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ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES

DEPARTMENTOFELECTRICAL & ELECTRICAL ENGINEERING

Anil Neerukonda Institute of Technology and Sciences Sangivalasa, Visakhapatnam - 530062.

ARC – EEE Technical magazine is a platform for EEE students and faculty to express their creativity and showcase their literary skills. ARC is designed to present to its readers the technical developments and technical papers that have been prepared by EEE students and Staff.



Chief Patron Dr. G Raja Rao, Hod

Editors:

Ms. D Sri Lakshmi, Asst prof. Mr. L Dinesh, Asst prof Mr. N Kiran, Asst Prof.

Student Members: Mr. K Raghu Mr. L Naga chaitanya

The EEE Department at ANITS envisages attaining a position of national excellence for graduating students that have experienced implementing theory into practice and are capable of succeeding in higher learning up keeping ethical



To promote learning and research in the field of Electrical & Electronics Engineering and to advance and disseminate technical and professional knowledge in shaping young engineers into future human resource appropriate to the needs of our nation



2

PROGRAM OUTCOMES

1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2	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.
3	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.
4	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.
5	<i>Modern tool usage:</i> 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.
6	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.
7	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.
8	<i>Ethics:</i> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9	<i>Individual and team work:</i> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.

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.
- *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.

PROGRAM SPECIFIC OUTCOMES

	Design modern power system components to meet the
1	identified needs within economical and environmental
	constraints.

Design, simulation, fabrication and testing of power
switching devices, electrical drives and their control for industrial and research applications.

PROGRAM SPECIFIC OUTCOMES

1	To prepare students with a strong foundation in basic sciences, mathematics and electrical engineering for productive engineering careers and enable them to pursue higher studies.
2	To equip the students with good analytical and design capabilities to solve present day electrical engineering problems and to realize the necessity of life-long learning to excel in their professional careers.
3	To produce the students with strong communication skills and to foster the ability to work in multidisciplinary teams with a sense of environmental awareness, professional and ethical values.

Message from HOD's Desk



I feel very elated and at the same time privileged to share a few words as you go through the pages of the magazine "ARC". EEE department endeavors to help students to seek the best from the surroundings. The knowledge thus gained becomes a ladder for them to soar into greater heights. It's often the collective effort that leads to the discovery and fulfillment of aspirations.

I feel proud to be a part of ARC an instrument in moulding the students. We try to shape every sphere of a student's personality in the EEE Department. I take this opportunity to express my sincere thanks to all the members of the faculty and auxiliary staff for their sincere contribution in making this Edition.

> **Dr. G Raja Rao** Professor & HOD

Table of Contents

AEEEA- ARC-2K207
Student Paper Presentation
IE(I) student chapter
Coding Club21
Guest Lectures
student achievements and Industrial visits
Placements and Result Analysis
NSS Club Activities

AEEEA - ARC 2K20

Anits Electrical & Electronics Engineering Association (AEEEA) was started in the year 2006-07. The Executive Committee, whose tenure is for one academic year, headed by the HoD of EEE as its Chairman consists of some faculty of EEE and some student members of final year and pre-final year of BE (EEE). The main aim of the Association is to assist the dept. in identifying the thrust areas and organizing the Workshops/Symposiums etc. It also helps in arranging Expert Lectures/Industrial Tours. It keeps a record of EEE alumni.



ARC2K20 is a national level technical symposium held at ANITS ENGINEERING COLLEGE conducted by the "ANITS ELECTRICAL & ELECTRONICS ENGINEERING ASSOCIATION(AEEEA)", Department of Electrical & Electronics Engineering. The vibrant and energetic title 'ARC' signifies the sparkling efforts of the participants. It provides the ideal platform for all the students to analyze themselves technically and present their skills. Its tagline "Joining elites" represents a special group of multi talented people and we felicitously invite you all to link up with the elite group and get the best out of it.

Paper Presentation:

When you hear... You get to know....

When you see... You remember....

When you explain... You understand better...

This is true for may subjects experts. As a part of e-learning and to bring out the extent of concept realization by the students, a panel of technical support team will assist and scrutinise the Power Point Presentations as per the abstract submitted by the candidates. So, we welcome you to the dice of confidence and technical strength, i.e., Paper Presentations.

Model Presentation:

If you see anything...You wish to test it or represent it on a small scale... A power plant of solar energy portrayed on a bench or table.. Great.....

Bring that scientist with creativity....Concept...Knowledge and a desire of invention to the model presentations in this symposium....

Technical Quiz:

EMF equation of a generator....??

Voltage across a load with high resistance connected to a 230 volts supply...??

Love being technical??

