Counselling Code: VBIT





(A UGC Autonomous Institution, Approved by AICTE, Accredited by NBA and NAAC-A Grade, Affiliated to JNTUH)

Department of Electrical and Electronics Engineering

ELECTROX

PRESENTS

ELECVOICE

Powering Possibilities, Empowering lives.



Electric Vehicles in Reducing Pollution: y It's Not the Complete Solution





MAGAZINE

2025



(A UGC Autonomous Institution, Approved by AICTE, Accredited by NBA 6 NAAC+A Grade, Affiliated to JNTUH).

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

To emerge as centre of excellence in Electrical and Electronics Engineering to meet the industry and societal needs.

MISSION

M-1: Impart high quality education in Electrical and Electronics Engineering through effective teaching learning process and facilities.

M-2: Develop necessary skills for professionalism, career choices and lifelong learning to succeed in core and multidisciplinary fields.

M-3: Provide ambience for innovative research and societal needs by collaborations.

Program Educational Objectives (PEOs)

PEO-01: Domain Knowledge: Synthesize mathematics, science, engineering fundamentals, laboratory and attain practical experience to formulate and solve engineering problems in Electrical engineering domains by using appropriate tools and technologies.

PEO-02: Professional Employment: Contribute towards the growth of the industry, shine in government, entrepreneurship and R&D establishments.

PEO-03: Higher Degree: Succeed in the pursuit of higher degree in Electrical engineering or multidisciplinary fields by applying mathematics, science, and engineering concepts.

PEO-04: Engineering Citizenship: Practice professional and ethical attitude, effective communication skills and work in multidisciplinary teams to resolve engineering issues of social relevance. **PEO 05:** Lifelong Learning: Pursue lifelong

PEO-05: Lifelong Learning: Pursue lifelong learning to expand technical and professional skills to become expert in chosen fields.

Program Specific Outcomes (PSOs)

PSO-01: Design, analyze and solve problems in the field of Electrical & Electronics Engineering by applying knowledge acquired from Electrical Power Systems, Electrical Machines, Control Systems, Power Electronics and Field theory.

PSO-02: Apply multidisciplinary concepts with emerging technologies to sustain with the dynamic industry challenges.

PSO-03: Excel in current and future technological advances for active contribution in the field of Electrical and Electronics Engineering for professional career progression.

PSO-04: Develop interpersonal skills that are in line with the industry requirements and societal needs.

Program Outcomes (POs)

Engineering graduates will be able to:

PO-01: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO-02: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO-03: 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 cultural, societal, and environmental considerations.

PO-04: 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.

PO-05: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO-06: 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.

PO-07: 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.

PO-08: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO-09: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-10: 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.

PO-11: 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.

PO-12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

CONTENTS:

- ABOUT INSTITUTE
- ACKNOWLEDGEMENT
- ACADEMIC LEADERS
- ABOUT DEPARTMENT
- MESSAGE FROM HOD
- RESEARCH HIGHLIGHTS
- CONFERENCES AND
 PUBLICATIONS
- DEPARTMENTAL ACTIVITIES
- ACHIEVEMENT

ABOUT INSTITUTE

VBIT, Sponsored by Swami Vivekananda Educational Trust (SVET) is the place where opportunities are provided for students to realize their ambitions, where new ideas are born, where innovative projects materialize, and where students excel in learning. Founded in 2004 by highly qualified people, Vignana Bharathi Institute of Technology emerged as a hub for engineering excellence. At VBIT, students will discover engineering in a different light. Students will experience an engineering education that is on par with the industry requirement. The institute is recognised as one of the Top Engineering Colleges in Telangana with NAAC 'A' Grade and NBA Accreditation.

ACKNOWLEDGEMENT

We express our sincere gratitude to our esteemed Chief Patrons Dr. N. Goutham Rao, Chairman-VBIT and Dr.G. Manohar Reddy, Secretary-VBIT, for their immense support and guidance. We would like to acknowledge our Patrons Dr. P.V.S.Srinivas, Principal-VBIT, Dr.Y.V.S.S.S.V.Prasada Rao, Director VBIT for their invaluable contribution and encouragement throughout the development of this Magazine.

