding amount of 4.95 lakhs Rupees on 11/08/2023.

- Dr. P. Saravanan and Dr. R. Arun applied for an External funded project titled Design and Development of IoT Based Smart Non-biodegradable Garbage Collecting Robot to the funding agency TNSCST for 2 years for a funding amount of 450000 Rupees on 16/08/2023.

Conference Activity

- Dr Leo Raju, “Energy Management System using Multi-Agent Systems with IoT and Machine Learning”, in ICCPCT 2023 conducted by IEEE in Baselios Mathews II College of Engineering, Sasthamcotta, Kollam, Kerala on 10/08/2023.

- V.Rajini, Vinu Varshath S, P Dinesh, Kedhar Narayan, Jerry Rinaldo S, “Investigation of Integrated Bidirectional Converter with Eight Switch Inverter for Electric Vehicle Application”, in the International Conference on Circuit Power and Computing Technologies (ICCPCT) conducted by IEEE Scopus indexed in on 22/09/2023.

- B. Lakshmi Praba, Vidhu Priya V and Dr.R.Seyezhai, “A Detailed Study, Simulation And Analysis Of Dc-Dc CukConverter For Led Lighting Applications”, in International Conference On Emerging Trends in Information and Communication Engineering (ICICE ’23) conducted by ECE Department, Care College of Engineering, Trichy, Tamilnadu, India on 27/09/2023.

FACULTY ACTIVITIES

- Dr.R.Seyezhai and Kavichakravarthi, “Analysis of Two-Stage Interleaved Step-Up Converter for Solar Led Street Light Systems”, at International Conference On Emerging Trends in Information and Communication Engineering(ICICE ’23) conducted by the ECE Department, Care College of Engineering, Trichy, Tamilnadu, India on 27/09/2023.

- Dr.R.Seyezhai and Kavichakravarthi, “Design and Analysis of Double Z-Network Based VSI for PV Systems” at the International Conference On Emerging Trends in Information and Communication Engineering(ICICE ’23). conducted by the ECE Department, Care College of Engineering, Trichy, Tamilnadu, India on 28/09/2023.

- D. Ragul, and Dr. V. Thiyagarajan, “Comparison of multilevel inverter and its modulation techniques for battery energy storage system”, in Bilsel International World Scientific And Research Congress conducted by Institute of Economic Development and Social Researches, Turkey on 16/09/2023.

- Reshmi Soyinka V, IV Year/EEE, Vaduhammal V, IV Year/EEE, Sneka C, IV Year/EEE, Dr. V. Thiyagarajan, “A Review of Multilevel Inverter topologies in hybrid Electric Vehicles”, in 8th International Aegean Conferences Innovation Technologies Engineering conducted by Institute of Economic Development and Social Researches, Turkey on 25/09/2023.

- R Tamizh Selvan, Dr. V. Thiyagarajan, “Analysis of reduced switvh multilevel inverters for electric vehicles applications ”, in Second International Energy Days Conference conducted by Sivas Cumhuriyet University in Turkey on 27/09/2023.

Other Items

- R.Seyezhai and S.Harika Prepared and Published a Book Chapter titled Technical Study of Electric Vehicle Charging Infrastructure and Standards in the book titled, "Power Converters, Drives and Control for Sustainable Operations” for Wiley Publishing and on 19/07/2023.

FACULTY ACTIVITIES

- The following student completed his internship under “Research Internship Scheme – July 2023, SSNCE” under the guidance of Dr. R. Ramaprabha, ASSP/EEE. The details are:
    - Name: Mr. K. S. Harshavardan (II Year B.E. ECE), Regional Campus, Anna University, Madurai.
    - Title: Design and Simulation of Bidirectional Converter Suitable for EV Applications Duration: June 21, 2023 to July 19, 2023 (4 weeks).
- Dr. R Leo reviewed 4 papers in International Journals one in MDPI Journal, Sustainability, one in Sustainable Energy, Grids and Networks, one in Journal of Building Engineering, and the other in IET Renewable Power Generations, during August 2023.
- Dr.R.Seyezhai, ASSP/EEE and Ms.B.Lakshmi Prabha, Full-time research scholar demonstrated the working of SEPIC Resonant-based LED Driver to the Industry experts from Danfoss on the eve of SSN Innovation Day 2023 at SSNCE on 06/09/2023.
- Dr.R.Seyezhai, P/EEE presented the details and activities carried out by her start-up, Shrimitha Energy Solutions Pvt. Ltd to the power judges and chief guest for the SSN Innovation Day 2023 at SSNCE 06/09/2023.
- Dr. R. Ramaprabha reviewed 1 paper - COMPEL-04-2023-0157, The International Journal for Computation and Mathematics in Electrical and Electronic Engineering on 12.09.2023.
- Under the guidance of Dr. R. Ramaprabha 1 UG final year batch & 2 UG III year batches submitted a proposal for SSN student-funded project scheme on 31/08/2023.
- Dr. R. Ramaprabha (Co-PI) & Dr. Durgadevi (PI) submitted a proposal for the SSN faculty-funded project scheme on 31/08/2023.
- Dr. T. Divya received her PhD degree in the 43rd Convocation of Anna University. She completed her research under the guidance of Dr. R. Ramaprabha on 05/09/2023.
- Dr. M. Balaji presided as a Jury member for the Internal Hackathon at the institutional level on 23/09/2023.

FACULTY ACTIVITIES

- Dr R Leo reviewed 2 papers in International Journals one in the Journal of Cleaner Production and the other in IET Renewable Power Generations on 25/09/2023.
- Dr. R. Arun reviewed a journal paper from the Measurement and Control Journal on 26/09/2023.
- Dr. V. Rajini and Dr.V.S Nagarajan presented the details of Esamarp Technologies to the power judges and chief guest for the SSN Innovation Day 2023 at SSNCE on 06/09/2023.
- Dr. R. Ramaprabha reviewed 1 proposal under the DST – CRG – SERB scheme on June 27, 2023.
- Dr. R. Ramaprabha acted as Reviewer for the 12th International Conference on Renewable Energy Research and Applications, co-sponsored by the IEEE IES and IAS held from August 29 - September 1, 2023, in Oshawa, Canada on 12.08.2023.
- Dr. R. Ramaprabha acted as a Reviewer for the IEEE International Transportation Electrification Conference 2023 and reviewed the proposal on 12.08.2023.
- S. Sangeetha joined as JRA under the guidance of Dr. R. Ramaprabha on 21.08.2023.
- Dr. R. Ramaprabha attended 11 the Department Advisory Board Meeting (DAB) meeting of the Department of Electrical and Electronics Engineering, Sri Sai Ram Engineering College, Chennai on 03.08.2023 through Online mode in the capacity of DAB member.
- Dr.V.Rajini and Dr.V.S Nagarajan Received sanction order for Rs 5 Lakhs from startup India seed fund for their start up E Samarp Technologies on August,22, 2023

INDUSTRY ARTICLE

RECENT DEVELOPMENTS IN THE INDIAN POWER SECTOR AND ROLE OF GRID-INDIA

Mr. Surajit Banerjee. CGM (System Operations), NLDC, Grid Controller of India Limited, (Grid-India).

Indian Power system has reached a unique stage of development. Huge generation capacity addition with phenomenal growth of Private Sector generation, commensurate expansion & strengthening of the associated transmission & distribution network, operation of multiple agencies (State Utilities, Central Utilities, and Private players) in a deregulated environment, expansion of electricity market, integration of huge quantum of generation from renewable sources [about 500 GW by 2030], action plans to implement One Sun One World One Grid operation in S. Asia, etc. have increased the complexity of Indian Power system manifold. The country recently met an all-time high demand of 240 GW on 01-09-2023 and an all-time record energy of 5224 MU in a day on 02-09-2023.

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In FY 2022-23, there was addition of multiple new transmission and generation elements in various parts of the country which significantly improved the grid interconnection especially in large RE complexes.

DEPARTMENT EVENTS

Grid-India worked in close coordination with the government agencies and other stakeholders on various fronts such as strengthening the Technical Standards for Connectivity to the Grid and Technical Standards for construction of RE power plants and its compliance to ensure that all new elements connected to the grid not only enhance the connectivity but also contribute to the reliability of the grid.

The development of National Electricity Grid in India, has helped in harnessing diversity, enabled optimization of resources, enhanced resilience and facilitated growth in renewable energy in the country and expansion of the electricity market. GRID-INDIA has continued to play a leading role in facilitating Sectoral reforms, including growth of Renewables, expanding the ambit of Automatic Generation Control (AGC) and Security Constrained Economic Dispatch (SCED) to ensure further optimization and savings in fuel cost on all India basis etc. At the same time, focus is being kept on the need to enhance security and resilience of the Electricity Grid. GRID-INDIA has also made a significant contribution in implementing the electricity market reforms introduced by the Central Electricity Regulatory Commission like Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price – Day Ahead Market (HP-DAM) to facilitate integration of Renewable Energy and economy in operations and valuing various resources, including the Human Resources. NLDC, GRID-INDIA inter -alia is the Implementing/Nodal Agency for many responsibilities like for sharing of inter - state transmission charges and losses, Power System Development Fund (PSDF), implementation of the Renewable Energy Certificate (REC) Mechanism, Renewable Purchase Obligation (RPO) monitoring and Registry for Energy Saving Certificates (ESCerts) under Perform, Achieve and Trade (PAT) Scheme for energy efficiency, Green Energy Open Access Registry etc. NLDC has also been designated as Nodal agency for disaster management co-ordination in the Power Sector.

Grid-India has been actively engaged in discussions for evolving strategies for decarbonizing the energy sector with stakeholders at various levels. These actions also enable us to move towards Sustainable Development Goals (SDGs) for addressing environmental challenges and achieving a more sustainable future. With Power System operations undergoing significant changes in the recent years, Central Electricity Regulatory Commission (CERC) has revamped and updated Indian Electricity Grid Code (IEGC).

DEPARTMENT EVENTS

The revised Indian Electricity Grid Code, 2023 (Grid Code, 2023) has come into effect from 01 st October 2023. Along with Grid Code, 2023, Connectivity and General Network Access (GNA) Regulations were also implemented w.e.f 1 st October 2023. These regulatory reforms would support the measures towards achieving 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030 in India.