Ready to compete with peers who are also keen in learning about new things.... Brush up your subject toppers... You can win the technical round... To all those who wish to test their knowledge about electrical and electronics... We provide you the best stage.

Ensemble:

During childhood... We have different toys to play with... As we grow up..... We find a lot of things interesting around us... Parents and teachers present us with storybooks and puzzles... One such event is being hosted....A model is shown and materials are supplied....just a memory based event and how skillfully one can use his hands and creativity and solve the puzzle.. Time to assemble the available resources.... And we welcome you to this Event... Ensemble...Assemble quickly to ensemble...

Trouble Shooting:

"Every action has an equal and opposite reaction"

Newton discovered it regarding natural phenomenon.....

But Power systems engineers say

"After every sequence of action, there will be definitely a proportional consequence"

When power is generated chances of losses and also chances of faults occur...

Engineer chooses techniques to rectify the faults and reset the system back to original operation...

Here a flaw will be embedded in the question and the participants are required to solve these flaws...

For time being let's enjoy as Analysis Engineers...

Welcome to Trouble Shooting.

Code N Code:

In a language, "Certify" is given as "Burgivx"...Now can u guess what "Adjacent" in the same language is written????

This is as simple as finding logic behind the formation of words or something similar...

So a similar task of decoding or encoding a particular detail given as a question completely in sentence format... So this checks how u can code in technical software...

i.e., CodING and encoding event of this technical Symposium..





ORGANIZING COMMITEEE

STUDENT CO- ORDINATORS:

L Sai Vamsi (4/4 EEE) Naga chaitanya (4/4 EEE) K Raghu (4/4 EEE) Mohammed Payaz (4/4 EEE)

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Krup



POWER DISTRIBUTION AT NFC

Parvathi Kumari, EEE, ANITS, Visakhapatnam

The power distribution is one of the complex structures. So, in order to study power distribution system, we have chosen Nuclear Fuel Complex (NFC), Moula-Ali, Hyderabad. Our project report provides in-depth knowledge of NFC's power distribution network. In addition to those various facts regarding short circuits and other faults are discussed. It also discusses about various method of improving the power distribution quality. Our project report is presented in four sections. One section covers power distribution in NFC, section two gives various ratings of equipment's, section three deals with various short circuit studies and section four deals with the improvements made for the minimization of losses, and their analysis. Under section one all relevant topics related to power distribution have been discussed. In the minimization of losses, we covered topics like Energy Management System (EMS), power factor control, reduction of harmonics, etc.

MODELLING & SIMULATION OF SPEED OF A DOUBLY FED INDUCTION MOTOR

Sai Rohit, Dept of EEE, MVGR College of Engineering, Vizianagaram

Various industrial applications need new control techniques to get quick response and to improve the dynamic performances. Sliding mode, fuzzy logic and fuzzy sliding mode control are characterized by insensitivity and robustness to the parameters variation. This Modeling and Simulation of Speed of a Doubly Fed Induction Motor paper represents a study of a direct stator flux and induction motor with three regulators sliding mode, fuzzy logic, and fuzzy sliding mode.

These regulators are applied for regulation of speed of doubly fed induction motor (DFIM). The robustness between three regulators was validated and tested with the presence of the parameters of the motor. The three regulators are robust against external perturbations and the fuzzy sliding mode controller has best performance than the fuzzy logic and sliding mode controllers. The doubly fed induction machine (DFIM) is for variable-speed applications like electric vehicles and electrical energy production and variable-speed domain and performance depends on the application. The DFIM provides the opportunity modulation of power flow into and out the rotor winding. The DFIM has distinct advantages compared to the conventional squirrel-cage machine. The DFIM is fed and controlled stator or rotor with many possible combinations. The input-commands are obtained by four degrees of control freedom relatively to the squirrel cage induction machine and its control appears simpler. The flux orientation strategy transforms the non linear and coupled DFIM mathematical model to a linear model conducting, attractive solution, and generating or motoring operations. The entire performance of field-oriented-controlled induction motor drive systems is directly related to the performance of current control. Hence decoupling the control scheme is needed by the coupling effect between q-axis and d-axis current dynamics.

WIRELESS ENERGY TRANSMISSION WITH TARIFF SYSTEM D. Tarun, M. Sai Kiran, Gayatri Vidhya Parishad, Visakhapatnam

The objective of this paper is to wireless energy transmitter with tariff system through microcontroller. This is a type of data transfer through wireless communication by using microcontroller. This system will be useful for the EB people to transmit the data from the consumer place to EB without going directly to the consumer place. This particular system will transmit the number of units consumed by the consumer as well as the amount has to pay for the month.