We extend our acknowledgement to our Convener, Dr.K.Neelima, Head of Department-EEE and Mr.V.Jeetender, Assistant Professor & Incharge, for their magnificent leadership and dedication which have been pivotal in guiding this project. Finally, we extend our sincere gratitude to our team for their dedicated supervision and steadfast assistance in managing the diverse elements of magazine production. We deeply appreciate all our readers for thoroughly exploring every page.

ACADEMIC LEADERS



Dr. N. Goutham Rao Chairman VBIT

Dr. N. Goutham Rao, a highly accomplished sociologist, excels in academia and project management, bridging tradition with modernity while remaining accessible to diverse student and faculty populations.



Dr. G. Manohar Reddy Secretary VBIT

Dr. G. Manohar Reddy, originating from a Nalgonda village, injects youthful energy into the Management Committee. With a stellar academic journey, he actively engages in teaching Chemistry populations.



Dr. P. V. S. Srinivas Professor & Principal

Dr. P.V.S. Srinivas, an accomplished academic and administrator, serves as Principal and Professor in Computer Science Engineering. He holds a Ph.D., M.Tech, and AMIE with extensive experience.

ABOUT DEPARTMENT

The Electrical and Electronics Engineering department at Vignana Bharathi Institute of Technology. Harnessing electrical energy poses a significant challenge for electrical engineers. The dynamic EEE department endeavours to inspire budding Electrical Engineers by instilling the notion of constructing Generating Stations, Transmission Lines and Distribution Systems at cost-effective rates. Furthermore, it emphasizes the design, testing, and supervision of manufacturing processes for Electrical and Electronic equipment employed in various domains including electrical utilities, buildings, automobiles, aircraft, radar, navigation systems, and broadcast and communication systems. The Department upholds a high standard of teaching and learning, facilitated by highly qualified faculty members. It's well-equipped laboratories offer students ample opportunities to enhance their practical knowledge under the guidance of technically proficient instructors. Moreover, the Department is actively engaged in conducting research activities in the Electrical Power Sector, providing students with a platform to explore and innovate in this vital field.



MESSAGE FROM HOD



Dr. K. NEELIMA Professor & HOD, Dept. of EEE, VBIT

Warm Welcome to the Fourth Issue homepage of Elecvoice. This magazine speaks about the successful journey of EEE department in various aspects. I am proud to see that the students of our department have put an incredible effort in bringing up this magazine with useful information. Our department has a team of qualified and experienced faculty with which we are striving hard continuously to improve upon the quality of education and to maintain its position of leadership in Engineering and Technology. We always work with the motto "Nothing can be achieved without Genuine Effort." The core values of the department help the students to develop their overall personality and make them worthy technocrats to compete and work at global levels. Our department has been conducting Seminars, AV classes and Tutorials very efficiently and effectively since its beginning, this made the students abreast with the latest developments in the field of Technical Education.

Specialized knowledge is imparted regarding simulation of various processes using SCILAB, MATLAB, MI POWER etc by organizing Workshops, Guest Lectures and Technical Fests. Our Faculty and Students actively participated in various activities like R&D, Co-Curricular and Extra-Curricular. Industrial visits are regularly organized to enhance the practical knowledge of the students and to interact with the recent technologies used in the industries. I wanted to thank our Faculty and Students for all their Commitment and determination shown to get through NBA Accreditation which laid a good platform in focusing more Potential Technological Growth Opportunities. Before concluding I would say, the content in the Magazine has substantial knowledge repository which gives lot of learning growth to the readers.

RESEARCH HIGHLIGHTS

Fussy based method for improving the quality of a power in a grid connected system using a solar pv led multilevel inverter

Dr. K. Neelima's paper presents the combination of non-conventional sources, namely solar photovoltaic (PV) systems, into the power grid has received considerable recognition in recent years, mostly because of its environmental and economic advantages. Nevertheless, the incorporation of these systems presents difficulties with power quality, including issues with voltage variations, harmonics, and the control of reactive power. This work introduces a control approach based on fuzzy logic to improve the quality of electricity in grid-connected devices.

-Dr.K.Neelima

Analysis design implementation of extreme boost quasi–Z Source inverter technologies

Dr. V. Jagan's paper presents the salient advantages of inverters based on impedance source networks have made them proper for renewable energy conversion applications that are required to increase input DC voltage and convert it to AC energy. Switched Boost Inverters (SBI) are single-stage DC-AC power converters utilizing an active switch in the impedance network whose output voltage can be greater or less than its input DC voltage.

