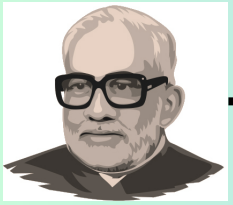

ILLUMINARIES

VOLUME - 15 ISSUE - 2 DECEMBER - 2024

VISHNU UNIVERSAL LEARNING
SVECW ESTD : 2001
Shri Vishnu Engineering College for Women
(Autonomous)
Vishnupur, Bhimavaram, Andhra Pradesh

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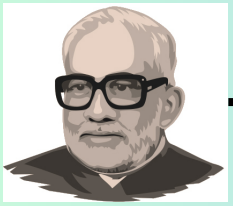


ILLUMINARIES

VOLUME - 15 ISSUE - 2 DECEMBER - 2024

Vision:

"To establish a knowledge hub in the field of Electrical & Electronics Engineering to meet the needs of the society"

Mission:

- To produce quality Electrical and Electronics Engineers.
- To inculcate discipline and ethical values among the students.
- To empower students to succeed in higher education and research.

Editor's MESSAGE:

With great pleasure, I inform that the newsletter for the second half of 2024 from the Department of Electrical and Electronics Engineering has been released. It features a variety of accomplishments and activities from our staff and students. The goal of Shri Vishnu Engineering College for Women (Autonomous) is to illuminate students' lives by using their understanding of flame to create shapes in a distinctive way.

Student Article

Title : Design and Implementation of Solar-Powered Grass Cutter: (A Prototype)

ABSTRACT : Since ancient times, Sunlight has been the main source of heat energy. Alternative energy sources, commonly termed non-conventional or renewable energy sources, are naturally available like Solar, Wind, and Hydro. It is used as an alternative source of energy in place of fossil fuels which causes pollution. This paper describes how we designed and built a solar-powered grass cutter. By incorporating solar panels, the machine harnesses sunlight as its main energy source. The main objective of developing the Prototype model of the grass cutter is to create an eco-friendly solution for lawn maintenance that reduces greenhouse emissions and minimizes the usage of fossil fuels. This prototype is designed so that it is controlled remotely by using Arduino UNO. After developing the prototype model, the system analysis is accomplished, and based on the results, the solar grass cutter's reliability with the system's high efficiency is compared with previous studies. This project aims to showcase solar-powered technology in practical applications to inspire the adoption of non-conventional energy sources in everyday tasks.

Authors

1) Kunapareddy Navya Harshitha
2) Pulagam Usha Devi
3) Pappoppu Pushpa Rekha
4) Patan Sabiha Roshin

STUDENTS CORNER

PROTOTYPE COMPETITION :The students of III EEE 1) Veligatla Sri Pujitha-(22B01A0259),2)Chilkuri Navya Sri -(22B01A0215), 3)P.S.J.Prasuna (22B01A0250), 4)N. Hemasri (22B01A0241), 5)M. Jhansi(22B01A0206) of EEE department are selected for IET Ignite Final Prototype Competition in collaboration with Arcadis India Pvt Ltd on December 14th, 2024.





Internships

Infineon semiconductors

G.T.S.Padmavathi
21B01A0211

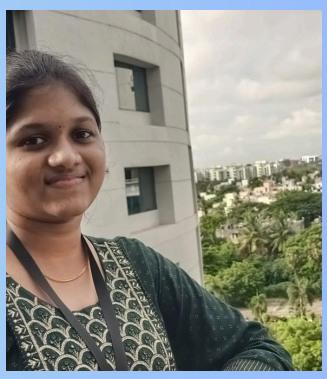
TVS motors

Mandala Rama Satya Devi
21B01A0225

TVS motors

P.Sri Harshitha
21B01A0240

TVS motors



Pilli Dharani Satya
21B01A0241

INDUSTRIAL VISIT

INDUSTRY VISIT

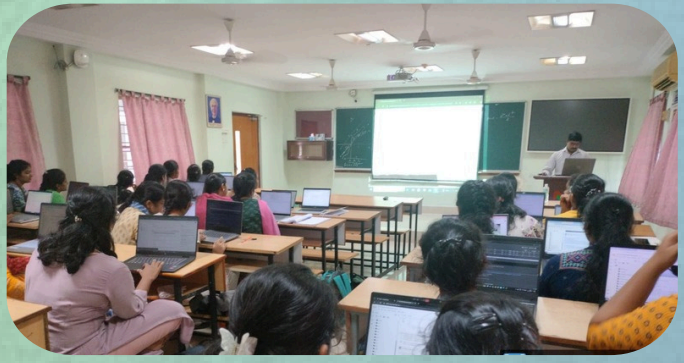
Department of EEE organized an industrial visit for II EEE students to 'Electrical Loco Shed' at Vijayawada on 2nd August 2024.The Purpose of the visit is to provide practical exposure and insights into the functioning of electric locomotives and . The relevant courses mapped is DC Machines and Transformers

