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CHIEF EDITORIAL MESSAGE



With great pleasure and honour I write this foreword. Indeed, this newsletter has a lot to look forward. I am happy that our department started in the year 1994 with B.Tech-EEE programme has completed 25 years and is now celebrating Silver Jubilee year. During these 25 years EEE department has crossed several milestones and contributed to society in the form of education to engineering students. Started with B.Tech-EEE in 1994 with an intake of 60 later enhanced to an intake of 120 in the year 2012. PG programme of M.Tech-Power Electronics was started in the year 2013. B.Tech-EEE program has been accredited by NBA two times under Tier-II from 2011-14 and 2016-19. I am glad to inform that now B.Tech-EEE program has been accredited by NBA under Tier-I for three years from 1st July 2019.

The Department has also witnessed the strong force of faculty. At present the Department has faculty strength of 34 with diversity of specialization, out of which 18 of them have Doctorates, 10 are pursuing PhD and 6 are with M.Tech. Alumni are the main pillars for the growth of the Department. I would like to offer my sincere thanks to all the Alumni for their support in guiding the students through invited lectures, supporting for internships and industry visits. Suggestions from stakeholders have added value during the reforms taken time to time.

This newsletter displays the contributions by faculty & students and activities conducted in the Department during January 2022 to June 2022 (Even semester of AY 2022-23). I am happy to share that this semester department has witnessed three of the faculty have been awarded with PhD. The experience of the faculty made it possible to conduct national and international FDPs with great support from industry experts and academic intellectuals from foreign Universities, IITs and NITs. I am also proud to inform that our students have made the EEEA activities more vibrant with hands-on sessions and training programmes. I would like to offer a word of thanks to our readers, our contributors, and our editorial board for their support of the journal and its mission: to improve the quality of technical education to the students. This newsletter will provide a glimpse of faculty and student achievements in even semester of academic year 2022-23

-Dr. G. Rajendar
HOD, EEED

VISION & MISSION OF THE DEPARTMENT

VISION: To fulfil the needs of the industry & society through excellence in education & research in electrical engineering.

MISSION:

- To produce globally competent engineers in Electrical & Electronics Engineering.
- To promote scientific inclination and cultivate professional ethics.
- To serve organization and society as adaptable engineers, entrepreneurs or leaders.

BTECH – ELECTRICAL & ELECTRONICS ENGINEERING

Program Educational Objectives (PEOs):

Within first few years after graduation, the ELECTRICAL AND ELECTRONICS ENGINEERING graduates will be able to:

- PEO1 Technical Expertise:** Apply the knowledge of electrical and electronics engineering to develop solutions for complex problems of electrical power industry and allied engineering areas.
- PEO2 Successful Career:** Demonstrate innovation & creativity in their professional practice, work effectively as an individual and in a team in multidisciplinary areas towards sustainable development.
- PEO3 Lifelong learning:** Adapt to a constantly changing field through higher education, professional development and self-study for contributing to well-being of society.

Program Outcomes (POs):

Engineering Graduates will be able to:

- PO1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4 Conduct investigations of complex problems:** Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the

knowledge of, and need for sustainable development.

PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 Communication: communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11 Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 Lifelong learning: recognise the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Program Specific Outcomes (PSOs):

PSO1 Apply the fundamental knowledge of electrical and electronics engineering in providing solutions for modern power industry and multi-disciplinary areas.

PSO2 Analyse, design and simulate systems to generate, transmit, distribute, utilize and control electrical energy to meet societal and environmental needs using electrical and electronic systems.

MTECH-POWER ELECTRONICS

Program Educational Objectives (PEOs):

The Postgraduates of POWER ELECTRONICS will be able to:

PEO1 Research and Innovation: Engage in research, innovation and teaching in the fields related to power electronics and Drives.

PEO2 Technical expertise and Successful career: Excel in professional practice relevant to industry and engage in entrepreneurship with latest technologies in the areas of power converters, renewable energy, smart electric grid, industrial drives and electric vehicles.

PEO3 Soft skills and Lifelong learning: Exhibit professional ethics, communication skills and spirit of teamwork by carrying out research for a sustainable environment.

Program Outcomes (POs):

At the time of graduation, the postgraduates of POWER ELECTRONICS will be able to:

PO1 Independently carry out research/investigation and development work to solve practical problems.

PO2 Write and present effective technical report/document.

PO3 Demonstrate competence in the area of Power Electronics.