-Dr.V.Jagan



Fuzzy PI based speed control of sensorless permanent magnet synchronous motor

Dr. C.R. Edwin Selva Rex's study examines the accuracy of control in permanent magnet synchronous motor system significantly affects overall mechanical structure safety. To satisfy high-performance control for the position servo of the electric steering engine, this study selects a suitable vector control model for permanent magnet synchronous motor

-Dr.C.R.Edwin SelwaRex

Wind turbine with line inside PMSG fed dc- dc converters for voltage regulator

Dr. B.Nagi Reddy presents a novel study of the design and analysis of a wind turbine system that includes a line-side permanent magnet synchronous generator (PMSG) with an ultra- step-up DC-DC converter for voltage regulation. Integrating renewable energy sources such as wind power into the grid requires efficient and reliable power conversion systems to handle fluctuating power and ensure a stable power supply

-Dr.B.Nagi Reddy

Design of PV fed single-switch transformer less topology powered electric vechicle

Mr. V. Jeetender's the increase in the availability of resources that were not harmful to the environment, solar energy applications shot to popularity. Photovoltaic cells power systems that necessitate DC-DC converters because of their low voltage output. This investigation uses photovoltaic cells (PV) to power a high-voltage gain design with just one switch and no transformer.



-Mr. V. Jeetender

CONFERENCES AND PUBLICATIONS

CONFERENCES

 Title of the Paper: A Fuzzy-Based Method for Improving the Quality of Power in Grid-Connected System Using a Solar PV-Fed Multilevel Inverter.
 Name of the Conference: ICSGET 2024.
 Dates of the conference: 14-15 June 2024.
 Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the Paper: Leveraging Electric Vehicle Batteries for Enhanced Microgrid Energy Management.
Name of the Conference: IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)
Dates of the conference: 31 July - 03 August 2024.
Indexed in SCI/Scopus/ WoS: Scopus.

3. Title of the Paper: Smart Solar Energy System with IoT-Enabled Tracking Name of the Conference : 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025) Dates of the conference: 21-22 Feb 2025 Indexed in SCI/Scopus/ WoS : Scopus



Dr. K. NEELIMA Professor & HOD, Dept. of EEE, VBIT BOOK CHAPTER:

Title of the Chapter : An adaptive DC link voltage three-phase photovoltaic structure for CPI voltage fluctuations. **Title of the Book chapter :** Emerging technologies and applications in electrical engineering.

Publisher : Taylor & Francis group. **Month and Year :** July 2024

CONFERENCES

 Title of the paper: Design and Analysis of Active Extreme Boost Quasi-Z Source Converter Name of the Conference: 2025 International Conference on Computer, Electronics, Electrical Engineering & their Applications (IC2E3)
 Dates of the conference: 06-07 June 2024
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

2.Title of the paper: Extended Quasi-Z-Source DC-DC Converter with an Active Switched-Z -Network
Name of the Conference: 2025 International Conference on Computer, Electronics, Electrical Engineering & their Applications (IC2E3)
Dates of the conference: 06-07 June 2024
Whether Indexed in SCI/Scopus/ WoS: Scopus

3.Title of the paper: Performance Analysis of Superior-Boost Quasi Z Source Inverter Name of the Conference: 2024 International Conference on Computer, Electronics, Electrical Engineering & their Applications (IC2E3)
Dates of the conference: 06-07 June 2024
Whether Indexed in SCI/Scopus/ WoS: Scopus

4. Title of the paper: Advancements in BLDC Motor Technology for Sustainable Electric Mobility
Name of the Conference: 2025 International Conference on Electronics and Renewable Systems (ICEARS)
Dates of the conference: 11-13 February 2025
Whether Indexed in SCI/Scopus/ WoS: Scopus



Dr. V. JAGAN Professor, Dept. of EEE, VBIT

5. Title of the paper: Electric Vehicle Charging Station with Hybrid Energy Sources

Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025)

Dates of the conference: 21-22 Feb 2025

Whether Indexed in SCI/Scopus/ WoS: Scopus.

JOURNALS

 Title of the paper: Design of a prototype firefighting robot based on an Arduino microcontroller using machine learning technique. Title of the journal : International Journal of Robotics and Automation (IJRA). Month & Year of publication : March 2025. Volume No and Issue, Page Nos : 14 (1), 31~37.