Effectronics Mangalagiri

Department of EEE has organised an educational industrial visit to EFFTRONICS SYSTEMS PVT.LTD., located at Mangalagiri, Guntur district, Andhra Pradesh on 27 September 2024.A group of 40 students from III year along with two faculty coordinators Dr B. Ramu and Mrs G. Bharathi of EEE Department.

STUDENT DEVELOPMENT PROGRAM

Department of EEE organized an offline One Week Student Development Programme on "Machine Learning Applications to Electrical Vehicles" during 1st – 6th July 2024 for III & IV EEE students in association with Radhanu Technologies a startup incubated with NITAP, Tadepallegudem.

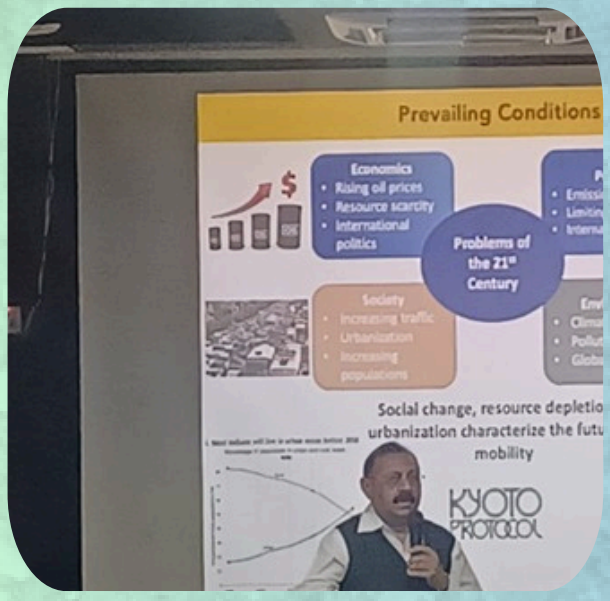


EXPERT LECTURE

Department of EEE in association with SVECW IEEE Power and Energy Society Chapter has organised an Industry Expert Lecture on "Introduction to Hybrid Electric Aircraft" on 30th November 2024 for III year EEE students.

EXPERT TALK

Dr K C Vora, is invited to SVECW to be as a Professor of Practice, for the departments of EEE & Mechanical Engineering. He was a Former Sr Dy Director at ARAI & Former CEO of COEP Bhau Institute, Chair-ASDC Expert Group on EV, Advisor-BAJA SAEINDIA, Working on Road Safety, Hydrogen, EV & Autonomous Mobility. He will be visiting SVECW every month for 2 days and delivers a course on "Electrical Vehicle Technology". Dr. Vora started his interaction with students on 24th June and visited again on 22nd July and 23rd August 2024 and will be continued.