Program Specific Outcomes (PSOs):

PSO1 Apply knowledge of power electronics for the development of effective innovation solutions to problems pertaining to the renewable energy sources, smart electric grids and electric vehicles.

PSO2 Analyse complex engineering problems related to power electronics industry related to power industry and develop solutions with the latest hardware and software tools.

FACULTY CONTRIBUTIONS

Details of the Journal Paper Publications of the Faculty
Published, during Jan'2023–June'2023:

| S. no. | Name of the Faculty | Title | Journal |
|--------|--------------------------------------|--|--|
| 1 | Prof. V. Rajagopal, Sri. D. Sharath | Optimized Controller Gains Using Grey Wolf Algorithm for Grid Tied Solar Power Generation with Improved Dynamics and Power Quality in <i>Chinese Journal of Electrical Engineering</i> , vol. 8, no. 2, pp. 75-85, June 2022, doi: 10.23919/CJEE.2022.000016. | Chinese Journal of Electrical Engineering |
| 2 | Dr. B. Jagadish Kumar | Certain Investigations On Current Ripple Free In A Single Phase Isolated Converter For Fuel Cell Applications <i>Positif Journal</i> , ISSN NO : 0048-4911, vol. 22, no. 7, July. 2022, pp. https://doi.org/10.37896/psj30.7/1240 | Positif Journal |
| 3 | Dr. C. Venkatesh, Prof. V. Rajagopal | Multilevel Inverter with Self-Balanced Switched Capacitor for Vehicle Application in <i>Positif Journal</i> , vol. 22, issue 9, pp. 1-10, Sept. 2022, doi: https://doi.org/10.37896/psj30.9/1400 . | Positif Journal |
| 4 | Dr. A. Madukar Rao | Fault tolerant nine-level inverter topology for solar water pumping applications, <i>International Journal of Electrical and Computer Engineering (IJECE)</i> , vol.12, no.4, August 2022, http://doi.org/10.11591/ijece.v12i4.pp3485-3493 . | International Journal of Electrical and Computer Engineering (IJECE) |
| 5 | Dr. M. Santhosh | A novel dynamic selection approach using on-policy SARSA algorithm for accurate wind speed prediction. <i>Electric Power Systems Research (Elsevier journal)</i> . 2022 Nov 1; Vol. 212: p.108174. (https://doi.org/10.1016/j.epsr.2022.108174) | Elsevier journal |

| S. no. | Name of the Faculty | Title | Journal |
|--------|--|--|--|
| 6 | Dr. B. Jagadish Kumar | Dynamic performance of solar PV array Fed water pumping system using Boost-buck converter Fed permanent magnet synchronous motor drive”, <i>Journal For Basic Sciences</i> , Volume 23, Issue 3, , ISSN: 1006-8341,pp-49-63, March, 2023. | Journal for Basic Sciences |
| 7 | Dr. B. Jagadish Kumar, R. Sunnymist havani | Investigations on solar PV and battery storage using a novel configuration of a three-level NPC inverter with an innovative control technique”, <i>Journal For Basic Sciences</i> , Volume 23, Issue 3, , ISSN: 1006-8341,pp-518-525, March, 2023. | Journal for Basic Sciences |
| 8 | Dr. B. Jagadish Kumar , D. Vishal, K. Sujith Kumar | Investigations on Solar PV Array Fed Water Pumping System using Permanent Magnet Synchronous Machine through Boost Buck Converter”, <i>Journal For Basic Sciences</i> , Volume 23, Issue 3, , ISSN: 1006-8341,pp-49-63, March, 2023. | Journal for Basic Sciences |
| 9 | A.M. Rao, C.P. Kumar | “Open-circuit fault resilient ability multi level inverter with reduced switch count for off grid applications” , <i>International Journal of Electrical and Computer Engineering (IJECE)</i> Vol. 12, No. 3, June 2022, pp. 2353~2362 ISSN: 2088-8708, DOI: http://doi.org/10.11591/ijece.v12i3.pp2353-2362 . | International Journal of Electrical and Computer Engineering (IJECE) |