Indexing (SCI/WoS/ Scopus) : Scopus.

2. Title of the paper : Solar tracker using Arduino microcontroller and light dependent resistor Title of the journal :International Journal of Power Electronics and Drive Systems (IJPEDS). Month & Year of publication : March 2025.
Volume No and Issue, Page Nos : 16 (1), 70~75 Indexing (SCI/WoS/ Scopus) : Scopus.

CONFERENCES

- Title of the paper: Enhancing Electric Vehicle Efficiency through an ANFIS Controller-Driven Energy Management System
 Name of the Conference: IEEE-2024 4th International Conference on Intelligent Technologies (CONIT)
 Dates of the conference: 21-23 June 2024
 Whether Indexed in SCI/Scopus/ WoS: Scopus+ WoS
- 2. Title of the paper: Efficiency Enhancement of Electric Vehicles with ANFIS-Based Energy Management
 Name of the Conference: IEEE- International Conference on Intelligent Algorithms for Computational Intelligence Systems (IACIS)
 Dates of the conference: 22-23 Aug, 2024
 Whether Indexed in SCI/Scopus/ WoS: Scopus+ WoS

3. Title of the paper: Optimizing Electric Vehicle Efficiency-The Role of ANFIS Controller-Driven Energy Management
Name of the Conference: IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems-2024
Dates of the conference: 23 October 2024
Whether Indexed in SCI/Scopus/ WoS: Scopus



Dr. SUNDEEP SIDDULA Associate Professor, Department of EEE



Title of the paper: Enhancement of grid-tied wind system performance under different loading scenarios.
 Name of the Conference: ICSGET 2024 .
 Dates of the conference: 14, 15, here 2024.

Dates of the conference:14-15 June 2024 Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper : Elevated Step-Up Gain DC-DC Converter Featuring Switched Capacitor and Regenerative Boost Configuration for Enhanced Solar PV Applications
Name of the Conference: ICSGET 2024 .
Dates of the conference: 14-15 June 2024.
Whether Indexed in SCI/Scopus/ WoS: Scopus.



 3. Title of the paper:Switched Inductor and Capacitor Techniques for Efficient Power Conversion Name of the Conference:2nd International Conference on Renewable Energy,Green Computing
 Associate Professor, Department of Associate Professor, Department of EEE
 Dates of the conference: 21-22 Feb 2025.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

JOURNALS:

Title of the paper : Wind turbine with line-side PMSG FED DC-DC converter for voltage regulation Title of the journal :PLoS ONE. Month & Year of publication : June 2024. Volume No and Issue, Page Nos :19 (6), 1-31. Indexing (SCI/WoS/ Scopus) : SCI.

CONFERENCES

 Title of the paper: Fuzzy PI Based Speed control of Sensorless Permanent Magnet Synchronous Motor
 Name of the Conference:IEEE 9th International Conference for Convergence in Technology (I2CT) Dates of the conference: 5-7 Apr 2024

Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: AI-Driven Fault Detection in Smart Grids
Name of the Conference: 2024 3rd Odisha International Conference on Electrical Power Engineering, Communication and Computing Technology (ODICON).
Dates of the conference: 08-09 November 2024.
Whether Indexed in SCI/Scopus/ WoS: Scopus.

BOOK CHAPTER:

Title of the Chapter : Study on Environmental and Social Impacts Through Electric Vehicles. Title of the Book chapter : Solving Fundamental Challenges of Electric Vehicles. Publisher : IGI Global. Month and Year : August 2024



DR.C. R. EDWIN SELVA REX Associate Professor, Department of EEE



 Title of the paper: Safety Warning for Electric Vehicle Charging Utilizing A-LSTM Algorithm Name of the Conference: IEEE 9th International Conference for Convergence in Technology (I2CT) Dates of the conference: 5-7 Apr 2024 Whether Indexed in SCI/Scopus/ WoS: Scopus.

 2. Title of the paper: Employing Opposition-based Grey Wolf Optimization for Optimal Allocation and Sizing of Distributed Generation in a Power Distribution System
 Name of the Conference: 2nd World Conference on Communication & Computing (WCONF)
 Dates of the conference: 12-14, Jul 2024
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

 3. Title of the paper: Improved Harmonic Mitigation Using Dual Three-Phase iUPQC Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025)
 Dates of the conference: 21-22 Feb 2025
 Whether Indexed in SCI/Scopus/ WoS: Scopus.