PLACEMENTS

Daimler Truck

Adabala Sri Ramya
21B01A0201
7.5 lakhs

Infineon semiconductors

G.T.S.Padmavathi
21B01A0211
4.2 Lakhs

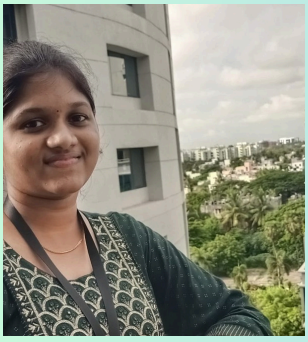
TVS motors

Mandala Rama Satya Devi
21B01A0225
8 Lakhs

TVS motors

P.Sri Harshitha
21B01A0240
8 lakhs

TVS motors



Pilli Dharani Satya
21B01A0241
8 lakhs

Cognizant

M.Akhileswari
21B01A0226
4 lakhs

Cognizant

S. Navyasri
21B01A0246
4 lakhs

KPIT

Midde Sravani
21B01A0229
4 lakhs

Renault Nissan

Manne Rishmitha Sai
21B01A0227
4.2 lakhs

Tech Mahindra

Shaik Ayesha Begum
21B01A048
5.5 lakhs

Accenture

Adabala Sri Ramya
21B01A0201
4.5 lakhs

Accenture

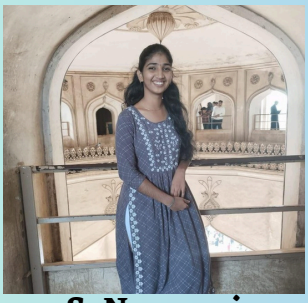
M. Rama Satya Devi
21B01A0225
4.5 Lakhs

PLACEMENTS

Accenture

Shaik Kareena Jani
21B01A0249
4.5 Lakhs

Accenture



S. Navyasri
21B01A0246
4.5 lakhs

Accenture

T.Sai Sri Vaishnavi
21B01A0254
4.5 lakhs

Accenture

Ravuri Pujitha
21B01A0265
4.5 lakhs

Siemens

S.AKHILA
22B01A0205
4.5 lakhs

Daimler Truck

DANDU SRIHITHA
21B01A0207
4.5 lakhs

Capgemini

V THANUJA LAKSHMI
21B01A0261
4.5 lakhs

Capgemini

V. NISHITHA
21B01A0260
4.5 lakhs

Capgemini

S.USHA SREE
21B01A0252
4.5 lakhs

Capgemini

R MOUNIKA
21B01A0244
4.5 lakhs

Capgemini

V.M. NAGA LAKSHMI
21B01A0258
4.5 lakhs

FACULTY ACHIEVEMENTS

Best paper

Dr. Ramu Bhukya of EEE department got the best paper award for the paper titled "MIWO-IC Based MPPT of PV Fed Water Supply System Driven by Induction Motor with a Five Level Inverter" in International Conference on Intelligent Computing and Sustainable Innovations in Technology (IC-SIT) 2024 organized by Silicon University, Bhubaneswar, India during November 21st-23rd, 2024.

Dr. S.Dileep Kumar varma of EEE department got the best paper award for the paper titled "Enhancing the Dynamic Performance of the Grid-tied Wind turbine using ADRC based STATCOM" in 2024 IEEE Flagship International BIT CONFERENCE(BITCON-24), BIT Sindri held during 7-8 Dec 2024

Dr. M V Srikanth of EEE department received best paper award for the paper titled" Tuning Reduced-order Error-based ADRC for FOPDT Processes using Magnitude Optimum Approach", 2024 1st IEEE International Conference on Computational Intelligence for Green & Sustainable Technologies (ICCIGST-2024) during July 18th-19th 2024 Organized by Department of EEE, V. R. Siddhartha Engineering College Vijayawada.

Doctoral degree

Dr.Y.T.R.Palleswari, Assistant Professor in the Department of EEE, has obtained her Ph.D. with a focus on 'Power Electronics applications in Power Systems'. with title "Performance Analysis of Solar PV under Partial Shading condition using Globalized MPPT Algorithm" under the esteemed guidance of Dr. D. Susitra, Professor, Dept. of EEE,in Sathyabama Institute of Science & Technology, Chennai in the August 2024.

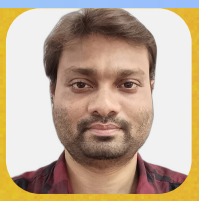
Dr.A.Siva, Assistant Professor in the Department of EEE, has obtained her Ph.D. with a focus on 'Power Electronics applications in Power Systems'. with title "Design and Implementation of Asymmetric Multilevel Inverter and Auxiliary Unit Based High Gain Converter for Enhanced Grid - Connected Solar Photovoltaic System" under the esteemed guidance of Dr. D. Susitra, Professor, Dept. of EEE,in Sathyabama Institute of Science & Technology, Chennai in the August 2024.

PATENTS

Dr.Rohith Balaji Jonnala of EEE department Published a Patent with the title of invention as “Smart Seismic Sensing: Designing an Arduino based Earthquake Detector"
Patent Application Number:202441073741
Date of filing::30/09/2024
Date of Publication:04/10/2024

Dr.Rohith Balaji Jonnala of EEE department Published a Patent with the title of invention as “AMBU BAG BASED PORTABLE LIFE SUPPORTING VENTILATION APPARATUS"
Patent Application Number:202441083692
Date of filing::01/11/2024
Date of Publication:08/11/2024

Faculty Publications



Dr. A. Siva of EEE department Published a paper titled "Demand response-based dynamic economic load dispatch in a microgrid with modified red deer algorithm" in "International Journal of Powertrains", 13(2), 141–155. https://doi.org/10.1504/ijpt.2024.140123

Dr. B. Ramu of EEE department Published a paper titled "Renewable Energy based Automatic Water Level Monitoring for an Overhead Water Tank – A Prototype System," IOP Conference Series: Earth and Environmental Science, vol. 1375, p. 012010, 2024/07/01, 2024.