Details of the Conference Paper Publications of the Faculty published during: Jan'2023–June'2023:

| S. no. | Name of the Faculty | Title | Name of the Conference | Dates | Venue |
|--------|------------------------------------|---|---|-------|-------|
| 1 | Dr. D. Rakesh Chandra | Short-Term Load Forecasting in DSO Substation Networks with Dimensionality Reduction Techniques, <i>IEEE international Conference on Environment and Electrical Engineering (CPS Europe)</i> , pp.1-6, July 2022. | IEEE International Conference on Environment and Electrical Engineering | | |
| 2 | Dr. G. Rajender | Design and development of Mini electric bike, <i>AIP Conference Proceedings</i> , October 2022. | AIP Conference Proceedings | | |
| 3 | Dr. C. Venkatesh, Dr. Y. Manjusree | ANFIS Based VSC Drive Solar Fed Water Pump with Zeta Converter”, <i>AIP Conference Proceedings</i> 2418, 040031 (2022); https://doi.org/10.1063/5.0083115 . | AIP Conference Proceedings | | |
| 5 | Dr. C. Venkatesh | “Single-Input Dual-Output Three-Level DC–DC Converter”, <i>National Conference on Electric Vehicle Charging Infrastructure</i> , 9 th & 10 th May 2022, ISSN 2347 – 3258. | National Conference on EV | | |

EEE ASSOCIATION DETAILS

PRESIDENT

K. Sujeeth Kumar (IV/IV, B.Tech)

VICE-PRESIDENT

K. Sujith Kumar (IV/IV, B.Tech)

GENERAL SECRETARIES

B. Sruthi (IV/IV, B.Tech)

Ch. Sheetal (IV/IV, B.Tech)

TREASURER

G. Santhosh Kumar (IV/IV, B.Tech)

RAPPORTEUR

J. Sai Chandhu (IV/IV, B.Tech)

EVENT MANAGERS

T. Eshwar Naik (IV/IV, B.Tech)

SPOKESPERSONS

Nishath Tabassum (IV/IV, B.Tech)

Ch. Sri Vaishnavi (IV/IV, B.Tech)

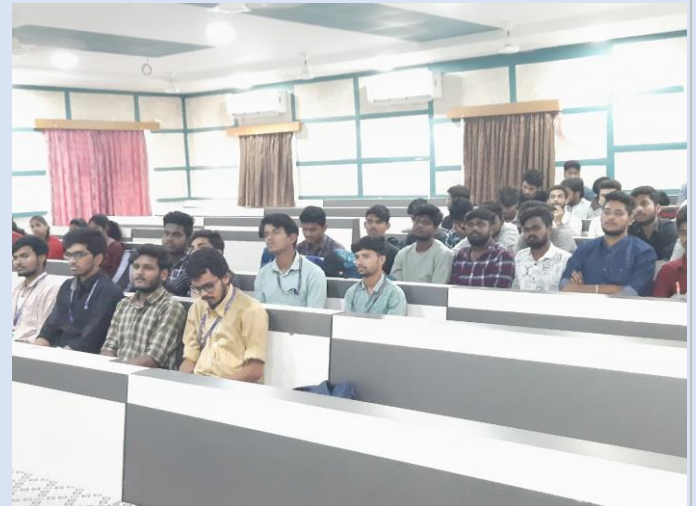
EXECUTIVE MEMBERS

V. Rahul (IV/IV, B.Tech)

STUDENT ACTIVITIES

| S. no. | Activity | Date |
|--------|--------------------------------------|--------------|
| 1 | JAM Session on trending technologies | 15 Feb' 23 |
| 2 | Social Media For Self-Learning | 22Feb' 23 |
| 3 | Gate awareness | 15 Mar' 23 |
| 4 | Global Tree Session | 29 Mar' 23 |
| 5 | Trading and stock Market awareness | 12 April' 23 |
| 6 | How to plan for Start-up | 19April' 23 |
| 7 | Awareness Program on Internships | 27 April'23 |

EVENT PHOTOGRAPHS



Activity – JAM On Trending Technologies

Summary on technologies spoken by attendees:

1. Artificial Intelligence (AI): AI involves the development of computer systems that can perform tasks that typically require human intelligence. It includes machine learning, natural language processing, and computer vision.
2. Internet of Things (IoT): IoT refers to the network of physical devices, vehicles, appliances, and other objects embedded with sensors, software, and connectivity. It enables these objects to collect and exchange data, leading to improved efficiency and automation.
3. Blockchain: Blockchain is a decentralized and distributed ledger technology that securely records and verifies transactions. It has gained popularity due to its potential to enhance security, transparency, and

4. Augmented Reality (AR) and Virtual Reality (VR): AR enhances real-world environments with computer-generated information, while VR immerses users in a simulated digital environment. Both technologies have gained popularity in gaming, entertainment, and even training and education.
5. 5G: 5G is the next generation of wireless technology, offering faster and more reliable connections. It enables faster data transfer, lower latency, and supports the development of advanced applications like autonomous vehicles and smart cities.
6. Cybersecurity: With the increasing dependence on technology, cybersecurity has become crucial. It involves protecting computer systems, networks, and data from unauthorized access or damage, ensuring privacy and preventing cyber threats.