DR. Y. ANIL KUMAR Associate Professor, Department of EEE

4. Title of the paper: Comparative Analysis of Average Current Mode Control and Sliding Mode Control of Bidirectional CUK Converter for BESS

Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025)

Dates of the conference: 21-22 Feb 2025 **Whether Indexed in SCI/Scopus/ WoS:** Scopus.

5. Title of the paper: Design of Efficient Single Switch DC-DC Converter for Electric Vehicles Charging.
 Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025)

Dates of the conference: 21-22 Feb 2025 **Whether Indexed in SCI/Scopus/ WoS:** Scopus.

JOURNALS:

- Title of the paper : Cybersecurity enabled electric vehicle charging and battery management system. Title of the journal : Journal of Discrete Mathematical Sciences and Cryptography. Month & Year of publication : Oct 2024. Volume No and Issue, Page Nos : 27 (7), 2111–2122. Indexing (SCI/WoS/ Scopus) : WoS.
- 2. Title of the paper : Cryptography algorithms for enhancing security in IoT based Mafly-MPPT system under partial shading conditions. Title of the journal : Journal of Discrete Mathematical Sciences and Cryptography. Month & Year of publication : Oct 2024.
 Volume No and Issue, Page Nos : 27 (7), 1991–2003. Indexing (SCI/WoS/ Scopus) : WoS.

- 1. Title of the paper: Simulation of Hybrid Boost Converter with Reduced Switch Stress for PV Systems.
 Name of the Conference: ICSGET 2024.
 Dates of the conference: 14-15 June 2024.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.
- 2. Title of the paper: Control of Solar and Wind Battery Storage Based Micro Grid Using Simulation.
 Name of the Conference: IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS).
 Dates of the conference: 28-29, Jun 2024.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.



Dr. J. SREEDHAR Associate Professor, Department of EEE

3. Title of the paper: Dual Axis Solar Tracking System.
Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025).
Dates of the conference: 24-25 January 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.

CONFERENCES

Title of the paper: Protection and Monitoring of Smart Grids with IoT. Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025). Dates of the conference: 21-22 Feb 2025. Whether Indexed in SCI/Scopus/ WoS: Scopus.

JOURNALS

Title of the paper : Artificial rabbits optimization based reconfiguration and distributed generation allotment in the distribution network.

Title of the journal : International Journal of Power Electronics and Drive Systems (IJPEDS).

Month & Year of publication : September 2024.

Volume No and Issue, Page Nos : 15 (3), 1749~1756. Indexing (SCI/WoS/ Scopus) : WoS.



Dr. G. POORNA CHANDRA RAO Associate Professor, Department of EEE

Title of the paper: Speed Control of BLDC Motor using PWM and Arduino Uno. Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025). Dates of the conference: 24-25 January 2025. Whether Indexed in SCI/Scopus/ WoS: Scopus.

JOURNALS:

Title of the paper : An evaluation on industrial applications using leakage inductance and series capacitance converter.
Title of the journal : Transactions on Energy Systems and Engineering Applications.
Month & Year of publication : Feb 2025.
Volume No and Issue, Page Nos : 6(1), 1–23.
Indexing (SCI/WoS/ Scopus) : Free Scopus.



Mr. M. SAI PRASAD REDDY Associate Professor, Department of EEE

CONFERENCES

 1. Title of the paper: The Study of Solar and Wind Power Systems under Different Weather Conditions.
 Name of the Conference: ICSGET 2024.
 Dates of the conference: 14-15 June 2024.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: Design and Analysis of NN Controller based EV Charging Station with Enhanced Power Quality.
Name of the Conference: 2024 IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS).
Dates of the conference: 28-29 June 2024.
Whether Indexed in SCI/Scopus/ WoS: Scopus.

3. Title of the paper: Power Smoothing Enhancement in Hybrid System Using Neural Network Controller.
Name of the Conference: 2nd International Conference on Renewable Energy, Green Computing and Sustainable Development (ICREGCSD 2025)
Dates of the conference: 21-22 Feb 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.



Mr. A. GOPALA KRUSHNA Associate Professor, Department of EEE

14

 Title of the paper: Analyzing the Outdoor Performance of Different Types of PV Module Technologies.
 Name of the Conference: ICSGET 2024.
 Dates of the conference: 14-15 June 2024.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: Servo Control of Shunt-Active Power Filters Using Kalman Filter With DC-Link Reference.
Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025).
Dates of the conference: 24-25 January 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.