SPEED SENSORLESS SEPARATELY EXCITED DC MOTOR DRIVE WITH ADAPTIVE OBSERVER

K. Vishal Kumar, N. Tulasi, EEE, GMRIT, Rajam

This project deals with a speed sensorless separately excited dc motor drive which uses the adaptive observer to estimate the rotor speed. The stability analysis of speed estimation is carried out. The modified feed forward control is integrated with the adaptive observer to simplify the implementation. The design guideline for feedback gain and the speed controller are also given to assure system stability for the entire operating region and Simulation results are also provided.

SOLAR POWER GENERATION WITH AUTO TRACKING SYSTEM

K. Sravani, P. Reetika, AU College of Engineering For Women, EEE

In this project we use the solar energy for generation of electrical energy, by using the Solar cells. The solar cells receive the solar energy. The solar cells operate on the photoelectric energy by using solar cells principle. The energy from the photo voltaic cells is used to switch on the lights. At present solar electric power generation systems are having fixed solar panels whose efficiency of generation is less. The aim of the project is to introduce the SOLAR TRACKING to the existing fixed solar panels; thus we are maintaining the constant maximum power output. Thus by using this tracking system we can increase the conversion efficiency of the solar electric power generation. For this tracking purpose we use a sensor and the input from the sensor is given to the micro controller and according to the program the panel is fixed to the maximum intensity position. Here we are using PIC micro controller. The 16F877 is a low-power, highperformance CMOS 8-bit microcontroller with 4K bytes of Flash Programmable and Erasable Read Only Memory (PEROM).

SOC ESTIMATION OF RECHARGABLE BATTERIES

S. Bhagavan, S. Sri Hari, ANITS, EEE Department

Battery is the most widely used energy storage device. Since its invention, it has become a

common power source for various household, commercial and industrial applications. Despite its ever-increasing importance, many challenges remain unsolved to characterize and manage the battery. Among them, one fundamental issue is the estimation of state of charge (SoC). SoC, expressed in percentage, refers to the amount of capacity available in a battery. SoC is critical for modeling and managing batteries. If SoC is 100%, reflects a full battery and if SoC is 0%, reflects an empty battery.

Information on SoC can be used to control charging and discharging process of the batteries. A good SoC estimation offers many advantages such as longer battery life, better battery performance and increased reliability of battery pack. There are several methods for determining SoC. Some of the popular methods are Coulomb counting, Voltage estimation and Impedance measurement method. There have been many attempts in literature to estimate SoC by synthesizing circuit models based on measured voltage and current at battery terminals. The final goal of any SoC algorithm is to predict the remaining capacity accurately. Developing efficient yet accurate SoC estimation algorithms remain a challenging task. This project aims at developing a novel method to estimate the SoC and remaining runtime of a rechargeable battery which overcomes the drawbacks of existing methods. The proposed method is based on renowned Coulomb Counting technique. The proposed method predicts the SoC by Coulomb Counting method and corrects it using PI controller by employing a closed loop to estimate actual SoC. The proposed method is simple and easy to implement. The SoC as well as remaining runtime are estimated accurately. Based on the new method, a model is developed using MATLAB/SIMULINK. The code corresponding to develop model is dumped in a target PC and is run in real time for online estimation of SoC. The required parameters such as voltage and current at the battery terminals are acquired by target PC and SoC is estimated. Estimated SoC and remaining runtime are used for control the charging and discharging process of the battery. A hardware test bench is developed for acquiring voltage and current at the battery terminals for online estimation of SoC.

SIMULATION OF EXTRA HIGH VOLTAGE LONG TRANSMISSION LINES

A. Yamini, G. Anisha, EEE, ANITS

The electrical power system mainly consists of three principle divisions the generating

stations, y he transmission system and the distribution system. The transmission lines are the connecting links between generating station and the distribution system and lead to other power system interconnections. Now a day, we are using Extra High Voltage (EHV) transmission lines for transmission of power between the generating station and distribution system in India.

The main reasons behind it are:

- 1. The construction of super power stations of very large capacities necessities the transmission at high voltage for this we use EHV lines.
- 2. At high voltages power loss is also reduced because losses are directly proportional to the square of current.

The simulation of transmission line using MATLAB helps us to analyze the behaviors and parameters of transmission line under actual conditions. We are simulating a long transmission line and analyze the waveforms at sending and receiving end. The results obtained after simulation are used in the designing of Extra High Voltage Long Transmission Line Model.