Activity – social media for self-learning

The "Awareness on Social Media" session was organized to equip attendees with essential knowledge and skills. The event aimed to enhance participants' academic and professional capabilities, enabling them to communicate their ideas and findings with confidence and impact. Overall, the session left participants feeling more equipped and confident in their ability to undertake social media and deliver compelling presentations, enhancing their academic and professional growth.

By leveraging social media platforms effectively, individuals can engage in self-learning, expand their knowledge, connect with experts and peers, stay updated with the latest trends, and even build their personal brand. However, it is important to approach social media usage mindfully and strike a balance between online learning and other aspects of life. With the right approach, social media can be a valuable tool for continuous learning and personal growth



Awareness and Preparation of GATE and other Central Exams

The session aimed to create awareness about the GATE exam and other central government job opportunities. By understanding the exam structures, eligibility criteria, and effective preparation strategies, candidates can equip themselves to pursue higher education, secure prestigious jobs, and contribute to the development of the nation. With consistent effort, determination, and the right resources, candidates can increase their chances of success in these competitive exams.



Dr. Surender addressing the session

Activity- Global Tree Overseas Studies

The following points are addressed in the session:

1. GRE, GMAT exam preparation.
2. ToFEL, IELTS preparation
3. How to apply for universities.
4. Course Recommendation
5. SOP/LOR
6. University Search
7. Job Search
8. Visa Process
9. Immigration Help
10. Services offered by their organization



Speaker addressing the attendees

EVENT PHOTOGRAPHS



Trading and Stock Market Awareness

The session on trading and the stock market provided participants with a comprehensive understanding of the fundamental concepts, strategies, and risk management techniques involved in trading. He explored topics such as stock market basics, fundamental and technical analysis, different trading styles, risk management, trading strategies, market psychology, and the use of resources and tools. By equipping participants with this knowledge, the session aimed to empower individuals to make informed trading decisions, manage risk effectively, and navigate the complexities of the stock market. It highlighted the importance of continuous learning, disciplined execution, and maintaining emotional control in order to succeed as a trader.



EVENT PHOTOGRAPHS



How to Plan for Start-Up

The Speaker has noted on the specific points:

1. Define the purpose and vision to be set.
2. Conduct market research.
3. Building of solid business plan.
4. Strong team to be built.
5. Funding and Brand identity.
6. Set realistic goals and milestones.
7. Develop a marketing strategy.
8. Stay agile and adaptable.
9. Motivated and confident



EVENT PHOTOGRAPHS



Awareness Program on Internships

The speaker mentioned regarding the points:

1. Types of internships.
2. Objectives & Scope of internships.
3. Co-relation of internships with subjects.
4. MoU's of our college.
5. Previous internships by students.
6. Process of Internships.
7. Theoretical Vs Practical.
8. Minimum internships to be performed.
9. Internship Evaluation – VII Sem.
10. Outcomes of Internships.