Dr. S. Dileep Kumar Varma of EEE department Published a paper titled “Degradation Analysis of Grid Interfaced Solar Pv Plant in Coastal Climate Conditions” in Journal of Renewable Energy Volume 11, Issue 3 , August 2024, Pages 141-155.

Mrs. G Bharathi of EEE department Published a paper titled "Artificial Neural Network MPPT method of Solar PV System for Electric Vehicles using Mat Lab Simulink," IOP Conference Series: Earth and Environmental Science, vol. 1375, p. 012004, 2024/07/01 2024.

Dr.B.Ramu -Assistant Professor

Dr. Ramu Bhukya of EEE department got the best paper award for the paper titled "MIWO-IC Based MPPT of PV Fed Water Supply System Driven by Induction Motor with a Five Level Inverter" in International Conference on Intelligent Computing and Sustainable Innovations in Technology (IC-SIT) 2024 organized by Silicon University, Bhubaneswar, India during November 21st-23rd, 2024.

Dr.S.Dileep Kumar Varma -Professor

Dr. S.Dileep Kumar Varma of EEE department published a paper titled "Enhancing the Dynamic Performance of the Grid-tied Wind turbine using ADRC based STATCOM" in 2024 IEEE Flagship International BIT CONFERENCE(BITCON-24), BIT Sindri held during 7-8 Dec 2024.

Mr.Sunkara Veerababu - Assistant Professor

Mr.S.Veerababu of EEE department published a paper titled "COOPERATIVE POWER EXCHANGE BETWEEN TWO ROOFTOP SOLAR PLANTS INTERFACED WITH ARDUINO IOT CLOUD" in the Proceedings on Engineering Sciences with ISBN Number 2620-2832 (print), 2683-4111 https://doi.org/10.24874/PES.SI.25.03b.021 in DECEBER-2024.

Dr.Asapu Siva - Assistant Professor

Dr.A.Siva of Electrical & Electronics Engineering department published a paper titled "Design and Implementation of High Voltage Gain DC-DC Converter for solar PV Applications" in the IEEE Xplore® digital library on 24-10-24.

Dr.A.Siva, Mr. M. Siva Rama Ganesh of Electrical & Electronics Engineering department published a paper titled "Dual Switch High Gain Boost Converter for DC microgrid Applications" in the IEEE Xplore® digital library on 24-10-24.


Dr. Y.T.R.Palleswari of Electrical & Electronics Engineering department published a paper titled"Comprehensive Analysis and Performance Investigation of Non-Isolated DC-DC Converters in Solar Photovoltaic Applications" in IEEE conference on 24-10-24.

Mr. K. Omkar of Electrical & Electronics Engineering department published a paper titled “Local Mean Decomposition based Passive Islanding Detection” at ICCIGST in December 2024.


Lakshman Kumar Dangeti, S. M. Padmaja of EEE department published a paper titled "Small Signal Modelling and Analysis of an Improved Hybrid Switched Inductor Based Boost Converter," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10717935.

Lakshman Kumar Dangeti, M. S. R. Ganesh, M. C. Bade of EEE department published a paper titled "A Modified Non-Isolated Switched Inductor-Based Boost Converter Using Voltage Multiplier Cell without Common Ground for EV Application," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10718067.




Lakshman Kumar Dangeti, S. S. Duvvuri of EEE department published a paper titled "A Modified Non-Isolated Switched-Inductor based Boost Converter using Voltage Multiplier Cell for EV Application," 2024 IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), Delhi, India, 2024, pp. 241-245, doi: 10.1109/ICPEICES62430.2024.10719331.

Program Educational Objectives :: B. Tech. - EEE

PEO 1 : Demonstrate employability skills and leadership qualities to serve the society.

PEO 2: Achieve personal and professional success with awareness and commitment to their ethical and social responsibilities.

PEO 3: Improve professional competence through life-long learning including higher education and research.

Program Outcomes:: B. Tech. - EEE

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4).

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5).

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis& interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6).

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9).

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8).

Program Specific Outcomes :: B. Tech. - EEE

PSO 1: Ability to enhance living standards of disabled people by designing appropriate products with the help of technology.

PSO 2: Competence to explore, analyze and solve problems related to power electronic systems.