One of the major thrust areas of the new Grid Code is to enhance the use of RE sources and considering increased Renewable energy penetration, the need for flexibility of conventional resources, energy storage systems, demand response measures, Integrated Resource Planning (IRP) with key components of demand forecasting, generation resource adequacy planning with Unit Commitment and Economic Despatch, and transmission resource planning have been added in the Grid Code to ensure reliable electricity supply. Frequency Response Performance Assessment provisions have been mandated in the Grid Code, 2023 to assess the operating reserves to be maintained so that frequency variations can be controlled within the tolerance band of 49.900 – 50.050 Hz even under credible contingencies. The Grid Code 2023 also mentions the importance of various types of ancillary services viz. Frequency Control, Voltage Control and Black-Start. For smooth and efficient supervision and control of the huge number of grids connected RE plants envisaged, the Grid Code, 2023 has introduced the concept of Qualified Coordinating Agency for Renewable energy forecasting and scheduling under distributed renewable sources. Compliance repository performance verification of RES generators and periodic testing of the power system elements in the Grid as mandated in the Grid Code 2023, are expected to strongly support reliable operation of the Indian Grid.

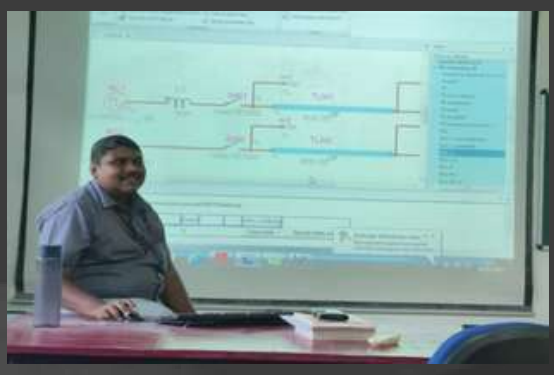
In a major shift from the earlier paradigm of scheduling, access to the grid and scheduling as per contracts have been delinked under GNA. The buyers can flexibly schedule power under any type of contract which would help in optimizing their power procurement costs. Grid-India has played a key role in the implementation of these regulatory reforms. A total of 20 plus procedures have been prepared with due stakeholder consultations under these regulations over the period spanning June’23 to September’23.

ONE DAY WORKSHOP on "Analysis and Mitigation of Switching Transients in Power Transmission using EMTP-RV"

COORDINATOR: Dr. M. Devesh Raj, Associate Professor

On 9th September, 2023 the Department of EEE organized a workshop on "Analysis and Mitigation of Switching Transients in Power Transmission using EMTP-RV" at the System Simulation Laboratory. The workshop was intended for 3rd year U.G - EEE students and it was planned on the second Saturday so that the regular classes wouldn't be affected. Around 44 students registered to attend the workshop, but only 32 students were selected due to limitations on the EMTP-RV software user license. Even though the workshop was on a non-working Saturday, 27 students attended the workshop.

A clear understanding of the propagation of waves in long transmission lines and switching surge analysis with the aid of EMTP-RV simulation software were of primary focus in this workshop. The entire content delivery and hands-on training was provided by Dr. M. Devesh Raj, Associate Professor. The workshop started at 9:00 AM with a brief introduction about the classification of transmission lines and modeling followed by the propagation of waves in long transmission lines with a demonstration using EMTP-RV software. Subsequently, the case study-based hands-on practice using EMTP-RV software for analysis of switching transients in transmission lines was provided. The workshop ended by 12:30 with concluding remarks by the coordinator & suggestions/feedback organized from the participants. The workshop was a great success as all participants expressed their sincere appreciation and their eagerness to await future such events to be organised.



Interaction of Sanctioned DST project

Title of the project: Design and Development of Replicable and Scalable Cyber-Physical, Micro Grid System

Sanctioned by DST International Bilateral Co-operation Division (India-Serbia, Bilateral Scientific and Technological Cooperation)

Dr.Zoran Stojanovic, Associate Professor (Serbia side PI) and Dr.Mileta Zarkovic,Assistant Professor,(Serbia side Co-PI) Department of Power Systems, School of Electrical Engineering, University of Belgrade. Bulevar Kralja, Aleksandra, Belgrade, Serbia visited department of EEE on August 22, 2023, along with Dr.C.Vaithilingam Prof /SELECT, (India side PI) Vellore Institute of Technology, Chennai.

They have interacted with Dr.R.Deepalaxmi Associate Prof/EEE (India side Co-PI) for the sanctioned project titled "Design and Development of Replicable and Scalable Cyber-Physical Micro Grid System" under DST International Bilateral Co-operation Division (India-Serbia, Bilateral Scientific and Technological Cooperation). Also, they have interacted with Dr. V. Rajini, Prof and head/EEE, SSNCE, and Dr.S.Radha, Vice Principal/SSNCE. They visited the SSN research center and interacted with Dr.P.Ramasamy, Dear research.

Innovation Day

Innovation took center stage at the recent SSN Innovation Day event held September on 6th and 7th 2023, a two-day extravaganza aimed at celebrating and promoting creativity, collaboration, and cutting-edge ideas. The event brought together students, faculty, and industry experts in a vibrant atmosphere that pulsated with innovative energy.

On the first day, SSN Innovation Day drew the attention of experts from various engineering fields. Our project stall was a magnet for these distinguished professionals, who recognized the immense potential of our solutions. Their invaluable insights and constructive feedback provided us with a roadmap to take our projects to the next level and explore its practical implementation in industries. Their encouragement was a significant morale boost for our team.

As a testament to the quality of our work, we were selected to advance to the second round of presentations, where we had the privilege of presenting our project directly to the esteemed panel of judges.

The second day of the event was equally thrilling. Students from various departments and batches within our college flocked to the CDC building, eager to explore the innovative endeavors on display. Our team took this opportunity to present our project to our peers, allowing them to gain a comprehensive understanding of our groundbreaking work.

The enthusiasm and interest shown by our fellow students reinforced our belief that innovation has the power to inspire and unite individuals across disciplines and academic levels. It was a heartening experience to witness the support and curiosity of our peers, and we hope our project left a lasting impression on them.

SSN Innovation Day 2023 was a resounding success, not just for our project, but for the entire SSN community. It showcased the power of innovation to bridge the gap between theory and practice and demonstrated the potential of young minds to drive transformative change. We look forward to taking our project to greater heights, inspired by the connections made and knowledge shared during this extraordinary event.

DEPARTMENT EVENTS

EEE department students exhibited their innovative projects to the team of industry experts and guests. There were totally 9 projects from EEE department. Out of the 9 projects,5 projects were displayed at the CDC and were evaluated by the industry experts. The project titled "Adsorptive removal of impurities in the transformer oil retaining the oil properties" was selected for the power judging round.

Industry experts from Danfoss, Tata Elxsi, Royal Enfield, Nissi Engineering Solution, Great Learning interacted with the students and evaluated the projects. In the afternoon session they visited the faculty projects and research labs in the department. The experts appreciated the facilities in the department and expressed their intent to take up collaborative project work.

Projects displayed at CDC:

S.No	Project Title	Name of the students	Project Supervisor
1	Health care monitoring system using light fidelity	S. Amrutha V. Raghavendra R. Sethuram Gautham	Dr.K.Usha
2	Adsorptive removal of impurities in the transformer oil retaining the oil properties	Navneet Krishna Narasimhan G. Jeevanantham	Dr. S. Tamilselvi
3	Parking management using computer vision techniques	R. Sai Kanna J.Raymond Jude Harini Sree V. S. T.D. Saraswathy	Dr. R. Rengaraj Dr. G. R. Venkatakrishnan
4	Voice controlled wheel chair	C. Shiva Venkat T. Thejas Adithyaa G. Pozhilan	Dr. R. Rengaraj Dr. G. R. Venkatakrishnan
5	Tiny ML based intruder alert Camera	Manojshyaam.C.J Mahalakshmi.K, Sindhu.S, Abdulrahman Saleem	Dr.R.Rengaraj

DEPARTMENT EEVENTS

DEPARTMENT EEVENTS

Projects displayed in Department:

S.No	Project Title	Name of the students	Project Supervisor
1	IoT based smart energy meter	Akshaya .S Harini Sree .S A.R. Jayashree D. Khavipriya	Dr. V. Thiyagarajan
2	Air Pollution Monitoring system	J.Raymond Jude	Dr. R. Rengaraj Dr. G. R. Venkatakrishnan
3	Development of machine learning model to predict the battery lifespan using IOT	R.Saimugil B.K.Sri Harini	Dr. R. Rengaraj Dr. G. R. Venkatakrishnan
4	Autonomous Electric delivery system	Sathyapriya.R	Dr.P.Saravanan

DEPARTMENT EEVENTS

Workshop on " Conversion of Innovation into Start-up "

Faculty Coordinators Dr.R.Seyezhai, Dr.R.Ramaprabha, Dr.M.Balaji

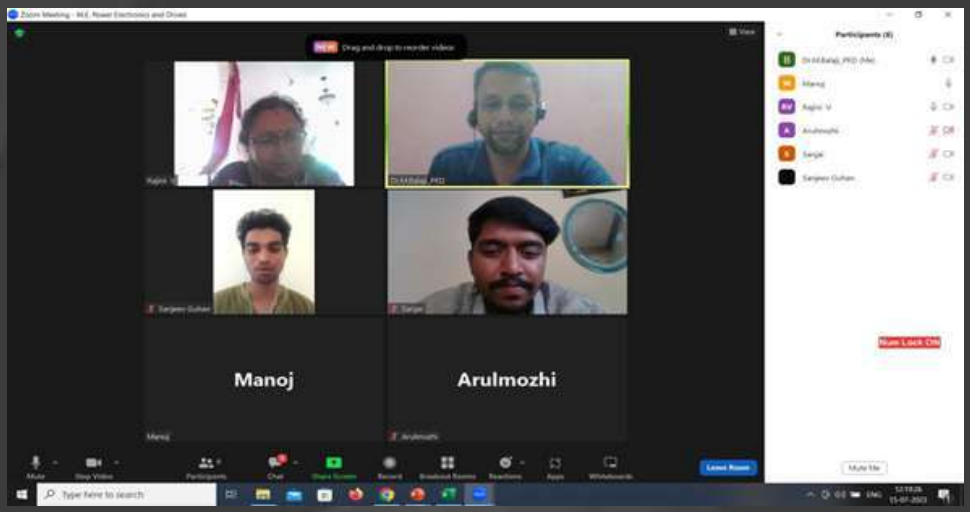
The Department of Electrical and Electronics Engineering in association with the Institution Innovation Council(IIC) organised a workshop on "Conversion of Innovation into Start-up" on 17.08.2023. Dr. V. Vasan Prabhu, Academic Manager & EV Tech lead of Great Learning Chennai, delivered the lecture. The workshop was attended by UG students, research scholars, and faculty members. The speaker discussed the importance and need for innovation. The session focused on the types of innovation and the process involved in converting an idea into a prototype. He substantiated the talk by giving real-world examples. The speaker highlighted the importance of legal and intellectual Property Considerations while converting an idea into a product.