EVENT PHOTOGRAPHS



STUDENT ACHIEVEMENTS

On-going Placements for the Academic year 2022-2023

| S. No. | Roll No. | Student Name | Name of Employer |
|--------|----------|-------------------------------|----------------------------------|
| 1 | B19EE004 | NARAHARI JHANSI | MIND TREE |
| 2 | B19EE008 | SRI VAISHNAVI CHAKRAVARTULA | MIND TREE |
| 3 | B19EE010 | V MANASA | MU SIGMA, MIND TREE, JSW |
| 4 | B19EE014 | T VAISHNAVI | MU SIGMA |
| 5 | B19EE016 | CH ROSHAN | MU SIGMA, ZF TECHNOLOGIES |
| 6 | B19EE018 | S SRIKANTH | HEXAWARE |
| 7 | B19EE024 | K CHANDANA | COGNIZANT GENC |
| 8 | B19EE026 | C SRINIDHI SANTOSH | ACCENTURE |
| 9 | B19EE029 | A KOUSHIK | MU SIGMA |
| 10 | B19EE035 | G PALLAVI | JSW |
| 11 | B19EE037 | R ADARSH KUMAR | HBL POWER SYSTEMS LTD. |
| 12 | B19EE039 | J NAGARAJU | TCS |
| 13 | B19EE041 | D AKSHITHA | COGNIZANT GENC, ACCENTURE, JSW |
| 14 | B19EE048 | K HARISH KUMAR | COGNIZANT GENC |
| 15 | B19EE049 | SAMALA SRINIJA | MIND TREE |
| 16 | B19EE054 | R VAMSHI KRISHNA | TCS |
| 17 | B19EE062 | MADHARAPU SHIVANI | MIND TREE |
| 18 | B19EE063 | RAHUL TEJAVATH | MU SIGMA, MIND TREE |
| 19 | B19EE064 | KODEPAKA SUJEETH KUMAR | MIND TREE |
| 20 | B19EE065 | J SATHWIKA | COGNIZANT GENC |
| 21 | B19EE067 | NISHASHVI YALAMAKONDA | MIND TREE, JSW |
| 22 | B19EE068 | DEEPAK MEDISETTI | MIND TREE, JSW |
| 23 | B19EE074 | GOVINDU SANTHOSH KUMAR BALAJI | MIND TREE |
| 24 | B19EE080 | NISHANTH TABASSUM | COGNIZANT GENC, INNOVA SOLUTIONS |
| 25 | B19EE082 | RAHUL VAIDYA | MIND TREE |
| 26 | B19EE084 | T SHIVA | MEDHA SERVO DRIVES |
| 27 | B19EE085 | AKHIL DASARI | COGNIZANT GENC, MIND TREE, JSW |
| 28 | B19EE087 | P GAYATRI | MU SIGMA, ZF TECHNOLOGIES |
| 29 | B19EE090 | S SRUTHI | ACCENTURE |
| 30 | B19EE091 | THIRUPATHI BASHAVENI | MIND TREE, TCS, JSW |
| 31 | B19EE092 | C CHAITANYA REDDY | HEXAWARE |
| 32 | B19EE094 | L THARUN NAYAK | INNOVA SOLUTIONS |
| 33 | B19EE098 | B. PRANITHA | MU SIGMA |
| 34 | B19EE105 | C AKASH | HEXAWARE, HYUNDAI MOBIS |
| 35 | B19EE108 | PAKA ANUSHA | COGNIZANT GENC, MIND TREE |
| 36 | B19EE109 | S SINDHU | POLY CAB |
| 37 | B19EE111 | G KAVYA SRI | ZF TECHNOLOGIES |
| 38 | B19EE112 | B SHRAVAN | TCS |

| | | | |
|----|-----------|-----------------------|----------------------------|
| 39 | B19EE115 | B SRUTHI | HEXAWARE, ACCENTURE |
| 40 | B19EE116 | K SUJITH KUMAR | HEXAWARE, MIND TREE |
| 41 | B19EE119 | P ROHITH | ACCENTURE, MIND TREE, TCS |
| 42 | B20EE121L | P. SPANDANA | ROAMONIX TECHNOLOGIES |
| 43 | B20EE123L | N SAI RATHAN | HYUNDAI MOBIS |
| 44 | B20EE123L | N SAI RATHAN | HBL POWER SYSTEMS LTD. |
| 45 | B20EE125L | MANOJ KUMAR DARA | HBL POWER SYSTEMS LTD. |
| 46 | B20EE126L | MAMIDALA PAVAN KALYAN | HBL POWER SYSTEMS LTD. |
| 47 | B20EE129L | GORANTALA NIHARIKA | MIND TREE |
| 48 | B20EE131L | A RACHANA | HBL POWER SYSTEMS LTD. |
| 49 | B20EE134L | R NIKITHA | ADMIRE GLOBAL ORGANISATION |

Research Papers Published by Students:

| S.No | AY | Student Name | Roll Number | Details of the paper | Journal/Conference |
|---|---------|-----------------|-------------|---|----------------------------|
| ASSESSMENT YEAR : CA Ym1 2022-23 | | | | | |
| 1. | 2022-23 | K. Sujith Kumar | B19EE069 | Investigations on solar PV and battery storage using a novel configuration of a three-level NPC inverter with an innovative control technique | Journal for Basic Sciences |