REAL TIME CLOCK

N. Lalitesh, M. Sai Kumar, ANITS, EEE Department

Solar panel converts the light energy from the sun into electrical energy. In ordinary solar panel systems, the solar panel is fixed in a particular direction. The solar panel delivers maximum energy only when it faces directly towards the sun. Since the sun is moving continuously, the solar panel cannot deliver maximum energy when the solar panel fixed at one direction. The goal of the project is to control the solar panel continuously, according to the movement of the sun. This is done by controlling the mechanical movement of solar panel. The mechanical movement of solar panel is controlled through the stepper motor using Microcontroller. The sun's movement from east to west is divided into segments keeping a fixed time frame for each segment with the use of Real Time Clock (RTC).

POWER MANAGEMENT SYSTEM IN BPCL

M. Harshavardan, S. Ravi Chandra, Dept of EEE, ANITS

For the protection of power system, relays are used. Different types of relays include

electromechanical, static and numeric relays. In an automated system numerical relay has a vital role. The project based on substation automation has been named as Power Management System.

Supervisory control and data acquisition (SCADA) allows a utility operator to monitor and control processes that are distributed among various remote sites. SCADA systems include hardware and software components. The hardware gathers and feeds data into a computer that has SCADA software installed. The computer then processes this data and presents it in a timely manner. SCADA also records and logs all events into a file stored on a hard disk or sends them to a printer. SCADA warns when conditions become hazardous by sounding alarms. Power Management System is a system which presents all network data to an operator to allow safe and reliable operation to control the complete network from a Central Control room through various plant overviews. BPCL - KR already has three substations automated using SCADA system. The objective of this project is to conduct a detailed study on this existing system and extend this to other substations.

POSITION CONROL OF MANIPULATOR USING PMAC WITH DC SERVO MOTORS

Priya Grace, Srinivas, Dept of EEE, ANITS

The aim of this project is controlling the position of DC servomotor by DC servo drive and PC position controlling is for single or multi-axis. Desired Position Command is given to the PMAC through PEWIN32PRO software to give output to Servo Drive to drive the servomotor at specific speed, direction and position. The aims of the Position Control with DC Motors of Manipulator Using PMAC Electrical Student project are integration of DC servomotor to clamp mechanism with DC servo drive, interfacing of Programmable Multi Axis Controller to the DC servo drives in closed loop, and parameter optimization and Tuning of the drive.

When the system employs the PC based standalone controller then the positioning of the table results possible with the soft CNC, motion control program, and PLC for I/O control of the system. The controller in this application is Programmable Multi Axis Controller (PMAC). It is a controller with high performance servo motion which is capable of commanding up to 8 axes of motion with a high level of sophistication. Motorola's DSP 56001 is the CPU for PMAC to handle all the calculations for 8 axes. There are four hardware versions of PMAC. They are the PMAC-PC, the PMAC-Lite, the PMAC-VME, and the PMAC-STD. It is to note that PMAC is a full computer and capable of standalone operation with its own right and stored programs. The abbreviation of CNC is Computer(ized) Numerical(ly) Control(led) which implies computer control of machine tools for the purpose of (repeatedly). Numerical control or numerically controlled (NC) machine tools are machines automatically operated by commands which are received by their processing units. Advantages include Smaller outside dimensions and large torque, good operating efficiency, Good controllability, and Cheap.

QUADRATIC BOOST CONVERTER

G. Pavan Kumar, Shaik Ahamadi, Dept of EEE, ANITS

A quadratic boost converter topology based on a high conversion ratio dc to dc converter with an active zero-voltage switching (ZVS) snubber circuit is developed for PV system application. The snubber circuit is used to protect the device and also provide smooth switching. The re-boost inductor, a coupled inductor and charge-pump circuits are proposed to achieve the high voltage gain with quadratic function. A first inductor is proposed to re-boost the voltage gain to make the output voltage is higher. The converter operating principle of the proposed conversion system is described in the detailed converter analysis. Simulation and experimental results are used to verify the performance of the quadratic boost converter with the maximum power point tracking controller (MPPT) in the PV inverter system.

DOUBLE FREQUENCY BUCK CONVERTER

V. Raj Kumar, Y. Simon Raj, Dept of EEE, ANITS

An increasing the switching frequency can improve the dynamics of power converters, but the efficiency may be degraded. Vary the efficiency and dynamics of power converters is a concerned in power electronics. This converter has two buck cells one works at high frequency and another works at low frequency. It works that current in the high-frequency switch is diverted through the low-frequency switch. The converter operates at very high frequency without adding control circuit's .The switching loss of the converter remains small. This project is increased the steady state and transient response with low switching losses. Double frequency buck converter voltage is depends on the high frequency buck cell parameters, and is independent of the lowfrequency buck cell parameters. This DF buck converter greatly improves the efficiency and exhibits nearly the same dynamics as the conventional high-frequency buck converter. This project can be extended to other dc–dc converters by the double frequency switch inductor and three terminal network structure.