The speaker engaged the attendees in an insightful discourse on the entrepreneurial landscape within the electric vehicle domain. He discussed various facts of entrepreneurship development, including insights into the Startup India initiative, while also shedding light on the expansive opportunities within the field of electrical innovation. He advised exploring the relationship between entrepreneurship development and the scope of electrical innovation. He described challenges faced by entrepreneurs in the electrical sector, including regulatory hurdles, technological complexity, and market competition. He also highlighted the opportunities arising from these challenges which serve to create new models and products.

M.E. Virtual Open House

A virtual open house program for aspiring M.E. students was held on 15.07.2023. There were two sessions in the open house. In the first session, there was a presentation by Mr. Anantharaman about our institution, the facilities on the campus, and the programs offered. In the second session, there were program-wise break-out rooms to have more interactive discussions.

Dr. M. Balaji, faculty in charge for the second session presented the overview of the power electronics and drives program. The new components introduced in the curriculum, research facilities available in the department, the alumni details, and internship opportunities available were discussed. After the presentation, Dr. V. Rajini and Dr. M. Balaji interacted with the students and clarified their doubts.



The Workshop conducted by IEEE-PELS & Department of EEE on Deep Learning for Image Classification

The Deep Learning for Image Classification Workshop conducted by IEEE PELS student branch chapter in association with the department of EEE was held on **28th September, 2023** at the EEE seminar hall was an engaging and informative event that brought together enthusiasts and professionals from the field of Deep Learning and Artificial Intelligence. The workshop aimed to delve into the intricacies of image classification using deep learning techniques, offering both theoretical insights and practical hands-on experience.

The event commenced with a warm welcome and opening remarks by the Head of Department, Dr Rajini. She expressed her enthusiasm for the workshop, highlighting the significance of deep learning in the contemporary world of computer vision. Her address set a positive tone for the event and motivated the participants to make the most of the learning opportunity. Following the HOD's address, the stage was taken by **Dr J. Bhuvana**, an esteemed Associate Professor in the Computer Science and Engineering (CSE) department at SSN College of Engineering. She started off the workshop by providing an overview of the key concepts and principles behind deep learning for image classification. She elaborated on the evolution of deep learning models, emphasizing the transformative impact they have had on various applications, including image classification.

The workshop was structured to include a comprehensive hands-on coding session, where participants had the opportunity to apply what they had learned. The speakers guided the attendees through the practical implementation of deep learning techniques using popular frameworks and libraries. The practical aspect of the workshop allowed participants to gain valuable experience and build confidence in their deep learning skills.

A crucial part of the workshop was the interactive Q&A round, where participants had the chance to seek clarifications, ask specific questions related to their projects, and engage in insightful discussions with Dr Bhuvana. This segment fostered a dynamic and collaborative learning environment, enabling attendees to deepen their understanding of the subject matter. The Deep Learning for Image Classification Workshop was a resounding success, thanks to the contributions of our enthusiastic participants and the expertise of our speaker, Dr Bhuvana. Attendees left the event with a solid foundation in deep learning techniques for image classification and a sense of inspiration to further explore this exciting field. The event served as a testament to the department's commitment to advancing knowledge and fostering a community of learning and innovation.

ANTENNA DESIGN – OVERVIEW OF MACHINE LEARNING TECHNIQUES AND APPLICATIONS

Bhuvanesh N P, 2nd year

Artificial Intelligence is the confluence of Mathematics and Computer Science which enables machine to perform tasks that require human thinking abilities such as learning, decision making, classifying, predicting and problem solving. With the advance of big data availability and affordable high computing power, AI has become extremely useful in research and engineering. Data analysis and extracting useful information from it is essential to ideate new techniques and designs. A subset of AI, Machine Learning is gaining huge traction in various applications for its versatile and proven ability to produce reliable and predictable algorithms for optimization and design.

Several papers have investigated the applications of ML in antenna design. These include simulations to understand electromagnetic behaviour and characteristics of antennas and obtaining datasets to develop algorithms that meet the needs of the designer. ML techniques like SVM is used to design shaped beam reflect array unit and rectangular microstrip antennas. Parameters like input impedance, operational bandwidth, resonant frequency etc are considered. Similarly, another ML technique called Bayesian regularization in Neural Networks are employed in the design of Planar inverted F antenna (PIFA) with magneto dielectric nanocomposite (MNDC). Parameters like nanomagnetic materials volume, particle radius, radiation efficiency, gain, resonant frequency, and bandwidth are calculated with high accuracy with ML. ML is also integrated into “Evolutionary Algorithms”, which find optimized results. Using the right algorithm paired with Artificial neural networks, the dimensional parameters can be predicted from the frequencies and associated bandwidth requirements. This eliminates time consuming simulations and computational burden. Similarly, combining Gaussian process ML and Differential Evolution algorithm, inter chip antennas are designed with enhanced speed and optimization, compared to Differential Evolution.

The ML techniques have become very useful but come with a set of challenges. The choice of learning algorithm is not easy to decide as it depends on what is being predicted and the type of data acquired. Beginning with incorrect assumptions gives worthless results. Also, insufficient data hampers the learning ability of ML algorithms. Data preprocessing is essential to clean the data and normalize them. Lastly, it is always necessary to debug the algorithm to reduce high bias and high variance occurrences. Diagnostics techniques need to be used to tackle this.

STUDENT CORNER

Antennas are the essential building block of wireless connectivity. Hence, research in this domain is higher owing to its wide usage and applications. They are used in Radio communication, Telecommunication, satellite communications and have found usage even in miniature applications like in Bio medical engineering. Implantable medical devices are utilized for treatments such as hyperthermia for cancer treatment and vital signs monitoring. They are placed in locations inside the body where they monitor bio signals and send them to an external device. It analyses and retrieves useful information for further medical diagnostics. Thus, the role of antenna is justified. Magnetoelectric (ME) antennas like NanoNeuro RFID are used for neural recording. ME antennas are smaller in size and enables miniaturization of sensor. It can also harvest energy making it reliable for long term usage. Similarly, Multiple Input Multiple Output (MIMO) are used to with EBG for implantable devices.

Various types of Implantable antenna are used depending on the application. Planar antennas, Wire antennas, Confrontal antennas, Spiral antennas, Slot antennas, Planar Inverted antennas are few types of antenna designs used, depending on the design requirements. They also must comply to parameters like miniaturization, patient safety, and bio compatibility, as they can have lasting effects on the human body. Since, the antenna is a key component of a biosensor operating in a harsh in-body environment, its design becomes a very challenging task. Several factors need to be considered while designing such an antenna including size, gain, efficiency, radiation pattern and patient safety. Though, the selection of antenna type is generally application specific, patch structures have exhibited greater potential of meeting most of the requirements efficiently.

REVOLUTIONIZING ENERGY STORAGE WITH SPINTRONICS

Anbu Suchithra, 2nd year

In the recent past, technology was characterized by its bulkiness and size. Bulky computers, large storage devices, and power-hungry gadgets filled our lives. However, as technology has evolved over time, our world has become increasingly digital, and the demand for smaller, more powerful, and energy-efficient devices has grown exponentially. Traditional electronic components rely solely on the movement of electrons, and their charge, to function. However, as electronic components have shrunk in size, the challenges of efficiently storing and managing electrical energy have become more pronounced.

Spintronics offers a solution to this challenge through its remarkable property of electrons known as “spin,” a field that combines the principles of electronics and magnetism. Electrons can spin in two distinct ways: “spin up” and “spin down” akin to a tiny magnet with a north pole at the top for spin up and the south pole at the top for spin down. These two options, much like flipping a coin, form the fundamental basis of spintronics.

The history of spintronics, dating back to the mid-20th century, began with the exploration of electron spin. It gained significant traction in the 1980s, particularly with the discovery of giant magnetoresistance (GMR) by Albert Fert and Peter Grünberg in 1988, a breakthrough that earned them a Nobel Prize in Physics in 2007. GMR set the stage for spintronics applications in data storage and sensors. Over the years, spintronics has continued to advance, with innovations like spin-transfer torque (STT) and the exploration of new materials, offering the promise of more efficient and versatile electronic devices and energy solutions.

Energy storage is an area where spintronics plays a crucial role in advancing renewable energy technologies. In conventional electronic devices, data storage relies on electrons filling capacitors, transitioning from 0 to 1 as the capacitor fills. However, as devices shrink, electron leakage becomes an issue. In contrast, spintronics pairs insulation with ferromagnets. Two layers of ferromagnetic material are used: one with a fixed spin direction and the other with a changeable spin. When both layers spin in unison, data is stored, when they spin oppositely, data is erased. This spin-based approach in spintronics offers a promising solution for robust and efficient data storage, mitigating the electron leakage problems seen in traditional electronics.