Mr. C V VIJAY KUMAR Assistant Professor, Department of EEE

CONFERENCES

 Title of the paper: Revolutionizing Renewable Energy Integration: The Innovative Gravity Energy Storage Solution.
 Name of the Conference: ICSGET 2024.
 Dates of the conference: 14-15 June 2024.
 Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: Servo Control of Shunt-Active Power Filters Using Kalman Filter With DC-Link Reference.
Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025).
Dates of the conference: 24-25 January 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.



Mr. J N BHANUTEJ Assistant Professor, Department of EEE

Title of the paper: Modelling and Analysis of Cascaded DC–DC Converters in Medium Voltage AC Grid-Connected PV-WIND Power Systems.

Name of the Conference: IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS).

Dates of the conference: 28-29, Jun 2024.

Whether Indexed in SCI/Scopus/ WoS: Scopus.



Mr. H. KISHAN Assistant Professor, Department of EEE

CONFERENCES

 Title of the paper: Enhanced Total Hormonic Distortion in a Hybrid Microgrid with Fuel cells and Photovoltaic Cell.
 Name of the Conference: IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS).

Dates of the conference: 28-29, Jun 2024.

Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: Electric Vehicle Charge Dynamic Wireless Power Transfer.
Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025).
Dates of the conference: 24-25 January 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.

JOURNALS

Title of the paper : Design of PV fed single-switch transformer less topology powered electric vehicle.
Title of the journal : Transactions on Energy Systems and Engineering Applications.
Month & Year of publication : July 2024.
Volume No and Issue, Page Nos : 5(2), 1-23.
Indexing (SCI/WoS/ Scopus) : Free Scopus.



Mr. V. JEETENDER Assistant Professor, Department of EEE

BOOK CHAPTER:

Title of the Chapter : A comprehensive review on switched capacitor based DC-DC converters.
Title of the Book chapter : Emerging technologies and applications in electrical engineering.
Publisher : Taylor & Francis group.
Month and Year : July 2024

16

1. Title of the paper: Improving the Load Frequency Control of a Renewable Energy Penetrated Dual Area Power System with a 2DOFPID Controller.
Name of the Conference: 2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST).
Dates of the conference: 25-26 October 2024.
Whether Indexed in SCI/Scopus/ WoS: Scopus.

2. Title of the paper: A Comprehensive Review on Voltage Multiplier Cells for DC-DC Converters.
Name of the Conference: 3rd International Conference on Sustainable Green Energy Technologies (ICSGET 2025).
Dates of the conference: 24-25 January 2025.
Whether Indexed in SCI/Scopus/ WoS: Scopus.



Mrs. B. Sravanthi Assistant Professor, Department of EEE



TEAM ELECTRICAL AND ELECTRONICS ENGINEERING

DEPARTMENTAL ACTIVITIES

Industrial visit to Lower Jurala Hydro Electric Power Generation Plant

Vignana Bharathi Institute of Technology arranged an industrial visit on September 30, 2023, to the Lower Jurala Hydro Electric Power Plant for students of Electrical and Electronics Engineering, overseen by Dr. K. Neelima, Head of the department. Forty students and three faculty coordinators participated.



Situated near Mulamalla Village, Atmakur Mandal, Jogulamba Gadwal district, Telangana, the Lower Jurala Hydro Electric Project is a significant ongoing venture. It comprises six units, generating 40 MW each, owned by Telangana State Power Generation. With a reservoir capacity of 14.2 million cubic meters and a net head of 20 meters, it has produced 534.43 GWh of electricity, offering valuable practical insights into hydroelectric power generation.

Industrial visit to PGCIL Power grid+6520



On January 23, 2025, Vignana Bharathi Institute of Technology organized an industrial visit to PGCIL, Annojiguda, for Electrical and Electronics Engineering students, led by Dr. K. Neelima, Head of the department.

Forty-five students and one faculty coordinator, including Mr. V. Jeethender, Dr. Nagi Reddy, participated, departing from the college at 9:00 AM. PGCIL, a significant industrial entity in Annojiguda, Hyderabad, provided first-hand insights into power sector operations.