BLDC MOTOR CONTROL USING dSPIC MICROCONTROLLER

P. Anusha, S.Kalavathi, Raghu College, Dept of EEE

This project describes the speed control of BLDC motor with the dsPIC30F4011 Digital Signal Controller. By using the Hall effect sensors of BLDC Motor, the dsPIC30F4011 controller generates the controlled switching pulses for inverter. The speed control is done by changing the duty cycle of PWM from dsPIC30F4011. The motor speed is measured by using the proximity sensor placed on the BLDC Motor and displayed on LCD.

IDENTIFICATION OF FAULTS IN TRANSMISSION LINES USING WAVELET TRANSFORMS

Atchuth Kumar, D. Kishore, Dept of EEE, ANITS

The aim of the project is to understand wavelet technique and identification of fault using wavelet transform. This presentation presents high speed fault identification and protection of power system lines based on wavelet transform technique and it is method which is used to detect the location and identification of fault in power system. Faults in power system are single line to ground fault, double line to ground fault, three phase fault. In this presentation the conventional time-amplitude response is presented and the result shows that wavelet leads to identify the type of fault

and its location. The results indicate that wavelet technique is fast compared to time amplitude technique and decision making with this is possible.

TWO WHEEL SELF BALANCING ROBOT USING PID CONTROLLER

K. Sai Harinin, M.Sarath Kumar, Dept of EEE, ANITS

To make a robot which can balance itself on two wheels. There will be only one axle connecting the two wheels and a platform will be mounted on that. There will be another platform above it. The platform will not remain stable itself. Our job will be to balance the platform using distance sensors and to maintain it horizontal. At first, we have decided to just balance the robot on its two wheels. If the platform inclines, then microcontroller (in this case it is Arduino) will send signals to motors such that motors would move forward or backward depending on the inclination direction and extent. So, if the platform tilts forward then motors will run forward and vice-versa to keep the platform horizontal. For this we will need to code the Arduino in order to perform job according to this.

HILL CLIMBING METHOD BASED SEPIC CONVERTER FOR MPPT OPERATION OF PV SYSTEM

P. Srinivasa Rao, P. Meghana, Dept of EEE, ANITS

This paper presents a Hill climbing method (or) perturbs & observe based single-ended primary-inductor converter (SEPIC) for maximum power point tracking (MPPT) operation of a photovoltaic (PV) system. The Hill climbing method proposed presents that the convergent distribution of the membership function offers faster response than the symmetrically distributed membership functions.

The Hill climbing method for the SEPIC MPPT scheme shows high precision in current transition and keeps the voltage without any changes, in the variable-load case, represented in small steady-state error and small overshoot. The proposed scheme ensures optimal use of PV array and proves its efficacy in variable load conditions, unity, and lagging power factor at the inverter output (load) side. The performance of the converter is tested in both simulation and experiment at different operating conditions. The performance of the proposed Hill climbing method based MPPT operation of SEPIC converter. The results show that the proposed Hill climbing method (or) Perturb & observe based MPPT scheme for SEPIC can accurately track the reference signal and transfer power.

UNSYNCHRONIZED FAULT LOCATION BASED ON THE NEGATIVE-SEQUENCE VOLTAGE MAGNITUDE FOR DOUBLE-CIRCUIT TRANSMISSION LINES

Y. Mounika, P. Dinesh, Dept of EEE, ANITS

This paper describes a new approach to fault location for double-circuit transmission lines based on only the voltage data of both ends of the faulted circuit. The ratio between the magnitudes of negative-sequence voltages measured at both ends of the faulted circuit is utilized to estimate the fault location. Since only the magnitudes are used, the data of both ends are not required to be synchronized, which removes any concern about data synchronization. Moreover, since only the voltage data are required, the errors caused by current transformers can be avoided.

The proposed method can effectively locate the single-phase-to-ground, double-phase-toground, and phase-to-phase faults disregarding the fault resistance and prefault conditions and without any need for fault classification and phase selection. Unlike the iterative methods, the proposed method is fully analytical and does not cause much computing burden to the line relays. The accuracy and practicality of the proposed method make it an attractive function to implementing numerical relays.

IE(I) STUDENT CHAPTER

The Institution of Engineers (India) which came into being on the September 13, 1920 is the result of general desire of those engineers in India who are members of the great parent Institution in England — the Institution of Civil Engineers, Mechanical Engineers and Electrical Engineers, to form a corporate body which should protect their interest, provide means of exchange of views on professional engineering matters and medium of expression of authoritative opinions on engineering problems of public interest.