Spintronics is revolutionizing renewable energy across multiple fronts. In solar energy, it addresses the inefficiencies of traditional photovoltaic cells by harnessing electron spin, potentially reducing energy losses and significantly enhancing overall efficiency. Simultaneously, in wind energy, spintronics improves the performance of wind turbines through the incorporation of spintronic materials, optimizing electron spin alignment for higher electrical output and more efficient mechanical-to-electrical energy conversion. Furthermore, spintronics enhances the reliability and durability of wind turbine generators, making them ideal for long-term use in renewable energy systems.

In conclusion, spintronics is playing a pivotal role in transforming renewable energy technologies. Advancements in spintronics have led to significant improvements in the efficiency and performance of solar cells, wind turbines, and energy storage systems. By harnessing the spin of electrons, spintronics has the potential to revolutionize the way we generate, store, and utilize renewable energy. As research in this field continues to progress, we can expect to witness even more exciting developments that will shape the future of renewable energy.

REPORT ON SSN INNOVATION CENTRE EXHIBITION

-MOHAMED ANAS S, 2nd year

Innovation is the most fascinating part of modern days technology. In this context, the SSN College of Engineering conducted its SSN iFound Science Exhibition on 06 th September 2023. It took place in the Career Development Centre, as the name goes shaping and developing creative engineers, In the hall were kept a lot of projects from all the departments of the college. I am here to share my little experience on that day.

Each project was fascinating and amazing. The cutting-edge technology and creativity of each project was a beauty to watch. There were a panel of judges to choose the best projects. I am sure the Judges would surely had a cat on the wall decision on the end results. All the departments showcased their talented students and their innovative ideas in projects with few projects were ecofriendly too.

Our department EEE also had variety of projects showcased. The most amazing and fascinating project was the automatic wheelchair with voice recognition system. This project brought the novelty of accessing specific voices of the chair, checking the access of commands in a website and storing the information in a database. The idea of reducing the cost of this huge mechanism made the project catchy too. The rapport of the 3 rd Years who made it help us get a better understanding of it.

There were other projects like oil distillation from water which was elected as the apt one from the EEE department. There were even other thought-provoking projects like the ease way to play tennis, etc. There was this project from my friend, Sree Ram of ECE department, a water level indicator. Though it was a simple project, it was the only project from the first years last year. The 3D printing done for the indicator designed by himself was a attractive on. Watching one of my friends competing with the other projects of seniors really boosted myself to work on it.

As an insight, the projects displayed in the iFound exhibition motivated us towards creating ideas. And SSN is a great place where creative ideas turn into reality through IFPs and other funding. A notable mention to all the staffs who guided each project as mentors which eventually led to bring out the talents of students. In the end there could be only on winner, but the amount of hard work done by all the students are appreciated.

In the end, I want to conclude that, the SSN iFound Project exhibition was worth watching all the projects and would like to thank the management for taking efforts in developing students ideas. Hope we could also find a opportunity to create and develop a project with novelty and display it in the upcoming years.

MY JOURNEY TOWRADS INTER-ZONALS

-MOHAMED ANAS S, 2nd year

Stepping into SSN as a topper from the school and turning into an athlete takes a lot of time and effort. Being a topper in a sports school is not anything new but turning into an athlete that you dreamt of is not a joke. SSN made my dream of representing the institution in athletics come true. In this short essay, I will be sharing my bizarre experiences of my participation in sports in our college.

My dream of becoming an athlete came true when our college called students for Zonal participation irrespective of sports background. I who filled out the form for participating, unfortunately, missed the selections. But P.E.T Sir. Nagendran due to vacancies in long-distance events, contacted me to do it. Never did he know that I would be the only student representing athletics from SSN that year. I took this as my final opportunity to excel in athletics and started my workouts.

I started my training early on with selections before the events could take place, but it does not even matter because I was practising was 1.5km run the event I got was a 21km marathon and a reserved place in a 1.5km run. But without losing hope, I wanted to give it a try. I was practising with other co-athletes from other years which eventually led my confidence build up to face the race.

The day finally came to test my practice and my patience. We are all athletes led by Sir. Nagendran went to Sri Sairam College of Engineering on 06 December 2022. To my shock, my event was a direct inter-zonal event but the eventual lack of fitness by our seniors let me get an opportunity. The day started of with 34 teams participating in the zone with Notable colleges like St. Josephs CE, Loyola CE, etc. The first event of the day was 5km which started with initial domination of St. Josephs boys and girls in various events.

Slowly but steadily, we started winning medals in events from both the boys and girl's side. Due to injury concerns by athletes, I was set to run the 1.5km run. With all the excitement I started off the race. I placed third in it, eventually leading the race, lost it due to my mistakes. After getting a handful of advice I also started the 10km run as the only SSNite to participate. This event on a spree because this run tests us patience with our stamina. But me who was ready to give everything placed 2 nd below a state athlete.

With this overwhelming response in athletics, I set to prepare for 10km because the first two winners of respective events are allowed to participate in inter zonal. But this time things became worse. I slowly started to getting cartilage related issues and continuous rain stopped my workouts. But still I continued to push myself to the journey. With the other years rejecting the chance of Inter Zonal. I was the only SSN UG to participate in it, I travelled with St. Josephs College athletes to Kongu Engineering College situated in Namakal. With injury-prone decisions I took the risk, but to add my condition, my event of was the first event of the day early morning with me reaching that night. With all the fatigue of a day and very little rest I went on for the event. I started my run promisingly. But in the last quarters of the run, my injuries in my leg started to worsen leading to decrease my chances winning. Finally, I placed 6 th in the Inter Zonal, equivalent to the states, where I am 6th best 10km athlete under the 430+ colleges under Anna University.

The competition was very intense in that, where I had the chance to collaborate to a lot of professional athletes. I meet a lot new faces and gave a lot advice about my events. The event lasted for two days. And after the two days my athletic journey too came to an end. The appreciation was fair enough from the PE department when I returned.

The comeback is bigger than the setback, with now with more potential, I am getting ready to face this year's Zonal with a better mindset. With the learnings from last years and support from the Sports Department, I am getting ready for my new challenge. Hope my experience sparked some interest of how dreams come true at last. With this I conclude by commenting that if I could dream and work for it and achieve it after years, anybody can do it. So, dream big and work hard, we have a right platform like SSN to showcase what we have got.

IEEE PHOTONICS SOCIETY STUDENT BRANCH PHOTONICS OUTREACH PROGRAM

Keshavraj S, 2 nd year

Hello everyone! I am really thrilled to share about my experience in the recent outreach program organized by the IEEE Photonics Society Chapter. On 27 September 2023, The Photonics Society SSNCE organized an outreach program at the Government Higher Secondary School, Thiruporur, to demonstrate and teach them basic physics concepts.

Being part of this initiative was a new and eye-opening experience for me. The energy and enthusiasm the students had were extraordinary. As our volunteers demonstrated various experiments the students' faces lit up with excitement and witnessing their bright, inquisitive expressions was genuinely heartwarming. It reminded me the importance of spreading knowledge to young ones and fostering a love for learning. I also had a great time interacting with my seniors and making new friends.

I basically worked on the experiment – Flame Sensor Fire Detection System with Arduino. The objective of this experiment is to create a fire detection system using a flame sensor and Arduino. The system will activate a buzzer and a sprinkler automatically when a flame is detected, simulating a fire protection mechanism. We constructed this experiment using flame sensor and Arduino along with resistors and transistors fitted in the Breadboard and we demonstrated the working of this experiment lively, infront of the students in their class. They really enjoyed our demonstration and some of them asked doubts, we mostly clarified it and made it understandable to them. The teaching staffs of this school also appreciated us for this outreach program.

I think our small move with this society along with my friends can make a revolution in upcoming days and many students will become eager to learn about Electronic Circuits and Devices, Arduino, many types of sensors etc. Finally, I experienced a lot by this outreach program and I hope that my journey with this IEEE Photonics Society continues forever to teach for many students.

It's Not Just A Cube

-Komal Yuvaraj, 2nd year

Many people look at a Rubik's Cube and the first thing that comes to their mind is "How do I solve this ". Something similar happened to me when I was in 4th grade, one of my friends brought a Rubik's cube to school.

I had had one of those before but never really liked them because no matter what I did, once it was scrambled I could never solve it. But he was solving it and I was flabbergasted seeing that. The very same day I bought a cube and just started twisting and turning it and guess what, I still wasn't able to solve it.

After trying for about a month or so, one of my friends told me that to solve cubes you need to learn something called algorithms. Which are a set of different steps that you have to follow that may vary depending on the position of different pieces. It took me around 10-15 days to learn all the different algorithms during which I broke about 4 cubes. It was frustrating no doubt, if you mess up even a single step the whole cube gets scrambled, and then you have to solve it all over again. But even though it was frustrating I kept on trying and trying, throwing the cube then picking it back up.

I remember my mother scolding me, because I used to come home from school and start solving the cube without taking my bag off. Once I learned how to solve a 3 by 3 Rubik's cube, I came to know that there are many different types of Rubik's cube, some of which are not even in the shape of a cube. Once I learned about that it opened up a whole new world to me and I know there are 12 different types of cubes I can solve from 4X4, 5X5 to megamix, square-1, etc.

Now I know many people will say that it's just a cube, but it's not, it's so much more. I was able to meet so many new people, who share the same love for cubing as I do. Other than that it also taught me an important life lesson, that no matter how big or complex a problem is, it can be solved if you tackle it step by step.

