



SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN (AUTONOMOUS)
VISHNUPUR, BHIMAVARAM ,WEST GODAVARI DISTRICT, ANDHRA PRADESH-534202

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

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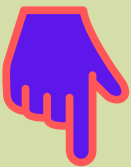
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EDITOR'S MESSAGE

It is with immense pleasure that I announce that the Department of Electrical & Electronics Engineering has released its Newsletter for the first half of the year 2021, highlighting the different activities and achievements of our faculty and students. Shri Vishnu Engineering College for Women (Autonomous) sparks the knowledge of flame to develop shapes in an unique manner to illuminate the students' existence.

RESEARCH ARTICLE

How is Artificial Intelligence used in Electrical Engineering?

The term "artificial intelligence" refers to a wide range of systems designed to mimic how the human brain makes decisions and solves problems. For decades, researchers investigated how various types of artificial intelligence (AI) can be applied to electrical systems. The most commonly used Artificial Intelligence (AI) techniques in electrical engineering like 1) Expert Systems 2) Fuzzy logic Control Systems 3) Machine Learning 4) Artificial Neural Networks and 5) Deep Learning. The application of Artificial Intelligence technologies to power engineering systems has been an active area of research since few decades. As a part of concluding remark, one can focus research on artificial intelligence applications in electrical engineering can be a notable success for the society.

By

Dr.S.S.S.R.Sarath.Duvvuri Ph.D - (IIT-HYD)
Associate Professor
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Title:1 MULTI-ROTOR WIND TURBINE The main objective of this project is to increase the utilization of swept area of the input air and efficiency of wind turbine.

Authors:

- 1) G. Bandhavi
- 2) J. Srikala
- 3) T N V D Akanksha
- 4) P. Kavya
- 5)V. Sadhana Reddy
- 6)Y. Leela Pranathi

Technical Description: As technology is improving, utilization of power is increasing day by day and it became part of our life. So, many researches are going on to develop the methodologies by which power can be generated more efficiently, by which output power of the plant can be increased and by which maintenance cost can be decreased. So, this project mostly concentrates on increasing the output power of the wind turbine.



Idea and description: to increase the output power of the wind turbines. But they failed due to some reasons like instability, position of center of mass etc. Some of the failed due to imbalance caused in the position of center mass. It is failed because of inefficient utilization of air. The main objective of this project is to increase the output of wind turbine along with considering the factors of center of mass and stability of the system. This can be achieved with the help of concentrated shaft mechanism with two rotors and blade of different sizes. One set of blades is placed to hollow shaft and other set of blades is placed to the solid shaft placed inside the hollow one.

STUDENT ACTIVITIES

ISTE STUDENT CHAPTER

ICE Breaking Program: The objective of an Ice Breaking Program for freshman students is to establish initial relationships and to provide an opportunity in a structured way to send and receive messages from the facilitators. This program is to satisfy student participants & needs of them to establish an appropriate social relationship with other participants and with the facilitators, and preview the style and content of the meeting.

ISTE STUDENT CHAPTER of Shri Vishnu Engineering College for Women (Autonomous) organized various 7 technical events in that Three events are conducted as Daily events and four spot events on the grand event on this occasion. Totally 297 students from all the departments have been participated in these various events with the Various Department faculty coordinators. Prizes are awarded to Winners in this connection.



FACULTY ACTIVITIES

NASSCOM FUTURE SKILLS : AN ONLINE COURSE WHICH DEALS WITH A DECOUPLING OF REVENUE AND HEADCOUNT GROWTH IS VISIBLE EVEN TODAY AND EMPLOYERS AND EMPLOYEES NEED TO ADAPT THEMSELVES TO THE CHANGING JOB ENVIRONMENT OF TECHNOLOGICAL SHIFTS AND CHANGING STAKEHOLDER EXPECTATIONS. THE PROBLEM IS TOO LARGE TO BE HANDLED ALONE. IT NEEDS A COLLABORATIVE INDUSTRY LEVEL RESPONSE. WITH NASSCOM AS THE ENABLER, IT-ITES INDUSTRY HAS STEPPED UP TO THE CHALLENGE WITH THE FUTURESILLS INITIATIVE A TRULY INDUSTRY DRIVEN LEARNING ECOSYSTEM.