EVENTS:

- 1. An event "Technical quiz" was organized on 12-02-2020 through IE(I) student chapter, ANITS . Around 65 students have taken part in the event. Mohammed Payaz and Tejewara panda has won the first prize and A Priyanka and E sunil Kumar has won second prize.
- 2. An event "Poster presentation and Model Presentation" was conducted on 14-02-2020through IE(I) student chapter, ANITS. Around 30 students with 10 groups with 3 students in each group have participated in the event. Group M Mohan Sai , Arun Kumar Das and G Prasanth has presented the best poster. Group with G Rnaga Sushma and G Venkata Trilok has won the prize for the model presentation.

CODING CLUB

Students club *CODING AND DESIGN* was inaugurated by Prof.G. Raja Rao garu on 15-09-2015. College clubs plays an important role for the professional growth of young engineers. Students can make use of this platform to expose their talents and innovative abilities in the field of Electrical & Electronics Engineering (EEE). This club is formed to improve the coding knowledge.

EVENTS

1. Design of logic and electrical circuits in MATLAB software

A design contest is organized in EEE department through CODING AND DESIGN CLUB to develop the design skills in MATLAB software on 15th September, 2019. Around 70 students have participated in the event. The contest aims to develop the design skills in "MATLAB SOFTWARE". First prize is awarded to P.Narendra (318126514083) and second prize to V.

"MATLAB SOFTWARE". First prize is awarded to P.Narendra (318126514083) and second prize to V. Ramanamma (318126514052).

2. CODE N CODE

A coding contest is organized in ARC event through CODING AND DESIGN CLUBto develop the coding knowledge in students on 12^{th} March, 2020. The contest aims to develop the coding knowledge in the students. Around 18 students have participated in the event. First prize is awarded to S. Tarun (318126514094) and second prize to K. Swetha Reddy (318126514116).

GUEST LECTURES



One-week Short-term training Programme on "Restructured Power System Modelling & Simulation" was conducted by Department of EEE.

The chief guest for the function was Dr. D.M. Vinod Kumar, Professor NIT Warangal, Dr N.B.R Prasad, chairman ANES; Prof. T. V. Hanumantha Rao, Principal, Prof. G. Raja Rao, HOD and Dr. J. Vijaya Kumar, Co-Ordinator for the programme, presided over the function.

40 Faculty members from different colleges and 60 final year students were satisfied with the 16 technical sessions spread over six days and the arrangements for the programme. The participants were presented with the certificates by the chief guest. The coordinator of the programme thanked all the participants, Principal and the management for their unstinted support. He said that the participants can choose their topic for doctorial research from Restructured Power System and seek the help of resource persons.



Smt. J. Vani Sri DGM (Electrical)/ Design & Engg. RINL Visakhapatnam



Dr. P. Chandra Sekhar, Assistant Professor, IIT Bhubaneswar



"Modern Practices in Grid Operation" Mr. A. Ramesh, DE SLDC Hyderabad



Dr. Debapriya Das, Professor, IIT Khargpur



"Voltage Stability", Dr. Ch. V. V. Bhaskar Reddy, Professor, AU, Visakhapatnam.



Mr. T. Srimannarayana Executive Engineer, AP TRANSCO Vijayawada.

Other eminent speakers in the technical sessions were Dr. K. Vaisakh, Professor, AU Visakhapatnam, Mr. M. Dhanunjaya Rao Senior Manager (O&M) GAIL-K.G Basin, Rajahmundry. Exam was conducted to all the participants after the workshop.



A guest lecture on "Professional Ethics" was organized for final year students on 14th December, 2019. The resource Person is Sri A Murali Mohan, AGM, Technical Training Institute, RINL, Visakhapatnam. Establishing a clear link between the purpose of the organization and the ethical values is very important to ensure that ethics becomes part of the culture and guides decision-making at all levels of the organization, promoting the desired behaviors.



A guest lecture on "Opportunities in Core Sector" was organized for final year students on 20th January, 2020. The resource Person is Mr. P. Teja Sandeep, SEMB Corp Energy India Ltd. Nellore.

A guest lecture on "Basic of Machine Learning" was organized for final year students on 9th March, 2020. The resource Person is Mr. T. Gangadhar, General Manager, Pivotal Soft Ltd. Machine Learning is so pervasive today. It has provided us with self-driving cars, practical speech recognition, effective web search and a vastly improved understanding of the human genome.



STUDENT ACHIEVEMENTS AND INDUSTRIAL VISITS

M. Jayasree, has participated on "Technical Quiz" in STEPCONE-20 GMRIT, during 2nd to 4th Jan 2020 and got the first place.