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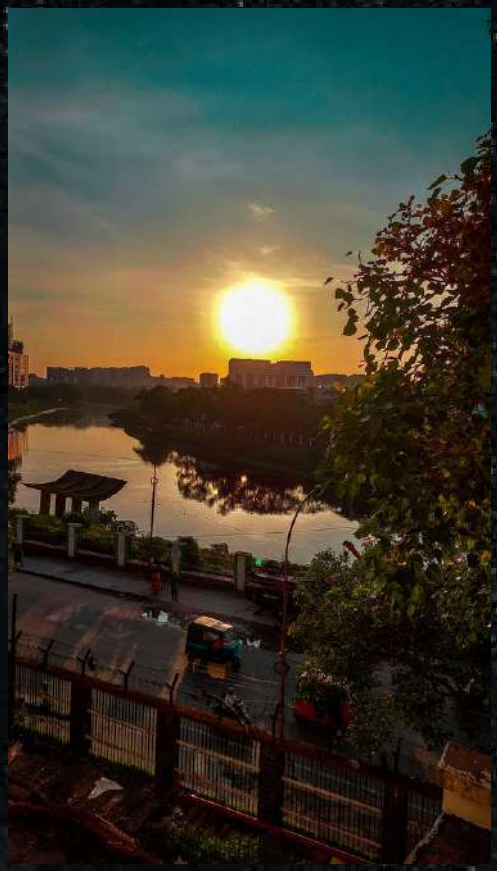

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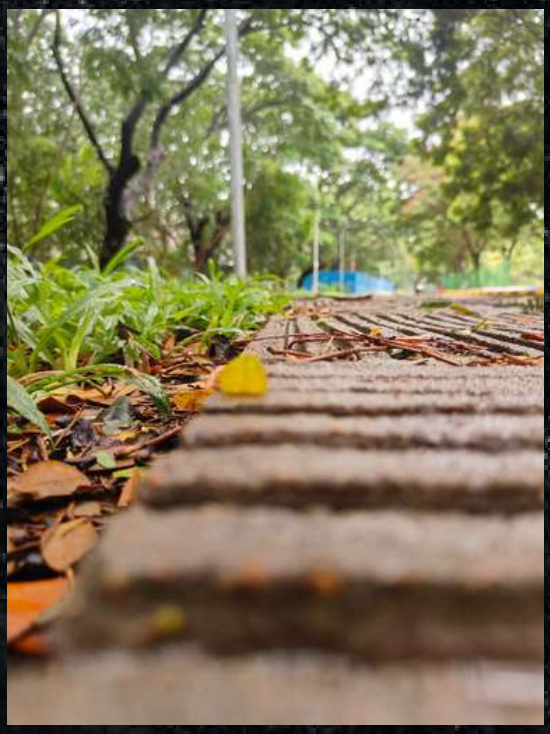
Suvashwin V
2 nd year

MYSTIC LENSES



Roopashree
2 nd year

MYSTIC LENSES

Vishnuvarshini
2nd year EEE B

VANTAGE OF VERSES

Beneath the Mask

-Sindhu S

In shadows cast, where secrets lie,
Innocence wears a thin disguise.
Beneath the mask of friendly grace,
Lurk those who scheme in this treacherous space.
They smile and nod, pretend to care,
While weaving webs of deceit with flair. Their words, like daggers, cut so deep, As trust and friendship, they silently sweep.
In cloak and dagger, they conspire,
With hidden motives, they never tire.
Betrayal's art, their twisted song,
Innocence they mercilessly wrong.
But in their darkness, we find our might, For they can't dim our inner light.
We rise above the venom's sting,
With strength and grace, we'll spread our wing.
Though they may plot and scheme in stealth, In unity, we find our wealth.
With open hearts and spirits free,
We'll overcome, forever be.
For in this world of shadows long,
The truth and love, they make us strong. They may try to undermine and bend,
But kindness, loyalty, in the end, we'll defend.

Creep

Shivam, 2nd year

In shadows cast by a distant moon's glow,
Unrequited love, a bittersweet woe.
A heart that yearns, a soul that sighs,
In silent tears, its sorrow lies.

Why does love's ember burn one way?
A painful dance, night and day.
When hearts align, it's heaven's grace,
But unreturned, a bitter chase.

Does love unspoken haunt the soul,
As waves of longing take their toll?
In secret dreams, the heart takes flight,
Yet in reality, it fades from sight.

Can unrequited love find its peace,
In the depths of longing, will it cease?
Or is it a fire that forever burns,
A lesson in love, as the heart yearns?

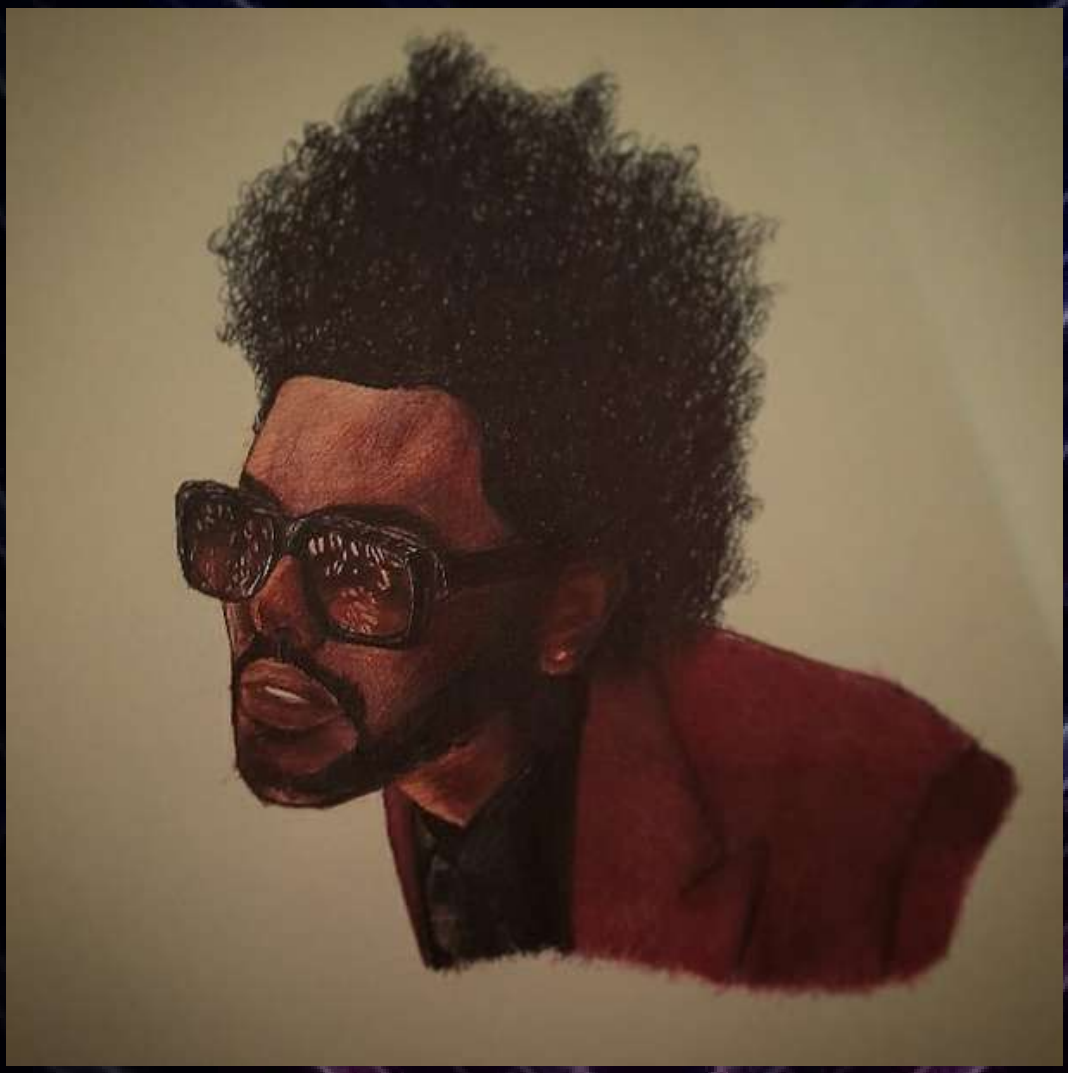
In moonlit realms, where dreams entwine,
Unrequited love, a grand design.
The labyrinth of longing, so profound,
In verses intricate, our sorrows resound.

With every stanza, a heart's lament,
In sonnets woven, its intent is sent.
An intricate tapestry of desire and despair,
Unrequited love, a burden we must bear.

In rhymes that dance, a waltz of pain,
A cadence of love, like summer's rain.
Yet still, we chase this elusive dove,
Through intricate verses, unrequited love.

In the final verse, we find our close,
Unrequited love, like a withering rose.
Though complex and deep, this love may be,
In its embrace, we find our poetry.

Through the pain and intricate rhyme's grace,
We learn to cherish love's transient embrace.
For, in the end, it's not the love we gain,
But the beauty of longing, the eternal refrain.



Monish Kumar
2nd year

SENIOR INTERVIEW

Interviewer - Sindhu

About Vishwaraj:
Vishwaraj graduated in Electrical and Electronics Engineering (EEE) from SSN in 2022 and currently works as a software engineer at Microtek Technology. He shares insights from his successful placement experience, emphasizing the importance of a strong programming foundation, understanding core concepts, and practicing aptitude. Vishwaraj's career at Microtek has been rewarding, including receiving the Spotlight Award for a unique project.

Interviewer: Okay, could you please introduce yourself briefly? Mention your name, graduation year, and your current position or career path.

Vishwaraj: Of course. I'm Vishwaraj, and I completed my EEE degree at SSN in 2022. I'm currently working as a software engineer at Microtek Technology.

Interviewer: Great. Now, can you provide a brief overview of your placement experience during your time in the department?

Vishwaraj: Certainly. Our placement experience was unique as it all happened online due to the pandemic. Despite the remote setting, I must say it was a great experience. All the companies adhered to the schedule, and I believe our placement system managed the situation exceptionally well, especially considering the challenges of the Corona batch.

Interviewer: That's good to hear. Were there any specific companies or industries you were particularly interested in, and how did you prepare for those?

Vishwaraj: Absolutely. Like most students, I aimed for companies like Google and Amazon. However, being from an EEE background, I knew cracking coding interviews would be challenging. To prepare, I practiced coding problems and utilized online resources.

Besides that, I had a strong desire to work at Microtek, and I'll explain more about the interview process for that later. For subjects related to electronics, I relied on my college textbooks. As for aptitude, I watched several YouTube videos for additional preparation.

Interviewer: It sounds like you were determined. Did you face any significant challenges or setbacks during your placement process, and how did you overcome them?

Vishwaraj: I did encounter a major challenge. Initially, I was unable to secure a spot in the first few rounds of interviews, almost 20 to 25 companies. It was quite disheartening because the fear of not getting selected started creeping in. However, I'd advise anyone facing a similar situation not to panic. Keep going through the interview process, as you'll eventually find the right fit. It's easy to get discouraged, especially when others around you secure placements, but remember that there are multiple opportunities throughout the placement season. In my case, I persisted, and I eventually received offers from three other companies before choosing Microtek.