PUBLICATIONS

SCI/SCOPUS JOURNALS:

Mr.S.Dileep Kumar Varma : S.Dileep Kumar Varma Associate Professor, EEE Department, SVECW published an article entitled “A Co-ordinated Ride Through Capability and Power Quality Enhancement Scheme for Grid tied PMSG based Wind Energy, International Journal of Renewable Energy Research, Vol 11, Issue 2, pp. 535-545, 2021.



<https://doi.org/10.1016/j.isatra.2020.12.035>.
(<https://www.sciencedirect.com/science/article/pii/S0019057820305541>)

Abstract: Quantitative tuning rules for RADRC are proposed for industrial processes approximated as FOPDT models. The proposed tuning rules provide a good trade-off between tracking and disturbance rejection performance Exhibits good repetitive tracking and better performance in stochastic environment.

Mrs:G.Bharathi, Associate Professor, EEE Department, SVECW Presented a paper on 2021,5th International Conference on Electronics,Communication and Aero Space Technology(ICECA), “Control and Optimization of DC Micro grid Power Management with Energy Storage Devices and Photovoltaic System”, added to IEEE Explore:



Doi: 10.1109/ICECA52323.2021.9676160.

Abstract: The photovoltaic (PV) system is incorporated into the DC microgrid with super capacitor (SC) for improving the system performance at uncertainties in weather conditions. Nevertheless, the accuracy and correctness of the system does not reach the optimal level due to low speed, takes more time for run. In this study, teaching learning-based optimization (TLBO) is utilized for tuning the adaptive neuro-fuzzy inference system (ANFIS) with the integration of DGs into DC microgrid system. As per simulation findings, the proposed TLBO-based ANFIS yields better enrichment in all considered dynamic conditions.

FACULTY ACTIVITIES

ACTIVITY BOOKLET-2K21

ACTIVITY BOOKLET 2K21 : Hello all..... Today after this COVID-19 pandemic, many updates existed in the teaching and learning process. Considering today's student's interests and learning needs, every teacher has to engage his/her course (mathematical/theoretical) content in an interactive and collaborative pattern. The use of student engagement elements will motivate the course irrespective of theoretical/mathematical discipline. Interactive segments like alumna/junior students testimonial/experience videos, Proctored Online Quizzes, Story-based activities, Puzzles, Individual/Scaffolding/Case study assignments, Simulation tools, Quiz/Game-based discussions, Pre-Recorded Practical awareness videos, Online Course/Workshop, Mindmaps, Selfie cards, etc. I believe that a healthy and comfortable learning environment has been created with the above-implemented activities that make students learn the Optimization Techniques (OT) and Industrial Electrical Systems (IES) courses in an effective way.

By
Mr.J.Venkatesh
Assistant Professor



"QR" code Questions - Whatsapp Chat Answers

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FACULTY ACTIVITIES



PUBLICATIONS

International Conferences:

- 1) Praveen Kumar Nalli and et al, Experimental Validation for A Nine-Switched 3-phase Multilevel Inverter (MLI) With a Photovoltaic (PV) Source of Array. Journal of Physics:Conference Series, 2089(1), p.012089.
- 2) SSSR Sarathbabu Duvvuri, A Critical Evaluation and Experimental Verification of Stator Inter-turn Short-Circuit Fault Detection and Diagnosis in 3- ϕ Induction Motors, 2021 IEEE International Conference on Power, Electrical, Electronics and Industrial Applications (PEEIACON), Dhaka, BANGLADESH, 03-04 December 2021.
- 3) SSSR Sarathbabu Duvvuri, Realistic Behavior of Electrical Faults in 3- ϕ Induction Motor, 2021 IEEE International Conference on Power, Electrical, Electronics and Industrial Applications (PEEIACON), Dhaka, BANGLADESH, 03-04 December 2021.
- 4) G. Bharathi, P. Kantarao and R. Srinivasarao, Control and Optimization of DC Microgrid Power Management with Energy Storage Devices and Photovoltaic System, 2021 5th International Conference on Electronics, Communication and Aerospace Technology (ICECA), 2021, pp. 60-69.
- 5) M V Srikanth, A magnitude optimum approach for tuning Reduced order ADRC with FOPDT models, 2021 7th Indian Control Conference, IIT Mumbai, Dec. 20-22, 2022.
- 6) Saravanan S., Kalaiyarasi M., Karunanithi K., Karthi S., Pragaspathy S., Kadali K.S.(2022) Iot Based Healthcare System for Patient Monitoring, IoT and Analytics for Sensor Networks. Lecture Notes in Networks and Systems, Vol 244, Springer, Singapore.
- 7) Durga Prasad Garapati, Multilevel Inverter Fed 1- Φ Asynchronous Motor Based Water Pumping System, IEEE International Conference on Computing, Communication and Power Technology (IC3P-2022), 07-08 January 2022.
- 8) Durga Prasad Garapati, SM Padmaja, R Sudheer Kumar and N Praveen Kumar, Fish Feeding Boat using BLDC Motor for Aqua Applications, IEEE International Conference on Computing, Communication and Power Technology (IC3P-2022), 07-08 January 2022.

Department Vision

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

Department 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

PEOs (UG Programme)		(PEOs of PG Programme)	
<p>PEO1: Demonstrate employability skills and leadership qualities to serve the society.</p> <p>PEO2: Achieve personal and professional success with awareness and commitment to their ethical and social responsibilities.</p> <p>PEO3: Improve professional competence through life-long learning including higher education and research.</p>		<p>PEO1: Graduates acquire technical knowledge to solve complex real-world problems.</p> <p>PEO2: Graduates will exhibit competencies to excel in academia or industry.</p> <p>PEO3: Graduates acquire ability to practice ethical values.</p>	
POs (UG Programme)		POs (PG Programme)	
<p>PO1 An ability to apply knowledge of mathematics, science and engineering.</p> <p>PO2 An ability to design and conduct experiments as well as analyze and interpret results to provide valid conclusions.</p> <p>PO3 An ability to design system components (or) processes optimally.</p> <p>PO4 An ability to contribute individually/ in group(s) representing varied engineering disciplines to accomplish a common goal.</p> <p>PO5 An ability to identify, formulate and solve complex engineering problems.</p> <p>PO6 An understanding of professional and ethical responsibilities.</p> <p>PO7 An ability to use written and oral communication skills effectively</p> <p>PO8 An ability to understand the impact of engineering solutions in a global, economic, environmental and societal context.</p> <p>PO9 An ability to engage in independent and life-long learning.</p> <p>PO10 Knowledge of contemporary issues related to engineering.</p> <p>PO11 An ability to use appropriate techniques, resources and modern engineering tools for engineering practice.</p> <p>PO12 An understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team to manage projects.</p>	<p>PO 1 The graduates have ability to discriminate, evaluate and analyze by acquiring conceptual knowledge base in power electronics.</p> <p>PO 2 Ability to analyze complex engineering problems critically and synthesize information independently for conducting research in theoretical and practical context.</p> <p>PO 3 Ability to think originally and arrive at optimal solutions for power electronic systems after considering safety and environmental factors.</p> <p>PO 4 Ability to identify, formulate research problems individually or in group(s) to the development of technological in the field of power electronics</p> <p>PO 5 An ability to develop mathematical models to use modern tools for designing power electronic topologies for various applications.</p> <p>PO 6 An ability to identify the opportunities in multi-disciplinary and collaborative research work</p> <p>PO 7 Ability to manage projects effectively after consideration of technical and financial factors.</p> <p>PO 8 An ability to develop networking in power electronics community and to make effective presentations and technical reports.</p> <p>PO 9 An ability to engage in life-long learning and an understanding of the needs to meet current trends of developments in the field of power electronics.</p> <p>PO 10 An ability to acquire professional and ethical responsibilities for sustainable development of society.</p> <p>PO 11 An ability to examine critically the outcomes of one's actions and make corrective measures independently</p>		