P. Manoj, has presented a paper on "State Estimation in Power system" in STEPCONE-20 GMRIT, during 2nd to 4th Jan 2020 and got the third place in best presentation.

K N N Naveen, has presented the paper on "Flying Electric Generator" in SRUJANKURA Vignan University during 14st -15th Feb 2020 and got the second place in best presentation.

K Raghu, has presented the paper on "Flying Electric Generator" in SRUJANKURA Vignan University during 14st -15th Feb 2020 and got the second place in best presentation.

T. Spandana has participated in Chess tournament, organized by AU,Inter collegiate games and sports, on 23rd Sept 2019 and secured 2nd place.

T. Spandana, has participated in Chess tournament, organized by Vaishnavi College of Engineering, Srikakulam, during 7th-8th Dec 2019 and secured 3rd place.

R. Manikantha, has participated in "Technical Quiz- ECLECTIQUE 2K20", held in JNTU Kakinada, during 28th-29th Feb 2020 and got the second place in best presentation.

B. Bhargava, has participated in "Prove your Talent- ECLECTIQUE 2K20", held in JNTU Kakinada, during 28th-29th Feb 2020 and got the second place in best presentation.

Sri Ram participated in Basket Ball tournament, organized by Gayatri Vidya Parishad, Visakhapatnam, in the month of December 2019, and secured first place.

Sri Ram participated in Basket Ball tournament, organized by Vishnu Institute of Technology, Visakhapatnam, in the month of December 2019, and secured first place.

PLACEMENTS



RESULT ANALYSIS



1. Blood Donation under ANITS & Life share Blood Bank 18-03-2019

The NSS unit of Civil Engineering department, ANITS, Visakhapatnam organized a blood donation camp on National blood donation day in association with Life shared blood bank in March 2020. The camp began at 10.00 am in ANITS Admin Block room no. A311 with a short inaugural function where Principal, ANITS expressed his gratitude to the NSS unit of the college. He also stressed on the growing need of blood in the state and commended the young volunteers for their noble act. teaching, non-teaching staff and students came forward to donate blood during the camp which included donors. At the end 210 units of Blood was collected and given to Life shared blood bank. The blood donors were given Apple, Biscuits and fruit juice after donating the blood in order to reenergize themselves. The blood donation camp was co –ordinated by Mr.K.SatyaNarayana and L.Dinesh, N.S.S co-ordinator of the college and N.Srinivas Naidu is department of ECE co-ordinator.



Blood donation camp in ANITS

2. Household survey, Unnat Bharat Abhiyan- 20-02-2020

The NSS unit of Civil Engineering department, ANITS, Visakhapatnam has initiated household survey in college nearest villages under ANITS Unnat Bharat Abhiyan scheme. During survey the NSS team has conducted the village survey on education of school children in Government school, rain-water harvesting facilities and portable drinking water facilities. This survey was done with the help of NSS volunteers and Non-Teaching staff. This event was organised and coordinated by Mr.K.SatyaNarayana and Dinesh, N.S.S co-ordinator of the college and all departments NSS co-ordinators.



Household survey in sangivalasa

3. Blood Donation under ANITS & Lions Club 20-08-2019

The NSS unit of Civil Engineering, IT and ME Departments, ANITS, Visakhapatnam organized a blood donation camp on National blood donation day in association with Lions club blood bank. The camp began at 10.00 am in ANITS Admin Block room no. A211 with a short inaugural function where Principal, ANITS expressed his gratitude to the NSS unit of the college. He also stressed on the growing need of blood in the state and commended the young volunteers for their noble act. Student volunteers came forward to donate blood during the camp which included teaching, non-teaching staff and students donors. At the end 22 units of Blood was collected and given to Lions Club blood bank. Many students voluntarily came forward to donate the blood and done their part in saving lives. The blood donors were given Apple, Biscuits and fruit juice after donating the blood in order to reenergize them. The blood donation camp was coordinated by Mr.K.SatyaNarayana and L.Dinesh, N.S.S co-ordinator of the college.



Blood donation in ANITS campus in collaboration with Lions club

4. SWATCH ANITS- 13-08-2019

The NSS unit ANITS conducted Swachh ANITS program and they cleaned the engineering and medical college premises. All the students took active participation and made the campus clean. With the motive of creating awareness regarding cleanliness among the people, we conducted an event named SWATCH ANITS in the college premises with the NSS team of ANITS. NSS team includes staff and students in the department. NSS volunteers and students actively participated in getting the premises clean and green. Both Engineering and medical campus premises were cleaned by the NSS. With the motivation from Principal sir, the programme was done effectively with all the support from staff and students.