Interviewer: That's a great perspective. So, what do you believe were the key factors contributing to your successful placement?

Vishwaraj: The primary factors that led to my successful placement at Microtek were my coding skills and my strong interest in C++. Additionally, my background in electronics played a significant role. One piece of advice I would offer is not to get overly stressed if you don't secure a position with the first few companies. It's a challenging situation, as there might be pressure from family and friends who've secured placements earlier. But it's essential to maintain patience. Remember, you have several semesters of placements ahead of you, and eventually, you will find the right opportunity. So, don't lose hope.

Interviewer: Are there any specific technical skills or knowledge areas you think juniors should focus on?

Vishwaraj: Certainly, it depends on their interest, but since most companies lean towards software, I'd advise strengthening programming skills. Not just LeetCode problems, though those are essential for top-tier companies. Understanding the fundamentals of programming languages is crucial. For instance, if you know Python, delve deeper into how it works beyond just using functions. Comprehend what happens behind the scenes, how classes function. Building a solid foundation in programming, rather than focusing solely on advanced terms, is vital. For example, Microtek doesn't require knowledge of graphs, but understanding pointers, which are used in graphs, is valuable. We also use recursion extensively, a fundamental concept in dynamic programming. You don't need to be an expert in dynamic programming, but grasping recursion, pointers, and how functions operate is essential. Additionally, for students in ECE or EEE aiming for core companies, focus on core concepts. You don't need to memorize formulas, but understand how those concepts apply in real-world scenarios. If you can explain where a concept is applied, like in a car or a phone, that's valuable.

Interviewer: How important do you think extracurricular activities, internships, or research projects are in shaping a strong resume?

Vishwaraj: Internships are significant, but research and extracurriculars may not carry as much weight for a company-based resume. For higher studies, they are crucial because universities seek well-rounded individuals. While extracurriculars and research might not provide a significant advantage in the corporate world, having them on your resume can catch the eye of hiring managers or HR personnel.

Interviewer: What extracurricular activities were you involved in during college?

Vishwaraj: Honestly, I wasn't very active in extracurricular activities, so I didn't mention any.

SENIOR INTERVIEW

I did engage in a lot of research projects and co-authored many research papers. This research experience helped me, and it's something universities appreciate. Even in my job now, my manager occasionally assigns research and development tasks because of my prior experience, even though I never explicitly mentioned it on my resume. As for extracurriculars, I don't have much to share in that regard.

Vishwaraj: I mainly relied on our seniors. Even though some of them from the previous batch didn't get selected by Microtek, they provided valuable insights into the interview process. Additionally, YouTube and online resources like GeeksforGeeks were beneficial. Searching and learning were the keys to success.

Interviewer: What advice would you give to current students who are preparing for their placement?

Vishwaraj: I can't emphasize this enough - build a rock-solid foundation in programming. Whether you prefer C++ or Python, understand the language deeply. Knowing fancy terms won't cut it; comprehend how classes, pointers, and functions work. These are the essentials for most companies. For core companies, focus on the intuitive understanding of core concepts. You don't need to memorize formulas, but grasp where and how these concepts are applied in the real world.

Interviewer: Do you have any final thoughts or additional insights you'd like to share with your juniors?

Vishwaraj: Okay. To sum it up, my advice remains the same. Please focus more on the fundamental concepts rather than getting caught up in fancy stuff. I understand that the allure of advanced topics may be strong when you're preparing for your placements in a year. However, it's crucial to be aware that even though you might start with complex topics like trees or graphs, your foundation should always begin with understanding the basics. Many tend to concentrate on the surface-level aspects rather than delving into what happens beneath the surface.

So, I strongly recommend prioritizing a solid grasp of fundamental concepts. This applies not only to electronics but also to digital electronics. Try to understand these concepts intuitively, not just for passing exams but to truly comprehend how things work, whether it's a transistor, a flip-flop, or registers. Speaking from experience, a strong intuitive understanding of registers has been invaluable in my current job. Knowing the theory is essential, but grasping the intuition behind it is equally important. To give you an example, I work extensively with registers in my company, and my intuitive understanding has allowed me to handle more tasks and responsibilities. In contrast, just rote memorization of facts doesn't provide the same advantage.

Also, make sure to practice aptitude rigorously. Regardless of whether you're in software or your core field, aptitude is the common thread. Failing the aptitude test in the initial rounds could mean missing out on an opportunity, even if you're the best fit for the job. It might not be a requirement for an engineer per se, but this is how the hiring process works. Therefore, put in the effort to excel in aptitude. You might know how to solve problems, but try to solve them in less than a minute or within 1.5 minutes. Invest time in honing your aptitude skills; it's a critical aspect of the selection process.

Interviewer: That's valuable advice. I understand the importance of these fundamentals and aptitude. Yeah. And that concludes our interview. Thank you so much for all the insightful information. Your detailed answers will be immensely helpful to me and my classmates.

Vishwaraj: Sure, sure. You're welcome.

SENIOR INTERVIEW

Interviewer - Sindhu

About Deekshita: Deekshita is an accomplished software engineer with a strong background in electrical engineering. She has valuable insights into the world of software development, as well as her experiences in college clubs and societies. Deekshita's journey from an electrical engineering student to a successful software engineer provides a unique perspective that can benefit aspiring students and professionals alike.

Interviewer: Can you please introduce yourself and briefly describe your current role and position?

Deekshita: Hi, I'm Deekshita, and I graduated from SSN in 2022 with a major in electrical and electronics engineering. I secured an internship placement at Citibank, which I later converted into a full-time analyst position. In my first year, the role was called a technology analyst, and in my second year, it was known as a technology app developer. My primary focus is backend development, and I mainly code in Java.

Interviewer: Could you briefly describe your placement experience during your time in the department?

Deekshita: Certainly. In my second year, I began evaluating my interests and found a knack for coding. I started learning more about data structures and object-oriented programming. My coursework in C++ and Java was beneficial for internship preparation. Citibank was one of the few companies hiring interns from our department, so I reached out to seniors to gather insights into their placement experiences. I analyzed the skills and resumes they sought and equipped myself accordingly, focusing on fintech companies. I used resources like Geeks for Geeks to practice. With the help of my seniors and these resources, I secured the internship and later the placement offer.

Interviewer: Did you face any challenges or setbacks during the placement process, and how did you overcome them?

Deekshita: Personally, I didn't encounter many placement challenges. However, one significant change was the transition to online interviews due to the pandemic. Initially, it was challenging to adapt to online interviews and communication. Still, it became more manageable over time, and I can't complain much about that.

Interviewer: What advice would you give to current students preparing for placements?

Deekshita: I'd suggest exploring multiple options instead of sticking to one path. Talk to seniors in their fourth year to understand the placement landscape, as core companies often recruit later in the season. For me, I didn't want to wait for core companies, so I started applying to software companies earlier. It's essential to connect with seniors who can offer guidance on various career paths, research opportunities, and further studies. I found this advice invaluable in shaping my decisions and achieving my goals.

Interviewer: Alright, ma'am, are there any specific technical skills you think juniors should focus on enhancing to improve their placement opportunities?

Deekshita: Absolutely. Juniors should definitely explore online resources, especially if they have a specific company in mind. Many online resources offer insights into how to secure placements in those companies. It's essential to start exploring these resources at least three months before the internship or placement cycle begins, allowing sufficient time to learn. For core job seekers, revisiting the basics is crucial. Core interviews often delve into fundamentals like electrical machines, electronic devices and circuits, and integrated circuits. So, brushing up on these basics is beneficial. Similarly, for coding jobs, companies may include rounds to test fundamental knowledge, covering topics like OOP concepts and data structures. Therefore, a strong grasp of the basics is essential. Moreover, building an impressive resume is vital.

It sets you apart from other candidates. In college, you have ample opportunities to explore different areas, so try to work on projects that interest you. For example, if you're from an EEE background but interested in software, consider developing a website for your department. It not only provides exposure but also creates a strong portfolio for your resume. So, my advice would be to focus on fundamentals, explore different areas, and build a robust resume.

Interviewer: How important do you think extracurricular activities like club initiation, research papers, and research projects are in shaping a strong resume?

Deekshita: That's an excellent question. Extracurricular activities are essential for personal development and building a well-rounded resume. However, it's crucial to balance them with academics effectively. While I was highly involved in extracurriculars during my college years, not everyone can dedicate as much time to them. It's a good idea to participate in one or two activities that align with your interests and offer a break from studies. These activities can help you develop skills and make connections. If you excel in these extracurriculars, they can significantly enhance your resume and make you stand out during interviews. As for research activities, they provide a valuable learning experience. Engaging in research helps you understand complex concepts and work on projects that contribute to your field. It's advisable to engage in research, especially if you have access to funding opportunities. Research projects funded by the college or external sources can be incredibly beneficial, both for learning and for your resume. However, it's crucial that your research efforts lead to meaningful outcomes and help you gain a deeper understanding of your chosen field. Ultimately, the key is to strike a balance and choose activities that align with your interests and career goals.

Interviewer: Could you share any tips on how to effectively network with industry professionals or alumni to improve connections?

Deekshita: Certainly. Building a network with industry professionals and alumni is crucial for career development. Start by connecting with seniors in your college as it helps you get comfortable with networking. Seniors can introduce you to a broader network of professionals. Look out for alumni association events, such as mock interviews or alumni fests, where you can meet alumni from diverse backgrounds. Be proactive in approaching and talking to them to understand their careers and experiences. Additionally, platforms like LinkedIn are valuable for networking. You can message professionals or alumni for guidance or insights. Just be respectful of their time and ensure your messages are purposeful. If you're involved in clubs or events in college, take advantage of the opportunities to connect with alumni who were part of similar activities. They often share valuable insights and are willing to help. It's essential to initiate these connections and keep them alive over time. Remember, even this conversation we're having right now is a step towards building connections. So, start small, engage with your network, and gradually expand your connections to benefit your career growth.