DEPARTMENTAL ACTIVITIES

Industrial visit to 210kw Solar Power Plant

Vignana Bharathi Institute of Technology arranged an industrial visit on August 29th, 2024 to the 210kw Solar Power Plant for students of Electrical and Electronics Engineering, overseen by D. k. Neelima, Head of the department. Fourty students and three coordinator participated



Situated in Vignana Bharathi institute of technology, Aushapur Village, Ghatkesar Mandal, Medchal District, Telangana. Solar Panels are mostly warrantied for 25 years (performance warranty) and have a useful life of about 30 years. For a 210kW Solar Plant about 609 qty of poly solar panels of 345wp would be required or 420 qty of mon-perc solar panels of 500wp.

Industrial visit to Nagarjuna Sagar Hydro Electric Power Generation Plant



Vignana Bharathi Institute of Technology arranged an industrial visit on Sep 02, 2023, to the Lower Jurala Hydro Electric Power Plant for students of Electrical and Electronics Engineering, overseen by Dr. K. Neelima, Head of the department. Fourty students and three faculty coordinators participated.

Situated near Mulamalla Village, Atmakur

Mandal, Jogulamba Gadwal district, Telangana, the Lower Jurala Hydro Electric Project is a significant ongoing venture. It comprises six units, generating 40 MW each, owned by Telangana State Power Generation. With a reservoir capacity of 14.2 million cubic meters and a net head of 20 meters, it has produced 534.43 GWh of electricity, offering valuable practical insights into hydroelectric power generation.

VIDHYUTHSANGRAH

VIDHYUTHSANGRAH the students forum Department of Electrical and Electronics Engineering Established on the 9th of April on the Birth Anniversary of Renowned Electrical scientist Charles Proteus Steinmetz, Under the Esteemed guidance of Dr.K.Neelima Madam, HOD EEE Department and Mr.V.Jeetender sir as Faculty Co-Ordinator of the team. Team VidhyuthSangrah aims to establish a dynamic platform for the student's of EEE to turn their Ideas into innovation and shape their bright future in the core platform.

GOALS OF VIDHYUTHSANGRAH

•Enhance Technical Knowledge – Strengthen understanding of core concepts through academic sessions, workshops, and peer learning.

•Bridge Academia and Industry – Facilitate industry exposure through internships, industrial visits, and expert talks.

•Promote Innovation and Entrepreneurship – Encourage research, project development, and startup incubation.

•Support Professional Growth – Improve career prospects with training in soft skills, resume building, and placement support.

GLIMPS OF TEAM VIDHYUTHSANGRAH



ACHIEVEMENT



Dr. SUNDEEP SIDDULA Associate Professor, Department of EEE

Dr. Sundeep Siddula, Associate Professor, Department of EEE, is duly recognized for his commendable achievement-an exemplary reflection of his continued commitment to academic and professional excellence.

Dr. Sundeep Siddula has recently been elevated to the prestigious grade of Senior Member by the Institute of Electrical and Electronics Engineers (IEEE). This honor is recognition of Sundeep Siddula's substantial professional experience, technical expertise, and significant contributions to the field of engineering and technology. With over a decade of professional involvement in the domain, Dr. Sundeep Siddula has demonstrated consistent excellence through impactful projects, research, and leadership. His elevation to Senior Member is not only a testament to his dedication and accomplishments but also places him among a select group of professionals who have reached this milestone-less than 10% of IEEE's global membership. This recognition reflects Dr. Siddula's ongoing commitment to innovation, mentorship, and the advancement of technology in both academic and industrial settings. It also highlights his role as a thought leader whose work continues to shape and influence the engineering community. His area of specialization as key projects, research contributions, and publications he's affiliated with Institutions and organizations. Dr. S. Sundeep presents the exponential expansion of electric-vehicles (EVs) has emphasized the necessity for effective energy management systems to optimize their performance and overcome range constraints. His achievements also include various awards recognizing both his academic excellence and industry impact.



MR.V.JEETENDER

Assistant professor of EEE Faculty Co-ordinator

OUR TEAM



K.MOUNIKA 22P61A0226 Team Lead



CH.LIKITHA 22P61A0217 Co-Lead



O.SAKETH 22P61A0238 Technical Coordinator



P.RATHNAKAR SAI 22P61A0241 Documentation Coordinator



BANOTHU RAJASHEKAR 22P61A0205 Designer



Department of ELECTRICAL AND ELECTRONICS ENGINEERING