Students active participation in Swatch ANITS

5. PLASTIC BAN RALLY-01-10-2019

The NSS teams of ECE and ME conducted Plastic Ban rally program in and around college premises and they have collected plastic related waste in the engineering and medical college premises. Students carried hundreds of placards with messages of safe environment. During the 2km rally, they distributed pamphlets on 'Refuse-Reuse-Recycle Plastic' and explained people on the need of environmental protection. The rally witnessed placards and signboards suggesting affordable alternatives to plastic. At the end of the program our beloved principal sir addressed the program and appreciated the NSS volunteers for organizing useful program to the society.



Distribution of Plastic free bags to students

6. EYE TESTING CAMP 29-06-2019

With the motive of creating awareness regarding importance of healthy eyes, we conducted an event named EYE TESTING CAMP (in Association with NRI Hospital) in the college campus with the NSS team of CSE. NSS team includes staff and students in the department. NSS volunteers and students actively participated by getting the tests done with staff and students effectively. With the motivation from Principal sir, the programme was done effectively with all the support from staff and students. Many students and staff has availed this facility in campus.

7. SCHOOL CHILDREN PROGRAM AT NAMMIVANI PETA - 18/12/2019

The NSS unit of Mechanical department, ANITS, Visakhapatnam has conducted school children program in Nammivanipeta primary school to enquire the facilities provided to the students and they interact with the students to know their need under ANITS Unnat Bharat Abhiyan scheme. During the session NSS team has conducted the survey on education of school children and portable drinking water facilities. This survey was done with the help of NSS volunteers and Non-Teaching staff. This event was organised and coordinated by Mr.K.SatyaNarayana and Dinesh, N.S.S coordinator of the college and N.Srinivas Naidu is department of ECE co-ordinator.



NSS team with school children, Nammivanipeta

8. NSS 50 Years Golden Jubilee On Eco-Friendly Campus- 24-09-2019

The NSS unit of ANITS is celebrated 50 years of NSS, Golden Jubilee of NSS day and in this all the NSS volunteers and coordinators are actively participated.

9. NSS SEMINAR AS PER AICTE GUIDE LINES 28-08-2019

As per AICTE guide lines in order to join the first year students into NSS team an induction program was organized by ANITS NSS team. Mrs. Bindu Niharika, Dept. of ME took an active initiation to organize this event and motivated the students towards the importance of NSS in nation building and community service and about ANITS NSS activities done so far. Allother department NSS coordinators and HODS also attended this event and shared their message on NSS team building in ANITS.

10. Eco Ganesha Program 22-08-2019

On the eve of Ganesh Chaturdhi college RACE team conducted Eco Ganesha Competition. Students of ANITS Engineering college had distributed eco-friendly Ganesha idols to the staff and nearby public on the act of protecting environment. Idols are made of recycled natural products and by products like rice husk ash, cane waste etc. collected from the industries. 30 students are participated in the event. The principal of the college visited and appreciated the students who were making the idols. The students from all departments took active participation and HODs of all departments announced winners.



Eco-friendly ganesha participation

11. Fund Collection for Orphanage Home

Mechanical department of ANITS has collected funds during September 2019. The objective of communal harmony campaign week is to raise donations for the physical & psychological support of the orphan or destitute children affected by violence. Fund was collected within the department from teaching and non-teaching staff and also from students. Finally money is given to "Child Orphanage", New Paradesipalem, Andhra Pradesh. Not only money food is also distributed to the child orphanage children, they felt so happy on that day. The child Orphanage people used this fund for hospital purpose.



NSS team Visit to orphanage home

12. NRI Blood Donation- 19-08-2019

With the motive of creating awareness regarding "Importance of Donating Blood" we have conducted an event named Blood Donation Camp (in Association with NRI Hospital) in the college with the NSS team of Mechanical department. NSS team includes staff and students in the department. NSS volunteers and students actively participated by donating blood and All the collected blood units were submitted to hospital. With the motivation from Principal sir, the programme was done effectively with all the support from staff and students.

13. Fund Collection for poor-23-July -2019

Mechanical department of ANITS has collected funds during July 2019. The objective of this fund collection is to raise donations for the support of physical & psychological support of the orphan or destitute children affected by violence. Fund was collected within the department from teaching and non-teaching staff and also from students. The collected money was given to "Child Orphanage", New Paradesipalem, Andhra Pradesh. Not only money food is also distributed to the child orphanage children, they felt so happy on that day. The child Orphanage people, used this fund for hospital purpose.



Donation to poor children at Gnananda and RamanandaAshramam