Interviewer: How do you believe juniors should maintain contact with alumni or seniors effectively, even after acquiring their contacts?

Deekshita: Maintaining contact with alumni or seniors involves consistent effort. It's not about randomly saying "hi" once and expecting a strong connection. Opportunities to connect with seniors will arise naturally throughout your college journey. These opportunities may include events, placement and internship queries, or project-related discussions. As you engage with these events and activities, you'll find chances to interact with seniors. It ultimately depends on how proactive you are in utilizing these opportunities. This conversation right now, where you're interviewing me for a newsletter, is a prime example of making connections. Opportunities are abundant; it's up to us to seize them.

Deekshita: It would be beneficial for them to talk to seniors and explore resources like YouTube videos. Videos that depict "A Day in the Life" of professionals in different fields can provide valuable insights. By watching these, they can get a sense of whether they prefer one career path over the others. Additionally, they should connect with recent graduates who are working and gain insights into their job experiences. Personally, I learned that consulting wasn't for me after speaking to seniors. In college, I aspired to work for firms like McKinsey, but later realized it wasn't the right fit. Researching the current job market and evaluating personal circumstances, like financial needs or the desire for further education, is crucial before making a decision.

Interviewer: Do you have any final thoughts or advice for your juniors?

Deekshita: One common issue I've noticed among EEE students is a sense of hopelessness. Some tend to think that they are in a different world compared to students from other branches who are more prepared for software jobs. I would encourage EEE students to reach out to their alumni and seek guidance on internships, projects, and career paths. It's essential to overcome these fears and equip yourself with the necessary skills and knowledge.

Interviewer: That concludes our interview. Thank you, Deekshita, for sharing your experiences and insights with us.

Deekshita: You're welcome. If you have any more questions or need further assistance, feel free to reach out.

BNY MELLON INTERVIEW EXPERIENCE

Name: Muralikrishna S
Company Name: BNY MELLON
Role: Software Developer
Category: Marquee
Type: IT

Online Test Experience:
It was conducted on the HackerEarth platform and consisted of 4 coding (DSA) questions. The questions level was medium to difficult. Questions were from topics like bit manipulation, array, DP, and tree. I was able to solve 2 QNs with all test cases and another question partially. Questions can be solved using any language of your choice but limited to c/c++, java, and python. There is no aptitude round in the selection process.

Interview Experience:
There were 3 rounds and all the rounds were taken by a single interviewer (Not a panel interview) face-to-face. The entire interview process was finished in a day as they shortlisted only a few.

Round 1:
This round went on for about an hour. Questions asked were mostly based on my resume, DSA, OOPs, and DBMS. I was asked to explain about my internships and projects. I was also asked to explain one of my python scripts in my GitHub repo from top to bottom. After technical questions, HR questions were also asked.

Round 2:
This round was also a technical round with a few HR questions that lasted for about an hour. Again Qns were based on my resume. Questions from computer networks and OS were also asked. I was also asked questions about the basics of cloud computing and HLD.

Round 3:
This is a bar-raiser round. Technical, behavioral, and culture fit questions were asked. This round is mostly non-eliminatory in nature. This round lasted for about only 20 - 30 mins.

INTERVIEW EXPERIENCE

NATWEST INTERVIEW EXPERIENCE

Name: Deepshika S
Company: NATWEST
Type: IT
Role: SDE
Category: Super Dream

Round 1:
Students were shortlisted based on resume

Round 2 :(Online Test)
There are 5 sections and can be attempted in any order which include Section 1 with 15 verbal reasoning, Section 2 with 15 logical reasoning, Section 3 with 15 MCQ-based technical questions, Section 5 with 15 questions in SQL, and Section 5 included 2 coding questions of medium difficulty

Round 3: Interview (Technical and HR)
This panel interview lasted for about 20 minutes.2 panelists were present one for technical and the other for HR. The Technical questions were asked based on the resume. For me, questions were asked on OOPS concepts and basics of C++ as I included them in my resume and was asked to explain about the projects I had done. As NatWest was a banking firm, other questions included were How do banks work, what type of bank is NatWest, what are different types of banks, what do you wish to change in the banking sector, and how is NatWest different from other companies? The HR questions included whether there were any disagreements among members while doing projects if so, how did you overcome them, what is your career aspiration, and which one would you choose if given an option between learning skills, work-life balance, and a high-paying job. Why join the IT Sector when majoring in EEE and final question was anything to ask us.

INTERVIEW EXPERIENCE

ASHOK LEYLAND INTERVIEW EXPERIENCE

INTERVIEW EXPERIENCE

I am Yashaswini S, final year EEE. I received an offer from Ashok Leyland for the GET role. Here is my placement experience:
The selection process happened in 5 rounds:

1. Test:
This was a proctored test and it had 100 questions to be completed in 60 minutes. There were technical, aptitude, and general knowledge questions

2. Gamification:
There were a bunch of small games that tested your logical thinking, spontaneity, etc. For example, there was this game where we have to choose the shortest route covering all checkpoints, in another game, we were given a shape and a color (eg: circle, blue). In the game, if it says “shape”, we have to choose the correct shape (circle) irrespective of the color and similarly for color, we have to choose the correct colour irrespective of the shape. This round was also timed and proctored

3. Group Discussion:
Group discussion happened after the pre-placement talk. Candidates were divided into groups of 5 to 6 persons. They let the group discuss the given topic or a picture/ video they showed. The topics were general and before the discussion started, we were given a minute to collect our thoughts. This round was simple, we just had to contribute relevant points to the discussion to make it.

4. Video:
After the GD, the selected candidates received a link to a portal where we were given one question. For example: tell me about your time management skills, what was the biggest obstacle that you have ever faced, etc. We have to record and upload a 1-minute video of ourselves answering the question

5. Interview:
In the interview, they asked me a few personal questions, technical questions, and about work preferences

Personal questions:
They asked me

i. To tell me about myself
ii. About my family background
iii. About my strength and weakness
iv. About my hobbies and extracurricular activities
v. Where do I see myself after 5 years

INTERVIEW EXPERIENCE

Technical questions:
All of them were out of my resume and what I mentioned as my domain of interest. Some of them were:

i. Why are you inclined towards Electric vehicles, what is special about them?
ii. Are Electric vehicles 100% pollution free?
iii. Currently, what are the major sources of power generation?
iv. Explain power electronics in 1 minute
v. What is power factor and why power factor correction is required
vi. What switches are generally used in power converters
vii. Difference between IGBT and MOSFET
viii. Draw the characteristics of MOSFET
ix. They asked me to explain my final year project.
x. What I did during my internship
(About my final year project and internship, they didn't dig deep into the technical aspect; they were just checking if I knew what I was doing)

Preferences:

i. They asked me if I had any location preference
ii. They asked me about work environment preference (if I prefer to work in an office or plant environment) Finally, they asked me if I had any questions for them.

The whole process was completed in 2 days. On the first day, we finished the test and gamification round. The next day rest of the rounds took place. The company gave offer letters to the shortlisted candidates on the very same day. Overall, the placement went smoothly.

ALUMNI SPEAKS

Hello Dear SSNites! I'm delighted to write this article to share my life journey both during my time at SSN and in the period that followed. In 2018, I embarked on my academic pursuit at SSN. To be candid, if you were to inquire whether I had a strong preference for Electrical Engineering at that time, my answer would be no. My decision to enroll at SSN was primarily influenced by the presence of seasoned professors, excellent educational resources, and promising campus recruitment opportunities. I trust that many of you who are reading this narrative may have similarly opted for SSN, even if your initial course of choice was not available.

SSN offered a unique blend of high-quality education and entertainment. As I began my journey in learning the fundamentals of electrical engineering, I found myself increasingly captivated by the core subjects. Moreover, approachable instructors provided me with a welcoming and comfortable learning environment right from the very beginning.

I am delighted to have led a project focused on IOT-based Demand Side Energy Management using Arduino and Matlab in which a cost-effective management system for energy resources in microgrids was developed to improve the existing methodology for energy consumption. The project findings were presented at the International Conference on Smart Electronics and Communication in 2020. Subsequently, further research findings on Implementation of Demand Response Management in Microgrids Using IOT and Machine Learning were presented at the 5th International Conference on Intelligent Computing and Control Systems in 2021 and journals were published through IEEE.

As an opportunity to venture beyond the realm of theoretical technical knowledge, I was chosen to intern as an electrical engineer at one of the leading chemical companies, Dow Chemicals International Private Limited, Chennai. This internship spanned a couple of months and exposed me to real-world engineering applications. During this time, I dedicated myself to delivering flawless engineering documents, including cable schedules, power plans, grounding layouts, and cable routing.To assess my performance during the internship, I participated in a practical evaluation, which involved conducting a load flow study and engaging in a roundtable discussion. This examination provided me with a valuable opportunity to critically assess and enhance both my technical expertise and soft skills at an advanced level.

ALUMNI SPEAKS

My role as the Student Placement Coordinator brought about a notable increase in my responsibilities. Within this position, I collaborated with fellow placement coordinators to oversee the demands of recruitment companies and fostered seamless communication between the career development center and our peers. This experience enabled me to skillfully balance various tasks while maintaining my academic obligations.

All right! What's on the entertainment side? Numerous intra-college clubs offered both entertainment and team collaboration. Right from the start, I became a member of the Saaral classical team. This experience allowed me to connect with many fellow students and professors. The stages, performances, and the lively audience interactions still vividly resonate in my memory.

In terms of my professional journey, my aspiration was to join a company with a strong focus on core engineering. As a rewarding outcome, I received a full-time position as a Hardware Discipline Engineer at Dow Chemicals International Pvt. Ltd. in Tamil Nadu, India. In this role, I took on a range of responsibilities, including the development of electrical engineering schedules and equipment specifications.

As a recent college graduate entering the workforce, my communication skills played a pivotal role in networking with colleagues and rapidly acquiring essential workplace competencies. Working closely with experienced engineers and designers on various projects, I conscientiously assessed my strengths and weaknesses to become a more effective team player. Over time, as I participated in projects from their initial identification stage to construction, my expertise in global project methodologies expanded.

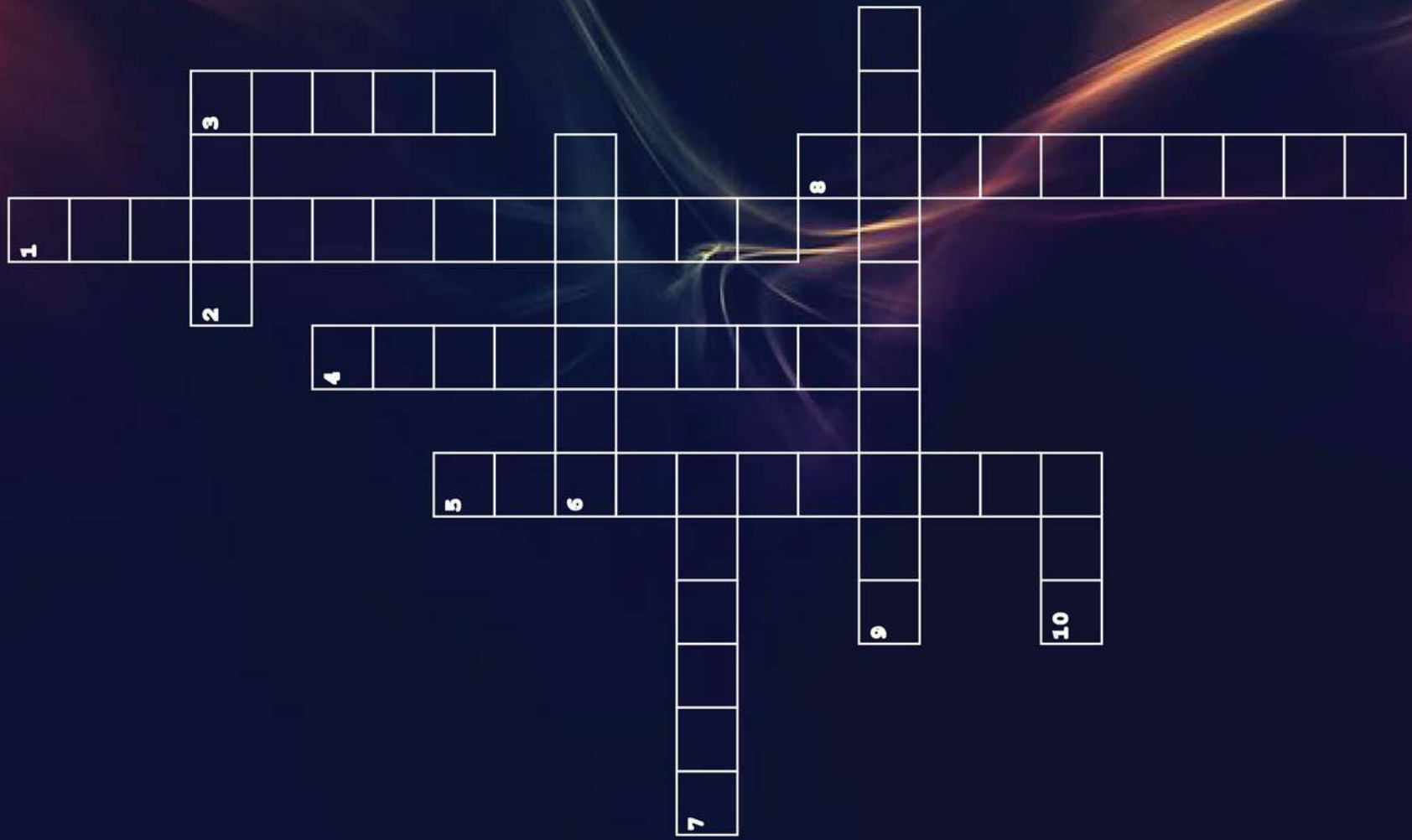
I express my gratitude to all the faculty members who provided support and guidance during my undergraduate studies. Presently, my life at and after SSN has been wonderful, especially considering it has only been a year since I graduated from college. I'm uncertain if this alumni testimonial will be of great assistance, but I'm eager and available to share my experiences and offer support in any way I can. Thank you for taking the time to read this.

Regards,
Shruthi Jeyasankar
LinkedIn: https://www.linkedin.com/in/shruthi-j-217a86235/

PLACEMWNT REPORT

Name	Class & Sec	Reg No	Company	CTC
AGILBERT SESU FELICK F	EEE-'A'	203001006	Wood PLC	6,00,000
Akash Raj S A	EEE-'A'	203001007	Wood PLC	6,00,000
Deepshika S	EEE-'A'	203001027	NatWest	13,00,000
Kumaresh N	EEE-'A'	203001050	Everstage	8,20,000
MURALIKRISHNA S	EEE-'A'	203001058	BNY MELLON	21,64,308
Poovizhi A	EEE-'B'	203001068	Mr. Cooper	10,00,000
Rohin R	EEE-'B'	203001080	Technip	6,10,000
Sneha S	EEE-'B'	203001099	Wood PLC	6,00,000
Suneeth D	EEE-'B'	203001107	MINDGROVE TECHNOLOGIES	6,00,000
Surya Jothimurugan	EEE-'B'	203001109	Wood plc	6,00,000
M Thaga Sheriff	EEE-'B'	203001115	MINDGROVE TECHNOLOGIES	6,00,000
Vanaja I	EEE-'B'	203001121	Wood plc	6,00,000
Vishwajith N S	EEE-'B'	203001124	MINDGROVE TECHNOLOGIES	6,00,000
Yaahaswini	EEE-'B'	203001125	Ashok Leyland	6,97,500

CROSSWORD



CROSSWORD

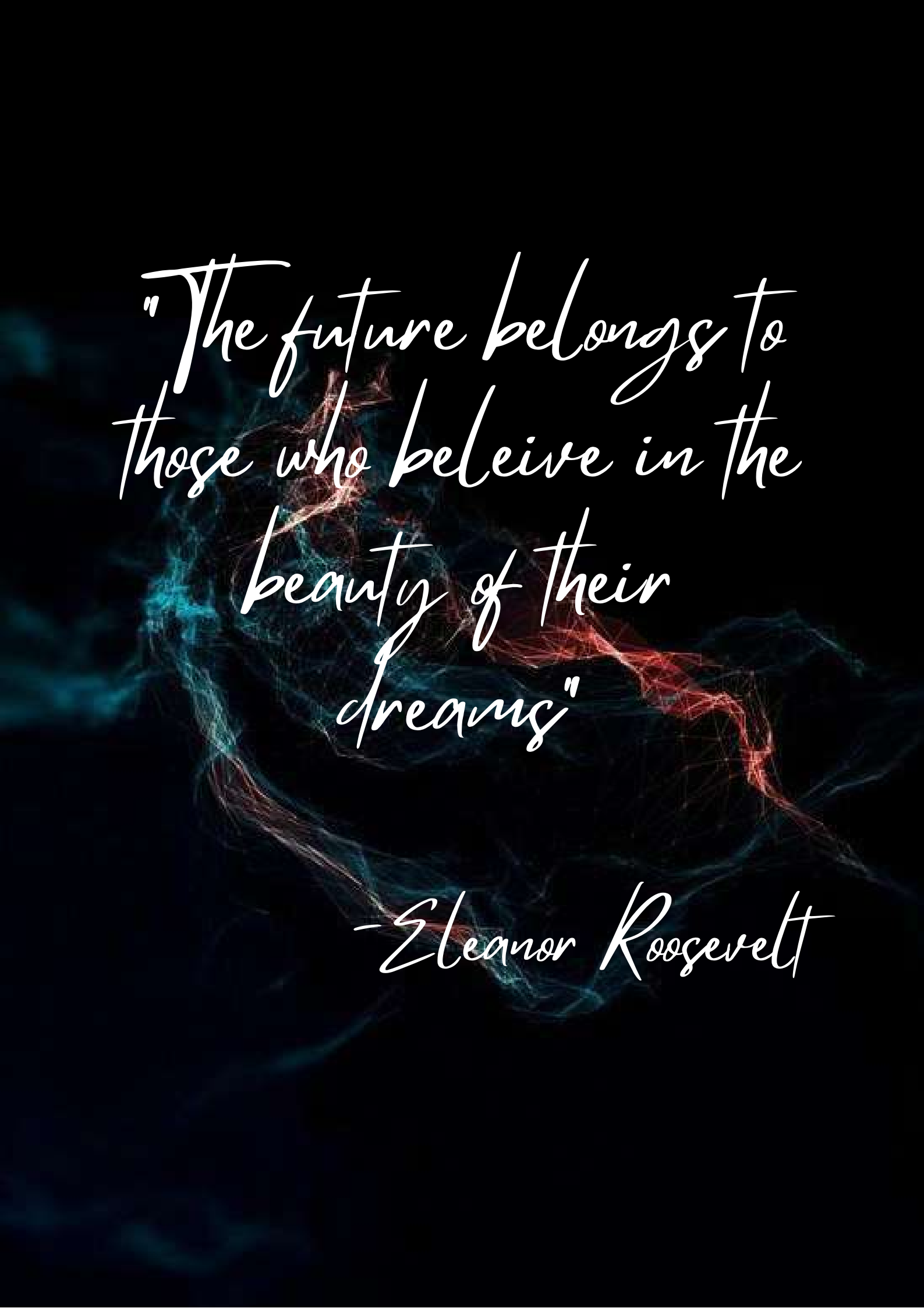
Across

2. All the voltage drops and the source voltage added together in a series circuit is equal to
6. Which transistor is preferred in digital and analog circuits
7. Form factor is equal to peak factor in which wave
9. Which region BJT acts as off switch in electrical circuit
10. How many directions can the electric field at a point have

Down

1. Wiper in a sliding contact
3. Group of 1s present in 8 cells of a K-map are called
4. Device that converts one form of energy into another
5. Sumpners test is conducted on transformer to determine
8. A type of electrical discharge that occurs when an insulating material breaks down due to high electrical field

SCAN ME FOR ANSWERS...


"The future belongs to those who beleive in the beauty of their dreams"
-Eleanor Roosevelt